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Poster Proceedings



Saturday, May 20, 2023

Poster Session 1

No. 1

**Gender Dysphoria Versus Psychotic Disorder:
Questions for Diagnosis and Treatment**

Poster Presenter: Zachary Mark Simpson, M.S.

Co-Author: Kevin Watson, M.D.

SUMMARY:

Introduction: Gender dysphoria and schizophrenia are diagnoses that carry stigma that can impact diagnosis and treatment. Unfortunately, there is a paucity of literature on the potential overlap between symptoms of schizophrenia and gender dysphoria. For example, can a delusion lead to persistent incongruence between one's expressed gender and assigned sex? This question raises the concern for potential misdiagnosis and inappropriate treatment. If gender dysphoria is incorrectly considered a delusion, it may be mistakenly treated as psychosis, leading to a delay in appropriate gender-affirming treatments. Conversely, gender-affirming treatments could be implemented instead of appropriate treatment of psychosis. The stress of each diagnosis may exacerbate symptoms, further complicating the clinical picture. These complicated diagnostic questions require further research and discussion. Case Presentation: A patient assigned male at birth (AMAB) was seen from ages 18-24 for medication management and psychotherapy. The patient persistently expressed a desire to present as a female by wearing women's clothes and expressed openness to female pronouns (but did not formally start using them during this treatment period). The patient also had a long-standing diagnosis of schizophrenia with auditory hallucinations and disorganized thoughts and behaviors. Over this treatment period, this patient was trialed on several medications, including antidepressants and antipsychotics and exhibited multiple potential delusions related to gender, including believing that: they would spontaneously develop female anatomy, dark stool represents menstruation, the female reproductive anatomy may be a different dimension, and fetuses can be altered to match parents' sex preferences. They expressed attraction to men, but

their family attended a non-LGBT-affirming church. Consequently, there were discussions about possibly wanting to live as a woman in order to have sex with men. Gender transition seems to have been discouraged by previous providers as unrealistic, difficult, and expensive and was therefore never initiated. Psychotherapy focused on increasing socialization and gaining employment. Discussion: This case highlights the need for answers to the above diagnostic questions. However, most of the literature surrounding gender dysphoria and schizophrenia comes from an era that pre-dates modern understanding of gender identity, and the relevant research on this topic is often stigmatizing and pathologizing. Stigma related to schizophrenia and gender identity complicates the management of both. Appropriate treatment of patients with symptoms of schizophrenia and gender dysphoria involves careful diagnostic considerations. More research needs to be done so that providers may accurately diagnose and treat patients without harming them through inappropriate care.

No. 2

Positive Associations Between Chronic Cannabis Use and Cognition in Patients With Schizophrenia

Poster Presenter: Jeff Wang Jin, M.D.

Co-Authors: Colin Goodman, M.D., Lauren Mordukhaev, M.D., Emily Wu, M.D., Ph.D.

SUMMARY:

Objective: In patients with schizophrenia, cannabis use is associated with worsened psychosis – often paired with transient cognitive effects¹. Recent literature has shown some improvement of psychosis and cognition with short-term cannabinoids in patients with schizophrenia^{2,3}, but there is insufficient evidence to conclude a therapeutic effect⁴. The effects of chronic cannabis use on cognition in schizophrenia remain unclear. We aim to investigate the effects of chronic cannabis use on specific cognitive domains in patients with schizophrenia. **Methods:** A cross-sectional study included 31 total inpatient participants [mean age = 30.52 ± 2.95; 87% male] at Harris County Psychiatric Center meeting DSM-V criteria for schizophrenia. The cannabis abuse screening test (CAST), Kreek-McHugh-Schluger-Kellogg (KMSK) cannabis scale,

and Montreal cognitive assessment (MoCA) were used to evaluate several cognitive domains and determine the 30-day and lifetime cannabis (LC) characteristics of cannabis use. Data was analyzed in SPSS 26 with a statistical significance set at $p < 0.05$. **Results:** Using the Pearson correlation test, a strong positive association was observed between LC duration and total MoCA scores [$R = 0.630, p = 0.001$]. Moderate positive associations were seen in LC duration and attention MoCA [$R = 0.440, p = 0.028$], abstraction MoCA [$R = 0.458, p = 0.021$], and orientation MoCA [$R = 0.567, p = 0.003$] scores. Moderate positive associations were seen in LC frequency and total MoCA [$R = 0.432, p = 0.031$], abstraction MoCA [$R = 0.497, p = 0.011$], and orientation MoCA [$R = 0.436, p = 0.029$] scores. Additionally, moderate positive associations were also seen between both 30-day cannabis duration and language MoCA [$R = 0.429, p = 0.032$] scores as well as LC total and abstraction MoCA [$R = 0.552, p = 0.004$] scores, but these associations lost significance after adjusting for education as a confounder. The multiple linear regression model [total MoCA = $12.956 - 1.046$ (LC frequency) + 4.463 (LC duration) + 1.058 (Education)] was statistically significant [$R^2 = 0.483, F(3,21) = 6.542, p = 0.003$]. Furthermore, it was found that LC duration score significantly predicted total MoCA score ($\beta = 4.463, p = 0.005$). **Conclusion:** Moderate to strong positive associations were observed between cannabis use and MoCA scores with cannabis duration scores as a significant predictor. Furthermore, the strongest cognition association was related to abstraction in the setting of frequent lifetime cannabis use. These positive associations between chronic cannabis use and cognition raise further questions around the true long-term effects of cannabis in patients with schizophrenia and warrant further investigation.

No. 3

"You're All You've Got": A National Survey of Youth Perspectives on Self-Care

Poster Presenter: Nicole L. Hadler, M.D.

Co-Authors: Anna Lauchnor, M.D., Laura Marrone, M.D.

SUMMARY:

Background: Self-care can be described as the engagement of individuals in activities or practices that promote and maintain their overall health and well-being. Such practices can involve taking care of one's physical health, mental health, and relationships. The COVID-19 pandemic's unprecedented impact on communities and families, including young people, has highlighted the strong interplay among physical, mental, and relationship health. This study aims to assess youth perspectives on the importance of self-care as well as their personal self-care practices and goals. **Methods:** This study is part of MyVoice, a weekly national text message survey of American youth ages 14-24. Youth responded to a five-question survey to elicit their perspectives on self-care topics: (1) How important is self-care to you? Why? (2) How do you care for your physical health? (3) How do you care for your mental health? (4) What are ways you care for your relationships? (5) What are your goals for self-care in the coming year? A team of coders organized the qualitative responses into categories using thematic analysis, and data were subsequently summarized with descriptive statistics. **Results:** Among the 856 respondents, mean age was 20.1 +/- 2.4 years, 54% were male, and 72% identified as White. The vast majority of respondents consider self-care to be "very important" (57%) or "somewhat important" (35%), with only 7.5% of respondents viewing self-care as not very important" or "not important at all." Youth engage in physical self-care in a variety of manners including exercise (60%), healthy eating (45%), sleep (18%), hygiene (18%) and medical care (11%). Likewise, youth came up with a wide range of ways in which they care for their mental health, to include engaging in hobbies (24%), spending time alone (24%), meditating (21%), focusing on relationships (16%), engaging in therapy (12%), taking care of their general physical health (10%), and exercising (9%). The most common self-care goal for the upcoming year among youth was to prioritize their mental health (21%), to take care of their general health (19%), to exercise (16%), and to make themselves a priority (15%). **Conclusion:** Adolescents and young adults believe in prioritizing their self-care and well-being. Specifically, many youth across the country aim to prioritize their mental and emotional health, suggesting a continued need for young

people to have access to mental health resources and education. The overlap of response characteristics across the questions suggests the need for a multidisciplinary approach when addressing both physical health and mental health concerns among youth. Going forward, it will be important to assess youth barriers to self-care and to design policies and practices that advocate for youth's well-being based on their personal perspectives, goals, and opinions.

No. 4

Erotomaniac Delusional Disorder and Visual Disturbances in a Patient After Long Term Treatment With Hydroxychloroquine: Clinical Case and Review

*Poster Presenter: Alejandro Compaired Sánchez
Co-Authors: Irene Esteban, Catalina Blanes Morell,
Irene Caballero Sanz*

SUMMARY:

A 44-year-old Bulgarian woman with a past history of systemic lupus erythematosus and under treatment with hydroxychloroquine since 2014 is referred to the psychiatric emergency team because of potential visual hallucinations and delusional ideation. After a long examination, the patient gradually reveals a highly systematized, erotomaniac delusion concerning her own dentist. The patient was sensitive by nature and with low self-esteem regarding its own physique and dental configuration. Although mentioning two prior, short lived episodes of infatuation and deep conviction of reciprocated (although unexpressed) love towards two strangers, this was the first time she had extended this idea to encompass practically her whole life. Gradually, almost every person she met was a friend of her lover: initially sending her reassuring signals of his affection, later disapproving looks and even insults when she kept refusing to acquiesce his devotion. She was convinced she had been constantly followed by a number of cars with the same kind of brown hue, always driven by her lover or his close circle. Regarding the beginning of her convictions, she alludes to a couple of very rapid, blinking phenomena while being under the dentist's lamp which she interpreted as signals of interest from her would-be lover. Looking back, she admits the appearance of subtle flashes and sudden

changes of colouration months before the start of her delusion. She also mentions that she identified the growing body of vehicles and people related to her lover because they were wearing clothes or had the same 'camel' colour as one of her favourite clothes. She is now pending ophthalmological evaluation for hydroxychloroquine toxicity. A narrative review of the literature reflects a vulnerability of visually impaired people towards developing delusional disorders. Hydroxychloroquine toxicity can cause symptoms of retinopathy like blurred and partial loss of central vision, side vision, colour contrast sensitivity and, in the later stage, night vision; as well as symptoms of corneal deposits like haloes and glare. Microperimetric sensitivities in the central macula were significantly lower in patients taking HCQ for more than 5 years. Due to the relevance of sensory disturbances in the pathogenesis of delusional disorders, a thorough medical workup and history (with drugs like hydroxychloroquine, known for their visual side-effects, of particular importance) can help determine the best approach in the management of these patients.

No. 5

"Doctor There Is a Salamander in My Chest", a Case Report of Extreme Self-Mutilation in a Patient With Delusional Parasitosis

*Poster Presenter: Catherine Zeba Sunny
Co-Authors: Sara Veselinovic, Raj Addepalli, Melissa Begolli, M.D.*

SUMMARY:

We present Mr. R, a 41-year-old man, who is single, unemployed, and homeless, with a past psychiatric history of schizoaffective disorder and two previous inpatient psychiatry hospitalizations. He also had a history of using several substances, including cocaine, cannabis, PCP, K2, and alcohol. He presented himself running and screaming through the front door of the hospital, clutching his chest, stating, "I'm dying, I'm dying, there's something in my chest, cut it out." He was initially evaluated by the trauma team. He was holding pressure over his wound, part of which appeared abraded and one portion of which was flaplike. He reported to the surgical team that he was trying to remove a "worm"

from his chest, following which psychiatry was consulted. On initial evaluation, he exhibited delusions of parasitosis about "flesh-eating salamanders" burrowing through his chest. He stated that he was trying to remove them by cutting the skin on his chest using a razor. He denied having used any substances and refused to provide a urine sample for toxicology screening. The wound was treated by the surgical team, following which he was admitted to our inpatient psychiatry unit. Based on a review of his past records, he had a history of multiple emergency room visits for various injuries on his body, that were the consequence of him attempting to remove the parasites by burning and cutting his skin with lighters and razor blades. His self-inflicted injuries later resulted in bilateral ear canal infections, excoriations, and burn marks on numerous regions of his body, including his ears, hands, fingers, and legs. During his previous hospitalization, he had responded well to Haloperidol, which was again restarted. Gradually over the next few days his delusional symptoms improved and he gained more insight and judgement. He was eventually discharged to a homeless shelter with Outpatient psychiatry services. Delusional parasitosis is a rare psychiatric disorder characterized by a false fixed belief that they are infested by an organism or pathogen, and can be primary or secondary. They usually present with complaints of itching and various dermatological lesions secondary to intense scratching¹, cutting or application of caustic substances². These patients usually seek help from medical or dermatological specialties³, often require laboratory tests to rule out real parasitic infections⁴, and are treated with second generation antipsychotics like Pimozide³. This is a rare case of severe delusional parasitosis exacerbated by concomitant substance use, in which the patient adopted more aggressive approaches, in an attempt to kill the parasites, by burning and cutting his skin, thereby putting his own life at risk. Hence it highlights the importance of recognizing and treating delusional parasitosis at an early stage and ensuring subsequent adherence to treatment, which would help mitigate the risk of severe self-harm in the future.

No. 6

What Are the Barriers to Clozapine Compliance in Intellectually Disabled Patients With Schizophrenia? A Case Report

Poster Presenter: Chenique Z. Teixeira, M.D.

Lead Author: Matthew Di Lorio

SUMMARY:

Introduction: DSM-5 defines intellectual disabilities as neurodevelopmental disorders that begin in childhood and are characterized by difficulties in conceptual, social, and practical areas of living. There may be common pathogenesis in intellectual disability co-occurring with schizophrenia, particularly treatment-resistant schizophrenia. Clozapine has been approved since 1990 for refractory schizophrenia, however, clozapine requires strict compliance and CBC monitoring for safe and therapeutic effects. How does this play into effect in patients with co-occurring intellectual disability and schizophrenia? A prior study¹, showed clozapine use had a significant improvement in aggression and self-injurious behavior in 72% of intellectually disabled patients independent of their schizophrenia diagnosis. However, does intellectual disability affect patients' ability for clozapine compliance? We present a case report examining the barriers faced by a patient with co-occurring intellectual disability and schizophrenia to strict clozapine adherence with a review of current literature on clozapine and psychotropic medication compliance in intellectually disabled patients with schizophrenia. Case presentation: Case of a 37-year-old Hispanic male with a psychiatric history of schizophrenia admitted for aggressive behavior. The patient was brought into our medical services ED, transferred to CPEP and eventually admitted to the inpatient unit. The patient has 15 inpatient hospitalizations with similar presentations of decompensation due to either medication non-compliance or substance abuse. He has been on a stable dose of clozapine for 5 years but recently had a few inpatient admissions for decompensation. Patient was admitted to a hospital and discharged with a month's supply of medications; however, he lost the key to his medication box for 2 weeks and as result stayed without medications for that time. Patient was admitted to the inpatient floor and started on Clozapine 50mg daily with a goal of titrating up. On

admission patient was floridly psychotic, actively hallucinating, and agitated by these perceptual disturbances. On evaluation, he shows signs of impaired intellectual functioning. Psychological assessment attained confirmed a diagnosis of intellectual disability. Patient remains in treatment on the unit. Noted behavior control has been seen on the floor, however patient remains internally preoccupied. Discussion: Patients with intellectual disability may have certain pervasive barriers to psychotropic medication compliance whether that be cognitive, attitudinal, altered perception, socioeconomic, informational, or communicative factors. Some of the important questions to be considered are: What are the barriers to clozapine compliance in intellectually disabled patients with schizophrenia? How can psychiatrists effectively identify these barriers and work towards diminishing them within their scope of practice?

No. 7

LSD Induced Catatonia? A Case Report

Poster Presenter: Megan Hopping, M.D.

Co-Authors: Meghana Damaraju, Ali Awan, April Seay

SUMMARY:

Introduction: Catatonia is a rare neuropsychiatric syndrome associated with several behavioral abnormalities, including psychomotor and autonomic disturbances. Catatonia may occur secondary to psychiatric, neurological, medical, or iatrogenic causes [1, 2, 3]. While many cases of catatonia have been linked to cannabis and other psychotomimetic agents [4], there are only two published articles exploring the connection between lysergic acid diethylamide (LSD) and catatonia [5, 6], and sparse literature exploring catatonia in adolescents. We present a report of an adolescent with no past medical or psychiatric history presenting with catatonia following LSD use. **Case Presentation:** A 16-year-old male with no prior psychiatric or medical history presented with acute onset catatonia about one week after LSD gel tab use. Patient's symptoms included mutism, no oral intake, posturing, elevated blood pressure and respiratory rate, and urinary retention. He responded positively to an intravenous Lorazepam

2mg challenge and was admitted to the pediatric inpatient unit for intravenous fluids. Medical and neurological workup was unremarkable. Patient's catatonia improved with standing Lorazepam (titrated to a maximum dose of 3mg 4 times daily) over the course of 2 weeks. As his symptoms of catatonia began to resolve, he started to report paranoid delusions, auditory and visual hallucinations, and thought broadcasting. Olanzapine, titrated to 15mg daily, was started and patient continued to show slow signs of improvement. He was subsequently transferred to inpatient psychiatry for ongoing treatment. **Discussion:** A working diagnosis of catatonia secondary to LSD use was considered to be the most appropriate given the presentation, however the team did consider catatonia secondary to first episode psychosis (less likely given the lack of any symptoms prior to LSD use). There is some data claiming LSD gel tabs have a higher concentration as well, which was a potential factor in this case. A thorough substance use history should be obtained in patients with catatonia, with serious consideration of LSD usage as a differential, especially if gel tabs are ingested. More research is needed to explore the relationship between LSD and catatonia and to further clarify treatment recommendations.

No. 8

Anterograde Amnesia Associated With Substance Use: A Case Report

Poster Presenter: Loay Alrojolah

Lead Author: Katherine Negreira

Co-Authors: Vanessa Nascimento, Krystal Nicht

SUMMARY:

Background: The hippocampus mediates consolidation of memories from short term to long term. Many cases have been published of multiple etiologies of bilateral hippocampal ischemia leading to memory deficits but few cases have been reported of isolated hippocampal ischemia postulated to be due toxic effect of illicit substances. We aim here to add to the literature available on bilateral hippocampal ischemia leading to anterograde amnesia suspected to be secondary to psychoactive substance toxicity. **Methods:** We summarize here the clinical course and chart review

of a new onset anterograde amnesia in patient presenting to a tertiary care center with new onset amnesia. Results: A 52-year-old man with a past medical history of cocaine and opioid use, anxiety and depression was brought to the Emergency Department by police after being found confused and disoriented on the streets. On exam, patient was found to have acute onset anterograde amnesia with intact remote memory. Collateral obtained from patient's brother revealed that the patient had completely normal memory and cognitive ability few days prior to presentation. No signs of physical injury suggestive of trauma were observed and the neurological exam was otherwise normal. Labs showed an unremarkable complete blood count, complete metabolic panel, and urinalysis. Urine drug screen was positive for cocaine use and upon further questioning, patient endorsed a history of cocaine and opioids use but could not recall the last time he used these drugs. Initial CT brain scan without contrast on admission showed subtle focal symmetrical hypodensities in the bilateral cerebelli and in the bilateral hippocampi. Patient was subsequently admitted for further evaluation. TSH, Free T4, B12, Folate, HIV, ESR, CRP and ANA testing were normal. EEG and Lumbar puncture showed no signs abnormalities. CSF culture was negative and viral, paraneoplastic, autoimmune encephalitis and meningoencephalitis panels from the CSF were also negative. MRI brain with and without contrast showed symmetric increased T2, flair signal intensity within the cortex of the medial temporal lobes and hippocampus bilaterally. CT angiogram of the head and neck showed similar brain abnormalities as the MRI but with no evidence of flow-limiting stenosis of the intra-cranial arteries and no other abnormalities noted. Ultimately, memory impairment and bilateral symmetric intracranial abnormalities were deemed to be secondary to cocaine and opioid use as rarely described in the literature. Throughout the hospital stay, memory deficits persisted and patient was subsequently transferred to a nursing home due to inability to care for himself because of memory impairment. Conclusion: This case highlights the difficulty associated with diagnosis and treatment of anterograde amnesia due to psychoactive substances and highlights the need for further research into the prevalence, pathophysiology, course and prognosis of this phenomenon.

No. 9

Risk of Psychosis With High Potency Thc Cannabis: A Case Report

Poster Presenter: Mohammed Faizur Rahman, M.D.

Co-Authors: Daniel Ulloa, Precious Olowookere

SUMMARY:

Introduction: In recent years, more states in the United States and countries around the world have legalized or decriminalised cannabis use. This trend brings some concern for the overall public health due to the accompanying increase in cannabis use and potential harm. The main psychoactive component in cannabis is $\Delta 9$ -tetrahydro-cannabinol (THC), which has been found to induce psychosis and impair cognition [1,3]. High potency cannabis is any strain that has a THC potency greater than 15%. The link between cannabis use and the development of psychosis has been established in a multitude of studies, but there are knowledge gaps in the effects of high potency THC cannabis and poorer mental health outcomes. Objective: The purpose of this study is to investigate the effects of high potency THC (cannabis) use on psychosis Case: Patient is a 38-year-old Russian American male, married, employed with a history of anxiety disorder who presented to the hospital for bizarre behavior after using medical grade cannabis. The patient's wife called the police because the patient acted bizarrely (e.g., eating dirt, running in and out of home). On arrival at the ED, the patient presented with bizarre speech and behavior and was noted to be tachycardic (at times as high as 170), tachypneic, and diaphoretic. Pt received treatment in the ED with improvement in mental status. Patient admits to having a partial recollection of the event. On further evaluation, the patient reports starting to use cannabis in college; however, only recently started using it in the evening for the last 2 years. Patients report using 34% THC cannabis bought from a dispensary. Last use was 1 joint prior to presentation. Patient is prescribed Xanax of 0.5mg/day p.o for anxiety. The patient denies any previous inpatient psychiatric hospitalization or outpatient psychiatrist. Additionally, the patient denies any depressive or manic, or psychotic symptoms. Urine toxicology was positive for cannabis. Patient was later psychiatrically

cleared and counseled on the benefits of sobriety and abstaining from further cannabis use. In addition, scheduling of outpatient appointment at the behavioral health clinic was recommended. Patient was agreeable to all suggestions. Discussion: Research suggests daily use of high-potency THC cannabis increases the risk of developing psychosis by close to five times when compared to those who have never used cannabis [3]. Recent studies have found that individuals with a specific variant of the AKT1 gene heightens the risk of developing psychosis by almost seven fold in those who use cannabis daily. The AKT1 gene codes for an enzyme that affects dopamine signalling in the striatum [3]. Although more research needs to be done, this shows promise in identifying individuals that are susceptible to developing psychosis with the use of cannabis.

No. 10
Increased Prevalence of Substance Use Disorders Among Patients With Systemic Lupus Erythematosus and Major Depressive Disorder

Poster Presenter: Xiaofeng Yan, M.D., Ph.D.

Co-Authors: Kevin Varghese, Alexandra Dellenbaugh, Douglas Burgess, Fei Cao

SUMMARY:

Background: Accumulating evidence shows major depressive disorder (MDD) has a higher prevalence among patients with systemic lupus erythematosus (SLE) and is considered as an independent risk factor with population-based evidence¹. Meanwhile, there is a strong link documented between substance use disorders (SUD) and MDD². Furthermore, patients with SLE are more likely to have increased alcohol intake³. This research investigated whether the comorbid MDD among patients with SLE is associated with increased prevalence of SUD diagnoses and which SUD are higher among patients with SLE. **Methods:** All data were extracted from I2B2, a de-identified dataset from the electronic medical record (EMR) of a university-affiliated hospital, including both inpatient and outpatient settings. ICD10 codes of different diagnoses were used to guide the search. The defined search duration was from the beginning of EMR (01/01/2000) to the present. **Results:** A total of 743 patients with SLE and 37623 patients with MDD were

identified, among which 317 patients with SLE had comorbid MDD. Most patients were between 50 and 60-years-old (26%). Females were the majority (88%). Caucasians were the most common race represented (47%). The prevalence of MDD among patients with SLE was 42.66%. Among patients with comorbid MDD and SLE, only 132 were treated with antidepressants (prevalence 41.64%). Compared to patients with SLE alone, patients with SLE and comorbid MDD were more likely to have diagnoses of tobacco, alcohol, opioid, cannabis, stimulants, hallucinogens, sedatives-hypnotics, or anxiolytic use disorders. The most common SUD was tobacco (prevalence 59.94%) and the least common was sedative, hypnotic, or anxiolytic use disorder (prevalence 2.84%). **Conclusion:** This study demonstrates a consistently higher rate of SUD diagnoses among patients diagnosed with SLE and comorbid MDD versus SLE alone. For clinicians who take care of patients with SLE, when they have comorbid MDD, substance use disorders should be screened to improve clinical care and outcomes.

No. 11
Nephrotoxic Effects of Naltrexone. Case Report and Literature Review

Poster Presenter: Andrea Guerrero

Co-Authors: Ye-Ming Sun, Kishan Shah

SUMMARY:

Background: Naltrexone is a Medication-Assisted Treatment (MAT) option approved by the Food and Drug Administration (FDA) to treat alcohol use disorder (AUD) and reduce cravings. Naltrexone has been greatly studied with a relatively safe side effect profile (1)(2). Due to its minimal nephrotoxicity, this medication is often chosen in patients with chronic kidney disease for AUD. Here, we report a case where Naltrexone causes acute kidney injury. **Methods:** A case report and PubMed literature review with keywords naltrexone, acute kidney injury, renal failure, nephrotoxicity. **Case report:** A 62-yo-male with a history of AUD, posttraumatic stress disorder (PTSD), major depressive disorder (MDD), hypertension, and chronic kidney disease stage 2, who presented to the ER following symptoms of alcohol withdrawal. After admission to the hospital, the patient was restarted

on his usual outpatient medications including Sertraline and Hydroxyzine. He was also given po naltrexone 50mg daily after the resolution of alcohol withdrawal symptoms. Patient was psychiatrically stable and transferred to the substance abuse Residential Rehab program. A repeat CMP found that patient's creatinine was significantly elevated from his baseline of 1.4 mg/dL to 2.6 mg/dL. His BUN increased from 16mg/dL to 40mg/dL in 8 days. Subsequently, naltrexone was discontinued, BUN was back to 21mg/dL in 9 days and his creatinine was recovered to 1.5mg/dL. **Discussion:** After a literature search, we found that there is an ongoing phase IV clinical trial (3) with preliminary data that suggest a very low incidence (0.49%) of kidney failure in four of the participants taking naltrexone (n=823). The mechanism for Naltrexone causing acute renal injury is not understood. It is unknown whether patients with already compromised kidney function are more sensitive to these effects. More case reports or systematic studies are needed to answer these questions. **Conclusions:** Acute kidney injury may be a rare adverse effect of PO Naltrexone. Given the widespread use of naltrexone in patients with AUD, surveillance, and monitoring of renal function when initiating naltrexone may be necessary. </p>

No. 12
WITHDRAWN

No. 13
Tolerance of Esketamine Nasal Spray With Concomitant Antidepressant and Psychostimulants in Patients With Treatment Resistant Depression: A Case Series

Poster Presenter: Alican Dalkilic, M.D.

Co-Authors: Sabriye Yilmaz, Ahmet Dalkilic, M.Ed.

SUMMARY:

Background: Esketamine nasal spray (ENS) is one of the FDA approved practical solutions in treatment resistant depression (TRD). ENS should be used in conjunction with antidepressants (AD) at risk evaluation and mitigation (REM) certified centers to treat TRD (1). Close monitoring of blood pressure (BP) is needed in TRD patients who are both on an AD and psychostimulant (PS) such as amphetamine, methylphenidate, modafinil, or armodafinil. Fua et

al. reported that 15% of patients who received ENS+AD experienced an increase in BP (I-BP) as opposed to 4.9% of placebo+AD patients (2) and Adigun et al. published about impact of AD on efficacy and safety of ENS (3). Both ENS and PS may cause treatment emergent hypertension (HTN) and tachycardia, but there is a dearth of data on their concomitant use. This retrospective case series were conducted to understand impact of ENS on BP and its tolerability in TRD patients, who were on AD plus PS. Methods: We retrospectively reviewed records of patients treated with ENS between 12/2020-12/2021 at an outpatient clinic on the East Coast. Eight cases were treated with ENS for TRD while they were on AD plus PS. We created a de-identified dataset including the following: Age, gender, comorbid diagnoses, average (ave) systolic and diastolic BP and heart rate (HR) measurement changes (pre-ENS and at 40 and 120 min post-dose) for sessions 1, 2, 3, 4, and 8. Results: Average age of patients was 54.5 years (range: 23-66), 6 were females and 2 were males. Beside treatment-resistant MDD, 6 patients had GAD, 2 had PTSD, one had binge eating disorder (BED), but none had ADHD as comorbid diagnosis. Seven patients were on PS for augmentation and one was to treat BED. In session 1 and 2 ave systolic and diastolic BP changes at pre-ENS, post-dose 40 and 120 min were +3/-3,-2/-2, +5/-1 and +3/+4, -1/+2, 0/+2 mmHg, respectively. Ave heart rate (HR) changes ranged between +7 and -7 beat per minute (BPM) in all sessions. BP and HR resumed to baseline by end of 2 hour monitoring period. As expected some patients experienced sedation and/or dissociation, but all symptoms resolved within 2 hours after ENS administration. In total 109 sessions were completed, session numbers ranged between 6 and 24 per patient. All patients tolerated ENS without any significant adverse events (AE) in any sessions. Conclusions: Patients with TRD often need multiple medications such as augmenting AD, PS, lithium, and/or atypical antipsychotics in addition to an SSRI, SNRI or TCA. These eight patients tolerated ENS in conjunction with AD plus PS medications without any significant AE. Changes in BP measurements were transitory and did not require additional anti-HTN medications. With close BP monitoring, clinicians might consider ENS as an option in TRD patients who are on concomitant AD plus PS. However, larger and randomized controlled

studies are necessary to further understand safety of ENS in TRD patients who are on complex medication regimens.

No. 14

Gaps in Care for South Asian American Mental Health: A Case Series

Poster Presenter: Lakshmi Karamsetty

Co-Author: Adiba Anam

SUMMARY:

Case 1: Mr. K is a 19-year-old South Asian American (SAA) college student with no previous medical or psychiatric history who was admitted for a possible first break episode. The patient's parents became heavily involved in his care, concerned that psychiatric hospitalization would tarnish his future career opportunities and be socially stigmatizing. This resulted in a precipitous discharge. Treating Mr. K exemplified the cultural stigma associated with mental health in SAAs, leading to not only a quick discharge but also a 10-day hospital readmission. Case 2: Ms. M is a 29-year-old SAA woman with established Schizoaffective disorder and multiple prior hospitalizations who was admitted due to refusal to eat since being discharged from the psychiatric unit two days prior. Stigma regarding mental illness and a heightened focus on achieving certain cultural milestones, such as marriage, were quickly identified as key treatment challenges. Treating Ms. M shed light on deeply ingrained gender roles in SAA culture along with fear and distrust of mental health treatment. The SAA population represents a rapidly growing and diverse cultural group with more than 5.4 million SAA residing in the United States. While there is emerging focus on mental health and illness trends in the US, limited research is focused on mental illness burden within the SAA population of immigrants and their intergenerational families. Along with these two cases, three others were identified at Mount Sinai Beth Israel, an urban hospital that has been serving the culturally diverse population of lower Manhattan since 1889 and provides full-service behavioral health. Each case demonstrates the unique challenges the SAA population faces in terms of acculturation, gender differences, and barriers to care when seeking and receiving mental health

services. There is a growing need to study the mental healthcare needs of the South Asian population, to identify how care can be culturally adapted, and to create easily accessible resources.

No. 15

Pronouns, Lgbtqia Populations, and Trauma-Informed Affirming Care

Poster Presenter: Rina G. Bhalodi, M.D.

Co-Authors: Chand Grewal, D.O., Rabiya Hasan, M.D.

SUMMARY:

Recent literature demonstrates an increased risk of traumatic stress among the lesbian, gay, bisexual, transgender, queer and/or questioning, intersex, and asexual (LGBTQIA) populations compared the general population. Given that the rates of suicidal ideation and attempts are significantly increased in the LGBTQIA population, it is imperative that behavioral health providers and staff be skilled in trauma-informed affirming clinical practices. Throughout inpatient psychiatric hospitalization, recognition and avoidance of perceived biases are key to establishing therapeutic alliance. Physician education on sexual orientation, gender orientation, and gender pronouns can aid in strengthening the patient-physician partnership. In this poster, we will discuss case examples of two patients whose care was supplemented via different trauma-informed strategies. The first case example is of a 34-year-old non-binary adult with a self-reported past psychiatric history of PMDD, anxiety, depression, multiple sexual assaults, and PTSD who presented due to bizarre behavior, disorganization, paranoia, auditory hallucinations, and persistent negative thoughts in the setting of medication nonadherence. During their hospitalization, we educated staff members on using preferred names and pronouns and navigating discussions related to sexual and gender orientation or practices. To demonstrate strategies to support the LGBTQIA patients during disposition planning, we will discuss a second case example of a 20-year-old homosexual male with a history of unspecified mood disorder, ADHD, and polysubstance use who was admitted for worsening depression, suicidal ideation, and substance use. In order to mitigate some of the many challenges experienced by LGBTQIA patient populations, knowledge of and referrals to accepting

and affirming outpatient environments promote access to quality care. Through these case examples, we hope to illustrate how applying different strategies can help facilitate the delivery of trauma-informed affirming care and enhance the therapeutic alliance for these patients in the inpatient psychiatric setting.

No. 16

“The Leaky Pipeline”: An Analysis of the Representation of Women of Color in Psychiatry

Poster Presenter: Sanjana Kumar, M.D.

Co-Authors: Maria F. Sarmiento, Deepika Sundararaj, M.D.

SUMMARY:

Background: Minority groups in the US experience higher burden of disability from mental health disorders, yet are less likely to receive mental health care when compared to nonminority groups.¹ Women of color (WOC) experience stressors further compounded by the intersection of racism and sexism. Barriers to care for this population include lack of insurance, language impediments, distrust in healthcare, and lack of diversity among mental health care providers.¹ Studies have shown that racial match between a patient and their provider is associated with increased utilization, retention, favorable treatment outcomes, and patient satisfaction.²⁻⁷ However, racial/ethnic minority physicians, especially WOC, are underrepresented in psychiatry. In this study, we analyze data on the racial/ethnic makeup of medical school graduates, psychiatry residents, and psychiatry faculty in the US to quantitatively assess the representation of WOC in this field and identify trends in the preservation of diversity. **Methods:** To compare the percentage of non-white female physician faculty members to the percentage of non-white female residents, we reviewed three datasets. We extracted the proportion of US medical school graduates who identified as non-white women in the 2020-2021 academic year (AAMC) and compared this to the national percentage of non-white female residents in 2020-2021 (ACGME). Similarly, we extracted data on the gender and racial makeup of US medical school psychiatry faculty in 2020 (AAMC). **Results:** Based on AAMC data, 51% of US medical school female

graduates in the 2020-2021 academic year identified as non-white, and 31.5% of female psychiatry faculty identified as non-white in 2020.⁸⁻⁹ Data from the ACGME showed that 55.5% of female psychiatry residents identified as non-white in 2020-2021.¹⁰ **Discussion:** Current data indicates the percentage of non-white women amongst faculty is strikingly low when compared to the racial/ethnic makeup of medical school graduates and psychiatry residents. A similar phenomenon was observed in a study at Johns Hopkins which showed that the representation of racial/ethnic minorities among psychiatry residents was 16.2%, as compared with 8.7% of faculty and 10.4% of practicing physicians.¹¹ This progressive loss of WOC from the hierarchy of psychiatry has been referred to as the “leaky pipeline.”¹²⁻¹³ One reason for this trend could be that more WOC are entering the medical field each year, which has likely not translated to representation amongst faculty. This results in increased pressure on these few faculty members to mentor the growing number of trainees. Lack of adequate mentorship during training can serve as a barrier to recruitment, retention, and advancement, creating a self-perpetuating cycle.¹⁴ **Conclusion:** Future efforts should focus on recruiting and retaining faculty of underrepresented groups, especially WOC, which will ultimately affect the future of psychiatric training and patient care outcomes.

No. 17

Prevalence of Depression in Medical Students at LKSOM and Their Utilization of Mental Health Resources During the Covid 19 Pandemic

Poster Presenter: Sarah Hmada

Co-Author: Justin Faden, D.O.

SUMMARY:

The aim of this study is to evaluate the prevalence of depression among medical students at LKSOM and the rates at which they utilize mental health resources. Previous studies performed both abroad and within the United States have shown that medical students have a rate of depression higher than the general public. They have also shown that the utilization of mental health resources amongst medical students is less than the general population. However, it is rare to find studies that address the

prevalence of depression in medical students based off of sexual orientation, race, and gender identity. The study incorporated the PHQ-9 survey as well as questions regarding the demographics (gender identity, sexual orientation, race, class year) of the students and their utilization of healthcare resources at LKSOM. In this poster, I will discuss the results of the study, including which groups displayed symptoms concerning for depression (students who identified as part of the LGBTQI community) and the demographic they belonged to, and which group of students was more likely to utilize mental health resources.

No. 18
Using Representation Quotients to Examine Trends in Representation of Racial and Gender Groups Applying and Matriculating Into Psychiatry Residencies

Poster Presenter: Mitch C. Otu

Co-Authors: Saba Paracha, Alesia Antoine, Elijah M. Persad-Paisley

SUMMARY:

Minority representation in U.S. medical schools has increased after recent efforts by the Association of American Medical Colleges to improve diversity in the physician workforce (1). It is unclear whether the composition of psychiatry residency programs has reflected the changes in the residency pipeline over time. Studies have examined trends in racial/ethnic and gender identity composition among psychiatry programs, but none have considered these trends in relation to the composition of medical school classes (2,3). Reports on race/ethnicity and gender for U.S. medical school graduates, and all psychiatry residency applicants and matriculants were obtained for years 2010-2018. Racial/ethnic groups included Asian, Black, Hispanic, and White; gender identity groups included men and women. The proportion of each racial/ethnic and gender identity in the psychiatry residency applicant and matriculant cohorts was divided by a denominator of their proportion in the corresponding medical school graduating class to produce representation quotients (RQ_{app} and RQ_{mat} , respectively). An RQ that approximates 1 suggests proportional representation of a given identity; $RQ > 1$ indicates

overrepresentation, and $RQ < 1$ indicates underrepresentation. Mann-Whitney U testing was used to evaluate for differences between RQ_{app} and RQ_{mat} within a given identity with $p < 0.05$ being deemed significant. All racial/ethnic and gender identities applied to psychiatry residencies in higher proportions than their distribution in medical schools, except for White men ($RQ_{app}=0.47$) and White women ($RQ_{app}=0.50$). Among matriculants, most groups had an RQ_{mat} greater than 1, except for White men ($RQ_{mat}=0.80$) and White individuals in general ($RQ_{mat}=0.89$). Despite having the highest average representation among all psychiatry applicants, Black men experienced the largest decrease in representation when comparing applicants to matriculants ($RQ_{app}=2.19$ vs. $RQ_{mat}=1.03$; $p < 0.0001$). Interestingly, while women and men across all races/ethnicities applied to psychiatry residencies in proportion to their medical school population ($RQ_{app}=0.99$ vs. $RQ_{app}=1.01$; $p=0.11$), women matriculated into psychiatry residencies in greater proportions than men ($RQ_{mat}=1.11$ vs. $RQ_{app}=0.90$; $p < 0.0001$). These data suggest that Black male medical students have a relatively high interest in applying to psychiatry but face obstacles to matriculating into psychiatry residency programs. Additionally, the binary gender classification in the data hinders our ability to identify trends in the representation of gender identity minorities over time. To ensure that the field of psychiatry continues to move closer to equitable racial/ethnic and gender identity representation, these data (and lack of data) imply the need for greater support for Black men as they navigate the residency application process and for the inclusion of non-binary gender identities in the collection of data from medical students and residents.

No. 19
Stopping Stigma in Its Tracks: Improving Mental Health Provider Knowledge and Comfort With Monkeypox Virus

Poster Presenter: Erica Cohenmehr, M.D.

Co-Authors: Alhasan Ghazzawi, M.D., Carole Filangieri

SUMMARY:

Background: Monkeypox virus is an orthopoxvirus endemic to the Congo and West Africa that causes a flu-like illness with symptoms including fevers, chills, myalgias, lymphadenopathy, and fatigue, as well as an evolving pustular rash. In May 2022, an outbreak began in the Western world, with 35,000 cases reported in non-endemic areas as of August 17, 2022. Currently, with the vast majority of cases having been reported in men who have sex with men (MSM), it is imperative that healthcare providers be educated about the clinical manifestations, treatment approaches, and preventative measures available in order to properly counsel patients and mitigate stigma. Stigma can lead to delayed treatment, shame, and increased transmission, and reducing stigma starts with educating providers to properly counsel patients and provide comprehensive, non-alarmist care. Healthcare providers have an opportunity to mitigate this developing stigma, minimize healthcare disparities in an already vulnerable population, and subsequently play a role in reducing transmission. **Methods:** Self-reported knowledge and comfort levels were measured using a likert-scale survey before and after a 45-minute educational talk to investigate the extent to which the talk could aid in improving these factors for mental health providers. An objective measure of knowledge about transmission was also included in the survey. **Results:** Among 17 responders to the pre-survey and 10 responders to the post-survey, all of whom were medical students and psychiatry residents, there was an increase in self-reported knowledge (2.14 to 3.75), importance of being knowledgeable about monkeypox (4.5 to 4.8) and comfort level with counseling patients on monkeypox (1.86 to 3.67), $p < 0.00002$. In addition, there was improvement in scoring on an objective question about routes of transmission, with less responders indicating that monkeypox is transmitted through semen/ vaginal fluids. **Discussion:** The current non-endemic monkeypox outbreak is disproportionately affecting MSM; false and alarmist rhetoric are contributing to stigma, which, in turn, can lead to delayed treatment and increased transmission. The first step in mitigating stigma is educating healthcare providers. After an educational talk, mental health providers at Maimonides self-reported an increase in their knowledge and comfort

with counseling; this is an important step in reducing arising stigma. Future direction for this research will be to measure changes in behavior for those who were at the educational talk when it comes to discussing monkeypox and counseling patients.

No. 20

Giving Voice to the Silent: A Multifactorial Examination of IPV in the Korean American Immigrant Population

Poster Presenter: Puja Sheth, M.D.

Co-Author: Kelly Pham, M.D.

SUMMARY:

Background: Intimate partner violence (IPV) affects ~30% women worldwide, with 25% of women and 10% of men in the U.S. having experienced some form of IPV. Up to 55% of Asian women in the U.S. have experienced IPV in their lifetime, however, no robust data on the prevalence of IPV in the Korean American community has been found. There is a lack of information on mental health service utilization in the Korean American population, but it is assumed that there is underutilization based on data obtained about the Asian American population, given some cultural and structural barriers for immigrants may be the same. Thus, Korean American immigrants are at a higher risk for sustaining the effects of IPV without engaging in subsequent mental health care. **Aims:** The goal is to provide a broad look at current literature on IPV in the Korean and Korean American immigrant populations to offer insight into themes noted in current research and for U.S. healthcare providers to gain contextual information when encountering this population. **Methods:** PubMed was searched on September 23, 2021, using the following Medical Subject Headings (MeSH) terms and text words: ((intimate partner violence[MeSH Terms]) OR (spouse abuse[MeSH Terms]) OR (battered women[MeSH Terms])) AND (korea[text word] OR korean american[text word] OR korean immigrant[text word]). The search yielded 38 results; all read by both authors. **Content:** Three major themes identified in the articles are cultural, structural, and psychiatric factors affecting IPV. Within these themes, Confucianism, alcohol use, immigration challenges, religious affiliation, clergy involvement, enculturation of clergy and physicians,

legal matters, and psychiatric conditions and their somatization were explored among others. Discussion: Confucianism is deeply rooted in this population, affecting the way that violence is justified, perpetrated, and propagated and how help is sought. For Korean American, the religious affiliation with Confucian beliefs results in patriarchal beliefs and violence being propagated. The effects of immigration and acculturation/enculturation in the Korean American population change dynamics integral in Confucian culture. The cultural importance of alcohol in Korean Americans plays an added role in propagating violence and subsequent coping by victims. Conclusion: With understanding the cultural beliefs/practices and lack of mental health treatment utilization, there is a need to focus on culturally sensitive history taking. Attention to somatic issues that could be part of a culture-bound syndrome or atypical presentation of a psychiatric illness as well as alcohol use and treatment given its role in social and career mobilization is important. The issue of IPV is multifactorial, complex, and unique in Korean Americans.

No. 21

Racial Disparities in Benzodiazepine Prescription Persist Regardless of Income: A Study Analyzing Benzodiazepine Receipt in a Primary Care Setting

Poster Presenter: Samyukta Dore, B.A.

Co-Authors: Jeremy Weleff, Akhil Anand, Nicolas Thompson, Brian Scott Barnett, M.D.

SUMMARY:

Introduction: Benzodiazepines are one of the most commonly prescribed medications in primary care for conditions such as generalized anxiety disorder and insomnia. Despite lack of evidence for long-term efficacy and significant addictive potential, they continue to be utilized as a long-term treatment for a wide range of psychiatric conditions. Historically, differential prescribing rates have been observed between racial groups for benzodiazepines and other drugs with high risk of addictive potential. However, studies examining racial differences for benzodiazepine prescription in a primary care context are limited. Furthermore, there are no studies on benzodiazepine prescribing disambiguating the impact of economic status on

differential prescribing between racial groups. This study aims to analyze the interaction between race and economic status with benzodiazepine prescription in a primary care setting in a large healthcare system. **Method:** We conducted a retrospective cohort study of all adult patients with at least one primary care visit in 2019 or 2020 at a large academic medical center. Using a multivariable logistic regression model we examined factors associated with receiving a benzodiazepine prescription during the study period, including race and a proxy for economic status (median income according to patient ZIP code). **Results:** Between 2019 and 2020, 455,537 adult patients had 1,643,473 primary care visits with 26,129 (5.7%) patients being prescribed a benzodiazepine during the study period. 76.7% of the patients in the study were White, 12.2% were Black, and 6% percent were of other races. Overall, Black patients and patients of other races were less likely to receive a benzodiazepine prescription compared to White patients (OR 0.62 and 0.73, respectively; $p < 0.001$). Patients of all races with higher income were more likely to receive a benzodiazepine prescription compared to patients of lower income ($p < 0.05$). The interaction between income and race was significant such that there was a greater disparity in benzodiazepine prescription across income for Black patients ($p < 0.001$). The difference in model-predicted benzodiazepine prescription rates between patients with median income by ZIP code of \$100,000 and \$20,000 were 0.18% for White patients, 0.80% for Black patients and 0.10% for patients of other races. **Conclusion:** Our results suggest that Black patients, regardless of income, are less likely to receive a benzodiazepine prescription compared to White patients and that middle and lower-income Black patients are the most susceptible to differential treatment within the health system. Further studies are required to evaluate the cause of this disparate prescribing behavior alongside strategies to ensure more equitable prescribing when benzodiazepines are indicated.

No. 22

Heteronormativity: How It Impacts the Queer Community and Implications for Practice

Poster Presenter: Ethan A. Bork

Co-Authors: Fiona D. Fonseca, M.D., M.S., Micaela Rice

SUMMARY:

People who undergo a gender transition from their assigned sex at birth oftentimes require social transition (changing name, gender marker). Trans folks have characteristically experienced turbulence, especially if their gender expression does not fit the cisgender binary, and as a result many trans people seek passing as a cisgender man or woman in order to bypass these troubles. This is because compulsory heteronormativity predominates as the standard to treat people and more importantly how one treats oneself as a queer person. How this comes out is straight identifying people do not think about their relationship to their own gender identity, or a queer identifying person feels they must fit the binary, where their gender identity is not subject or allowed to shift or change over their lifetime. As physicians it is imperative to fully engage patients, understanding them without judgement and walking alongside them in their own journey while also advocating for those who do not have a voice. The goal of this informational poster is to shed more light on helping physicians better understand that self conceptualization is a dynamic, changing process, and how they can better affirm and support their patients who experience continued exploration of their gender identity and/ or sexual orientation.

No. 23

Characterizing Experiences Shifting Perception of Meaning in Life and Psychometric Tools to Assess Degrees of Anti-Suicide Benefit From Them: A Review

Review

Poster Presenter: Robert Snyder, D.O.

Co-Authors: Burke Boyle, D.O., Scott Michael Hoener, M.D.

SUMMARY:

Psychological literature has long highlighted the value of augmenting perceived meaning in life (MiL) in the treatment of depression, anxiety, substance use disorders, and suicidality (1, 2). Classically, the profound loss of meaning or purpose has been identified as a significant risk factor for suicidal ideation (3). Consequently, more recent psychiatric

literature has focused on the development of frameworks for measuring degrees of MiL and algorithms for assessing meaning enhancing therapies. Experiences which enhance perceived MiL remain subject to fascination and emerging multidisciplinary research in the psychological, psychiatric, and neuroscience fields. Moreover, there appears to be a growing resurgence of literature surrounding highly meaningful experiences occasioned by classical psychedelics (i.e. psilocybin). The mediation of such experiences which provoke feelings of a transcendent, spiritually significant, or mystical nature may have benefits for acute suicidality. At the same time, certain non-substance related experiences (i.e. near death experiences) have also been associated with similar type effects on MiL and suicidality (3-6). Despite new conceptions that expanded MiL strongly correlate with improved efficacy and outcome of psychiatric treatment, there has been little systemic review or inquiry which analyzes the extent to which these meaning enhancing experiences may mediate reductions in suicidality or how such shifts in MiL might be most accurately measured. The authors propose a literature review to characterize the psychometric assessment tools used to qualitatively and quantitatively assess MiL enhancing experiences and the substantive effects or lack thereof on reduction in suicidal ideation or behaviors. These metrics may allow for the development of metadata for analysis and algorithmic measures to develop further research which explores the complex role between being MiL enhancement and treatment of suicidal ideation. This may guide the development of novel psychometric measures for quantifying the efficacy of psychopharmacological therapies aimed at reducing suicidality.

No. 24

A Firearm Safety Intervention for Psychiatric Patients at a Medical Student-Run Clinic

Poster Presenter: Jaya S. Thyagarajan, B.S.

Co-Authors: Caitlin Hackl, Elissa Freberg, B.S., Christopher Doan

SUMMARY:

Introduction: Firearms are the most utilized method of suicide and resulted in more than 24,000

American deaths in 2020. ⁽¹⁾ Yet, studies have demonstrated that screening or counseling about firearms in healthcare settings is infrequent, even for patients with an increased risk of attempting suicide. ^(2,3) Research shows that patients are generally receptive to speaking about gun safety when conversations are initiated by their physicians. ^(4,5) Therefore, psychiatrists have a crucial role to facilitate dialogue about firearm storage practices. Methods: At St. Vincent's Student-Run Clinic in Galveston, Texas, individuals receiving outpatient psychiatric care were screened for firearm access and suicide risk factors by medical students. If patients screened positive for firearm ownership, the students facilitated conversations about safe storage practices, followed by the provision of free gun locks and educational pamphlets. All data on firearm access and suicide risk was entered into the patient's electronic medical record on EPIC. Results: In July and August 2022, fifteen educational pamphlets and twelve trigger/cable locks were distributed to patients owning firearms. Both patients who did and did not own guns responded positively to the program. EPIC documentation of each patient's access to firearms and suicidal risk factors enables present and future psychiatrists to track the risk for suicide by firearm and intervene when necessary. Conclusions: This program has implications in psychiatric practice and residency training regarding what physicians can do to prevent psychiatric-related firearm deaths. Effective suicide prevention will involve standardized evaluation of suicide risk factors, a non-judgmental and apolitical approach to discussing firearms with patients, and physician training on safe firearm storage. Sources: Centers for Disease Control and Prevention. (2022, July 13). FastStats - suicide and self-inflicted injury. <https://www.cdc.gov/nchs/fastats/suicide.htm> Kaplan, et al. Prevention of elderly suicide. Physicians' assessment of firearm availability. *Am J Prev Med.* 1998 Jul;15(1):60-4. doi: 10.1016/s0749-3797(98)00019-1. PMID: 9651640. Farcy DA, et al. Emergency Physician Survey on Firearm Injury Prevention: Where Can We Improve? *West J Emerg Med.* 2021 Feb 8;22(2):257-265. doi: 10.5811/westjem.2020.11.49283. PMID: 33856309; PMCID: PMC7972360. Hoskins, et al. (2021) "A Mixed Methods Evaluation of Parents' Perspectives on the Acceptability of the S.A.F.E. Firearm Program,"

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No. 25

Analyzing Inpatient Suicide Within Medical Institutions Through Psychological Autopsy: Based on the National Police Agency's Investigation Records

Poster Presenter: Haelim Lee

Co-Authors: Ah Rah Lee, Sangmin Lee, Jong-Woo Paik

SUMMARY:

Background Suicide and self-harm occurring within medical institutions are continuously reported although medical institutions are striving to prevent patient safety accidents. It is necessary to carefully investigate the cases and types that need improvement through accurate analysis of each patient safety incident to prevent death or serious damage due to suicide or self-harm in a medical institution and ensure patient safety. **Aims** We analyze suicide and self-harm occurring in domestic medical institutions in South Korea through data from the National Police Agency's investigation records and identify characteristics of the risk group and risk factors to prevent patient safety incidents. Finally, we provide standard recommendations for environmental improvement including the improvement of the medical institution management system. **Methods** Through the Korea foundation for suicide prevention, we have requested police complete enumeration available on death by suicide, specifically within medical facilities, to analyze the information on general characteristics, development to suicide, factors related to suicide, and warning signs of 833 subjects for five years, from 2013 to 2017. **Results** 78.7% were 50 years and older, 76.1% were economically inactive, 73.2% were physically ill, and 79.7% suffered from mental problems. The most common method was jumping (49%), followed by

hanging (39.7%). According to the 2020 psychological autopsy interview report, 658 (94.3%) of the 698 suicide deaths subject to psychological autopsy showed verbal, behavioral, and emotional changes before death. Of the 2,012 respondents, 876 (43.5%) were found to be verbal signals, 615 (30.5%) were emotional signals, and 521 were behavioral signals (25.8%) when considering the warning signals of suicides. 569 (57.2%) were diagnosed with psychiatric diseases and 145 (14.6%) were diagnosed with none. The diagnosis of psychiatric diseases includes depression disorder (191, 19.2%), dementia (104, 10.5%), alcohol use disorder (81, 8.1%), and schizophrenia (60, 6.0%). **Conclusion** The study suggests that there is a need for a medical system that can closely observe rapid changes in the high-risk group to prevent suicide and self-mutilation incidents within medical institutions. Suicide and self-mutilation must be included in major patient safety incident reports, and institutional incentives and education are required to enhance the specialty of patient safety professionals. The priority of the measures is to identify patient risk factors using standardized pre-evaluation tools (fall assessment tools, suicide risk assessment tools, etc.), establish and implement separate in-house guidelines for suicide and self-harm during patient safety accidents, and create a safe hospital treatment environment.

No. 26

Understanding the Aftermath of Patient Suicide: The Support Healthcare Providers Prefer After Losing Patients to Suicide

Poster Presenter: Michelle Mercer, D.O.

Co-Authors: Madison Jupina, Loren Hackett

SUMMARY:

Background: When providers feel supported following a patient's suicide, they are less likely to find the experience traumatic.¹ Conducting an extensive literature review, we explored how healthcare providers prefer to be supported following the loss of a patient to suicide. **Methods:** An exhaustive search was conducted in the following databases: Ovid MEDLINE®, Ovid Embase, EBSCO CINAHL, and Cochrane Library, using index terms and keywords relating to the concepts of suicide, patients, and clinicians to capture articles that

studied the impact of patient suicide on healthcare providers. A total of 5,865 citations from these databases were imported into the Covidence systematic review software. After screening, 52 articles that studied sources of support following patient suicide were selected. **Results:** The perception of support ranged widely amongst providers, with as many as 87.3% and as little as 11% felt they received sufficient support.²⁻³ In terms of informal support, the support most often came from colleagues. The following forms of informal support were rated as helpful or very helpful following patient suicide: colleagues/peers (66-93%), family/friends (20-85%), patient's family/friends (6.8-59.1%), other patients/clients (6.8-66.7%), clergy/spiritual leaders/praying (6.8-86.8%), attending the funeral (13.6-85%).²⁻¹⁴ Collegial support was often perceived as more valuable when colleagues shared their experience with patient suicide.¹⁶⁻¹⁹ Desire for formal support varied widely, with between 20 and 70% wanting formal support in the form of referral to support services like counseling (11.8-82.1%), more suicide prevention/postvention training (4-70%), debriefing/supervision (41.2-75%), formal case review/psychological autopsy/M&M/administrative inquiry (17.6-20%), time off (11.8%), and legal assistance (4%).^{2,6, 16,20-21} 87% indicated they would participate in a clinician support group if available.²³ While a minority of providers sought formal therapy, those that did experience less intrusion and hyperarousal symptoms afterward.¹ Up to 9% of those experiencing patient suicide would prefer not to talk about the experience.⁴ **Conclusions:** This research supports increasing access to peer support for providers following a patient's suicide, as this type of support is often perceived as the most helpful to providers. This research also suggests that formal sources of support should be non-mandatory and include a range of support services.

No. 27

A Case of Gingko Induced Vyvanse Psychosis

Poster Presenter: Tanu Thakur, M.D.

Co-Authors: Masroor Sohail Ahmed, Huailin Zhang, Danae DiRocco, Jude Nkwelle

SUMMARY:

Stimulants are used in a controlled setting as a first line treatment for ADHD and are known to present with psychosis at toxic doses. Gingko, on the other hand, is a nutraceutical used off label for cognitive enhancement with some evidence for benefit in neurocognitive disorder. It is known to interact with metabolic enzymes CYP2B6 and CYP3A4 whereas Lisdexamphetamine primarily metabolizes via the cytochrome P450 with CYP2D6. Here we describe a case report of a 64-year-old patient on Gingko and recently started on Lisdexamphetamine for inattention symptoms, who presented with altered sensorium, new onset visual and auditory hallucinations. Here we suggest these drug interactions being responsible for the presenting amphetamine toxicity.

No. 28**Zolpidem Withdrawal: A Case Report**

Poster Presenter: Tanu Thakur, M.D.

Co-Authors: Omaymah Al-Otoom, M.D., Neera Gupta, Briana Saltstone, Karina Kowalski

SUMMARY:

Zolpidem, a GABA modulator, was initially purported to be a safer alternative to benzodiazepines in the treatment of insomnia due to enhanced binding selectivity to the GABA receptor complex. However, in the last decade several case reports of zolpidem dependence have been published with limited cases of zolpidem withdrawal. Here we describe a case of a 63-year-old gentleman who presented to the psychiatric consult team with altered mental sensorium after an abrupt cessation of his longstanding treatment with 10 mg of Zolpidem, prescribed for insomnia. This case report highlights that chronic low dose zolpidem use can cause significant withdrawal and patients should be educated on risk. Treatment was achieved by cross tapering with another benzodiazepines.

No. 29**Atomoxetine-Induced Clitoral Priapism**

Poster Presenter: Carrie Dillon

SUMMARY:

While penile priapism is a well-documented side effect of several medications with strong alpha-adrenergic blockade (to include multiple commonly-prescribed psychotropic medications), clitoral priapism is poorly described in the literature and under recognized by medical providers as a potential medication side effect. It is a rare medical condition characterized by painful engorgement of the clitoris and surrounding tissue due to prolonged erection of the clitoris. In this poster, we discuss the signs of clitoral priapism, psychotropic medications that have been associated with the condition, and treatment options as illustrated by the case of Ms. C, a 22 year old female active duty service member. Ms. C was diagnosed with ADHD and Dysthymic Disorder (no further medical history), and was treated with Atomoxetine. Within 2 weeks of starting this medication, the patient began to experience feelings of pain and engorgement of her vulva and clitoris lasting 20-30 minutes that were both provoked and unprovoked. These symptoms would resolve spontaneously but reoccur several times a week. She noticed that her clitoris was exquisitely tender during these episodes to the point that she was forced to discontinue sexual contact due to discomfort. The patient had never experienced these symptoms prior to starting Atomoxetine despite a number of other psychotropic medication trials. Given how relatively short-lived these episodes were, there were never physical exam findings correlated with symptoms. She denied other genitourinary symptoms. Differential included non-ischemic priapism, thromboembolism/ischemic priapism, vulvodynia, UTI, STI. Following discontinuation of Atomoxetine, she experienced complete resolution of symptoms and no further intervention was indicated. Clitoral priapism is an important potential medication side effect that can be a medical emergency if not corrected due to ischemic risk. Almost a quarter of the military population is comprised of women, and there are many military jobs and even some civilian companies that prohibit the use of stimulants in the treatment of ADHD making Atomoxetine a frequently-used psychotropic medication. Motivating physicians to screen and counsel their patients on the risk of this serious side effect is vital to early recognition and intervention.

No. 30**Is the Recommendation Against Paliperidone Palmitate's Use in Renal Disease Warranted? A Case Series in Geriatric Patients With Chronic Kidney Disease**

Poster Presenter: Gregory Malzberg

Co-Author: Emil M. Achmad, M.D.

SUMMARY:

The risks of use of paliperidone palmitate long-acting injectable in patients with renal disease is largely unknown and there have been few reported cases in the literature of their use in this population. Per paliperidone palmitate's prescribing information, the medication is not recommended in patients with moderate or severe renal impairment (creatinine clearance < 50 mL/min). Despite risperidone and paliperidone's pharmacologic similarities, this recommendation against use in patients with renal impairment does not apply to risperidone's long-acting injectable. Given that risperidone's main metabolic pathway is conversion to paliperidone, both medications are renally cleared albeit with an additional hepatic involvement for risperidone. Intuitively, either both or neither of these medications should be contra-indicated in moderate-severe renal impairment. This is the first case series on the use of paliperidone palmitate long-acting injectable in patients with chronic kidney disease. We identified all patients administered paliperidone palmitate long-acting injectable medication at a mid-sized urban outpatient resident psychiatric clinic from May 2020 to October 2020, with age ≥60-years-old and stage 3 or greater chronic kidney disease. We found 4 patients who met the criteria and did a retrospective chart review to assess their outcomes with a focus on renal measures. None of the 4 patients suffered acute renal complications during the initiation or maintenance phase of paliperidone palmitate, and most notably there was no worsening of GFR throughout treatment. While receiving paliperidone palmitate, 2 patients required medical hospitalization for COVID-related illness. 3 of the patients discontinued the monthly injections for reasons unrelated to renal problems (with median time to discontinuation of 9 months, range 3 - 19 months). In conclusion, the case series in this poster demonstrates a population of renally impaired geriatric patients who tolerated paliperidone

palmitate without major morbidity or mortality in the acute setting, however with generally poor outcomes long-term unrelated to renal issues.

No. 31**Mirtazapine-Induced Psychosis on a Patient With Severe Malnutrition Due to Anorexia Nervosa**

Poster Presenter: Roda Tessa L. Estrella

Co-Author: Anna Katrina L. Enriquez

SUMMARY:

Ms. NC, a 40-year-old female with major depressive disorder, anorexia nervosa, stimulant use disorder, and sedative, anxiolytic, hypnotic use disorder with no history of psychosis, was admitted for inpatient psychiatric care for detoxification and management of severe malnutrition. Ms. NC had always been conscious with her weight and it was during the COVID-19 pandemic that excessive preoccupation with her weight and symptoms of clinical depression were noted. Ms. NC restricted her diet and engaged in excessive exercise, resulting to a BMI of 16.1. She started to use cocaine and diazepam as well. Due to a suicidal attempt, consult was done with a psychiatrist, and the patient was eventually maintained on Mirtazapine 30 mg (highest dose given was 45 mg) and Gabapentin 100 mg. As her mood improved, improvement in weight and decrease in the use of cocaine and diazepam were noted. A few months after, she was introduced to methamphetamine. Despite the patient's euthymic mood, her preoccupation with weight was again noted - restricting her food intake to only four times a week and no binge-eating or purging. The decrease of BMI to 13.8 and use of methamphetamine being found out by family lead to her admission. Special care in her food intake was done to prevent refeeding syndrome. Benzodiazepine withdrawals symptoms were mild and symptoms also overlap with stimulant withdrawals. She has normal values for electrolytes, liver function tests, and creatinine. On the first days of admission, the patient was noted to be irritable and was mostly asleep. On the fifth hospital day, she started to have difficulty sleeping and was placed on Olanzapine up to 10 mg and Gabapentin 600 mg, but there was no improvement in sleep. On the tenth hospital day, Mirtazapine was increased to 45 mg, and later in the night, the

patient had visual and auditory hallucinations and paranoia. Repeat laboratory tests showed normal electrolytes and no infection. Upon discontinuation of Mirtazapine and initiation with Clozapine, initially at 25 mg and then increasing to 75 mg, the psychosis resolved after five days. Mirtazapine is an antidepressant commonly used to address depression with problems in weight and sleep. Case reports on Mirtazapine-induced psychosis either on initiation or increase in elderly patients and those with renal and liver impairment are found in the literature. Despite not being an elderly and having normal kidneys and liver, Ms. NC may be prone to Mirtazapine-induced psychosis given her severe malnutrition. The sleep deprivation also made the patient at risk for acute psychosis. Other factors that may have contributed are the risk of delirium when withdrawing from benzodiazepine and methamphetamine-induced psychosis; however, the timing of symptoms and the presence of antipsychotic medication days prior to the psychotic episode suggests that it is the increase of Mirtazapine that caused the psychosis.

No. 32

Expectations and Preferences for Medication and Medical Decision Making Among Patients With Major Psychiatric Disorders

Poster Presenter: Seoyun Han

Lead Author: Minha Hong

Co-Author: Su Young Lee

SUMMARY:

Background: Drug adherence is an important factor related to the treatment outcome and prognosis of psychiatric disorders. Along with patient-centered care, interest in shared-decision making is also increasing. This study aimed to examine psychiatric patients' expectations and preferences for medication and medical decision making. **Methods:** A survey was conducted with 707 outpatients with major psychiatric disorders (psychotic disorders (206, 29.1%), bipolar disorders (137, 19.4%), and depressive disorders (364, 51.5%)) who visited 15 hospitals nationwide between 2016 and 2018 in South Korea. The survey consisted of patients' demographic variables and questions that enquired their opinions on their wish for medication, key

medical decision maker, and preferred drug type. The most preferred value in each category in the total population were identified and differences of the preference ratio of each item between the three disease groups were compared using an analysis of variance (ANOVA) test. **Results:** In the total population, patients expected high efficacy (44.01±21.44%) as a main wish for medication, themselves (37.39±22.57%) and a doctor (35.27±22.88%) as the main deciders, and tablet/capsule(36.16±30.69%) as the preferred type of drug. In the wish for medication category, preference ratio of high efficacy in the depressive group (38.81±18.39%) was significantly lower and the ratio of less amount was significantly higher compared to the psychotic (50.68±23.56%) and bipolar groups (47.85±22.24%, p<0.001). Preference ratio of a doctor as the key-decision maker in the bipolar group (41.61±26.64) was higher compared to the other disorder groups (psychotic group (32.47±26.08) and depressive group (34.42±18.68), p<0.001). In the preferred drug type category, the psychotic group (27.27±29.40) had a higher preference rate for extended release drugs (bipolar group(20.82±19.27) and depressive group(19.30±15.68), p<0.001). **Conclusions:** This nationwide study revealed the general preference regarding medications and also showed the differences among patients with three major psychiatric disorders. Providing personalized medicine considering a patient's preference and expectations for the drug may contribute to improvement of drug compliance and lead to better treatment outcomes.

No. 33

Deafness and Deafferentation: Two Cases of Auditory Release Hallucinations in Bilateral Hearing Loss

Poster Presenter: Hana Millen, M.D.

Co-Authors: Sara Brady, M.D., Caitlin Joy McCarthy, M.D.

SUMMARY:

Charles Bonnet first described visual hallucinations associated with blindness, which resulted in the eponymous syndrome. He postulated that "release hallucinations" manifest due to decreased visual

sensory input. A similar phenomenon has been described in the literature whereby auditory hallucinations are common in patients with hearing impairment and can increase with severity of impairment. The proposed mechanism is not fully understood but is thought to be related to the absence of the external sensory input and its implicit inhibitory effect on neural networks involved in sensory processing; thus the brain is “released” and generates perceptions, known as deafferentation. Previous case reports have described patients with acquired deafness experiencing auditory hallucinations, often in the form of music or voices. In this poster, we describe two cases of individuals with no history of psychosis and bilateral acquired deafness who reported distressing auditory release hallucinations that were treated with pharmacotherapy and psychoeducation. Ms. A is a 61-year-old female with a history of obesity, chronic pain, insomnia, and acquired severe sensorineural hearing loss. She had a significant history of physical abuse in a relationship from her teens to early 30s. Tinnitus and musical hallucinations began shortly after onset of moderate/profound hearing impairment and progressed to threatening voices and paranoia, both of which negatively impacted her sleep quality. Olanzapine, started in an emergency department, improved Ms. A’s insomnia, but did not lessen her hallucinations. Ms. A’s hallucinatory symptoms gradually diminished following psychoeducation and initiation of SSRI (subsequently augmented with quetiapine to improve sleep and anxiety) to treat symptoms of PTSD. Mr. B is a 78-year-old male with a history of major neurocognitive disorder, panic disorder, obstructive sleep apnea, seizure disorder and bilateral sensorineural hearing loss who presented for worsening auditory hallucinations over the year. He had been started on quetiapine by neurology for hearing arguing voices and “psychedelic” music that was increasingly distressing to him. Quetiapine proved ineffective, and he reported hearing “explosions” that reminded him of pre-seizure auras but were not, in fact, seizure-related. Quetiapine was discontinued, and risperidone was initiated. After several weeks, Mr. B reported that the explosions resolved completely. Although auditory hallucinations continued with mild paranoia, Mr. B’s wife described his mood as improved following treatment with risperidone.

These cases further support that, despite the prevalence and distress caused by the phenomenon of deafferentation hallucinations, they remain an underreported symptom with need for additional research. Here, we explore the presentation and treatment course of these two patients, and how underlying conditions contributed to their symptoms and helped guide treatment.

No. 34

A Case of Post-Covid-19 Anti-NMDA Receptor Encephalitis With Catatonic Features

Poster Presenter: Pooja Chaudhary, M.D., M.P.H.

Co-Authors: Leonardo Alexandre, Caesa Nagpal, M.D.

SUMMARY:

Background: Anti-N-methyl-D-aspartate (NMDA) receptor encephalitis is a rapid onset immune-mediated neuroinflammatory disease, with neuropsychiatric symptoms and the presence of CSF antibodies against the NMDA receptor¹. Apart from well-documented triggers such as ovarian teratoma and herpes simplex encephalitis¹, COVID -19 infection is also a possible etiology². Immunotherapy modalities such as corticosteroids, intravenous immunoglobulin (IVIG), plasmapheresis (PLEX) & Rituximab are first-line treatment options¹, but fewer studies focused on using Lorazepam³. **Case Report:** A previously healthy 19-year-old male with no past psychiatric history presented to an inpatient psychiatric facility due to auditory hallucinations (AH), depression & headaches. Careful history revealed he had COVID-19 infection a month before admission with initial symptoms of anxiety, insomnia, depressed mood, and headache, but rapidly progressed to AH, paranoia, and functional impairment. During hospitalization, he became selectively mute, immobile, stopped eating and drinking, developed low-grade fever and twitching in his right arm. Haloperidol, Benzotropine, Olanzapine, Lorazepam, and Hydroxyzine were administered with no benefit. He was later transferred to inpatient neurology for investigation of suspected autoimmune encephalitis. Routine labs included CSF analysis, HSV PCR, Paraneoplastic Autoantibodies, LFT, CK, ESR, CRP, Blood Culture, Treponemal Antibody, Lyme Disease Antibody, Total EIA w/Reflex, West Nile Virus Antibodies and Cu level. Imaging

tests included CT brain/chest/abdomen/pelvis, MRI brain and cEEG. CSF showed mild lymphocytic pleocytosis with anti-NMDA antibodies. AST, ALT, ESR, and CRP were elevated. Imaging findings were unremarkable except for cEEG indicative of moderate encephalopathy. During neurology hospitalization, he received Valproic acid, IVIG, and steroids, with no improvement. He remained selectively mute and endorsed his right arm and mouth twitching. Due to lack of response, PLEX alternating with steroids was started, but he developed a fever of 101.2F, tachycardia 140, & elevated BP 150/80, raising concerns for PLEX reaction and/or malignant catatonia. Another Lorazepam trial was given which showed significant improvement in his symptoms. He recovered completely in a month at a long-term acute facility & was successfully discharged home.

Discussion: Anti-NMDA receptor encephalitis with catatonic features can present secondary to Covid-19 infection. Studies have shown that psychiatric symptoms such as hallucinations, changes in speech, disorganized thinking, catatonia, etc. may develop over weeks to months followed by neurological symptoms & prolonged deficits¹. Although standard treatments such as steroids, IVIG, PLEX & Rituximab proved ineffective in this case, Lorazepam helped reduce symptoms. Therefore, we recommend that the Lorazepam trial should be considered in the setting of catatonia in post-Covid-19 anti-NMDA receptor encephalitis.

No. 35

Medical Trainee Perceptions of Mental Health, Help-Seeking, and Barriers to Access: A Qualitative Pilot Study

Poster Presenter: Brianna J. Engelson, M.D.

Co-Authors: Eric Leppink, M.D., Katharine Nelson, M.D.

SUMMARY:

Purpose: Medical students report high rates of mental illness and/or psychiatric symptoms, but few ultimately seek care. Despite this concerning trend, current understanding of this problem, and its implications for later clinical practice, remain incomplete. The present study evaluates medical students' perceptions of mental health and utilization of mental health care using a group

interview model from a constructivist grounded theory perspective. **Methods:** A group of seven current medical students in their third and fourth years of medical school were recruited to participate in a structured group interview. Six prompts with associated probing questions were developed to guide conversation, focusing on perceptions of mental health in the medical community, pursuing care for mental health concerns, and barriers to accessing care for mental illnesses. Responses were coded by an independent evaluator, who then identified primary response themes and representative quotes for each prompt. **Results:** Discriminatory attitudes towards mental illness, marked barriers to care, and repercussions for pursuing care were consistent themes throughout the discussion. Participants unanimously supported physicians/students with mental illnesses being able to practice medicine while accessing adequate care. Participants were less likely to say they would seek care for themselves, however, and several reported concerns that doing so would negatively impact licensing later in their careers. **Conclusions:** While medical students themselves express support for peers and physicians struggling with mental illness, perceived discrimination in the medical field remains high. Concerns about licensing, professional perception, and accessibility of care for mental illness are prominent concerns, even in medical trainees. A self-discriminatory attitude towards mental illness is ongoing among medical students as demonstrated in this pilot sample, possibly driven by both historic problems and ongoing concerns about licensing and professional image. Student mental illness is of critical concern, and more direct interventions to address perceived barriers to care are essential.

No. 36

Sibling Support Program: A Novel Peer Support Intervention for Parents, Caregivers and Siblings of Youth Experiencing Mental Illness

Poster Presenter: Emily Rubin, M.A.

Co-Authors: Joshua Feriante, Ariella Shayani, M.D., M.P.H., Adele Pressman, M.D.

SUMMARY:

Caregivers and siblings of youth with mental illness often experience role-related psychological challenges, and it is important to focus on the needs of these family members. Existing literature demonstrates that caregivers and affected children benefit from participation in peer support and family-centered programs. This paper describes the Sibling Support Program: A Family-Centered Mental Health Initiative (SSP), a novel intervention for families of youth with mental illness. The SSP distinguishes itself from existing family-centered programs in that it utilizes a unique combination of peer support, parent mentor guidance, and clinician-led group therapy. The paper details the structure of the treatment model and presents preliminary data from participant surveys. Results show preliminary indications that the program provides both emotional and practical benefits. Along with high satisfaction ratings, family members report decreased feelings of isolation, gains in knowledge, and more positive thinking after program participation. Caregivers report that the SSP helped improve their understanding of the impact of a child's mental illness on family members and that they learned about effective family management strategies and access to resources. Siblings report learning coping strategies and feeling better after meeting peers with shared experiences.

No. 37**The Brainy Bunch: A Student-Directed Mindfulness and Study Habit Educational Series for Children and Adolescents in the Deaf Community**

Poster Presenter: Rachel Marie Shenoj, B.A., B.S.

Co-Authors: Snigdha Srivastava, B.S., Kirti Saxena, M.D.

SUMMARY:

Background: The COVID-19 pandemic has had significant effects on the health and well-being of students, leaving students months behind in their subjects, drastically limiting healthy socialization essential to overall well-being, and widening pre-existing opportunity gaps, especially among systemically disadvantaged students. Deaf communities face high mental health burdens, though few studies have been conducted assessing

prevalence rates of mental disorders in this population. Addressing mental health disorders and promoting healthy stress-management techniques are urgent public health priorities. This project aimed to encourage coping skills among deaf and hard-of-hearing middle school students with educational and experiential activities specifically aimed toward promoting mindfulness practice and healthy habits.

Methods: With funding support from the American Psychiatric Association Helping Hands Grant for Medical Students, a six-session curriculum on Healthy Eating, Fitness, Sleep Hygiene, Mindfulness, and Daily Routine/Study Habits was created and administered to twenty-four 6th-8th grade students from historically underserved backgrounds enrolled in the Regional Day School Program for the Deaf (RDSPD) at a local school in Houston, TX. This curriculum was taught by medical students, resident physicians, fellow physicians, and a mind-body interventionist, with the assistance of an American Sign Language interpreter. School teachers and social workers were interviewed regarding program efficacy and lessons learned. **Results:** The school social worker reported that with return to in-person learning, students experienced difficulties with concentration, resuming daily structure in their routines, as well as lack of stable housing and income among their families. They reported hope for improved study habits and routines. Middle school students particularly enjoyed the mindfulness session. They learned that their interactions with healthcare should always involve an interpreter.

Conclusion: This project effectively delivered a curriculum to help middle school students in the Deaf community develop healthy habits and mindfulness techniques with the return to in-person learning in the wake of the COVID-19 pandemic. Medical student takeaways included improved knowledge of communication strategies with adolescents who are deaf or hard-of-hearing, comfort in working with this population, and skills in collaborating with an interpreter to effectively deliver information.

No. 38**Treating Behavioral Disturbances of Prader-Willi Syndrome With Quetiapine**

Poster Presenter: Sera Chun, M.D.

SUMMARY:

Introduction: Prader-Willi Syndrome (PWS) is a genetic, neurodevelopmental disorder caused by paternal deletion of chromosome 15q11-q13 in 70% of cases. Behavioral disturbances are common and present as tantrums, aggression, obsessions, skin picking, hyperphagia, and hypersomnolence. There is increased risk of psychotic and affective disorders, and thorough assessment is necessary to determine treatment targets. Risperidone is the most widely studied atypical antipsychotic for use in children and adolescents. However, we present a case of quetiapine use following a paradoxical response from risperidone in treating aggression in Prader-Willi Syndrome. Case Discussion: A 17-year-old male with Prader-Willi Syndrome was admitted to the child and adolescent psychiatric inpatient unit after property destruction at school, worsening anger outbursts and impulsivity. His behavioral disturbances were severely impacting his social functioning and he was becoming a danger to himself and others. He had already been trialed on risperidone in the past and experienced a paradoxical effect of worsening agitation. However, it was felt that a trial of another atypical antipsychotic was warranted given imminent risk of harm if his agitation were to be left untreated. Quetiapine 50mg PO QHS was initiated and titrated with good effect on his behavior. The patient was discharged home on quetiapine 50mg PO TID. On follow up contact with the family, they reported that the patient's behavioral disturbances were minimized, allowing him to return to school under good behavioral control. There are concerns whether to treat behavioral symptoms in patients with genetic syndromes, but when the disturbances impact daily functioning and the patient poses a danger to self or others, medication management may be considered to help control the behavioral disturbances and help patients return to their social functioning.

No. 39**TikTok Influence on the Social Contagion of Mental Health Disorders in Youth**

Poster Presenter: Sera Chun, M.D.

SUMMARY:

Introduction: The rise in the influence of TikTok among children and adolescents has exponentially grown since the COVID-19 pandemic. Social media platforms can have positive impacts on mental health, from raising awareness of mental health concerns to empowering those with mental illness. However, social media use can also have negative impacts on mental health of youth when a population overly identifies with the shared content leading to social mimicry. This has led to a recurrence on mainstream discussions on the social contagion phenomenon such as that of the mass social media-induced illness, TikTok Tic Disorder, described as the spread of functional tic disorder among teens influenced by TikTok posts on Tourette's Disorder. To better understand the phenomenon in psychiatry and further the national conversation on the risks of social media use, we present a case of an adolescent male with major depressive disorder with psychotic features who developed 32 distinct identities and the correlation of the influence of TikTok use. Case Discussion: A 17-year-old male with major depressive disorder with psychotic features was admitted to the child and adolescent inpatient psychiatric unit after a suicide attempt by overdose on 25 tablets of acetaminophen. Pertinent past psychiatric history included post-traumatic stress disorder (PTSD) secondary to chronic physical abuse by his father. He endorsed worsening depression, anxiety, and auditory and visual hallucinations. His symptoms have impacted his social functioning significantly causing him to drop out of school, and he had been spending his time engaging in TikTok videos to better cope with his depression. During this time period, the patient identified 32 distinct personalities, reportedly influenced by the social media content to which he was exposed, but recurrent memory gaps were not present to further suggest dissociative identity disorder or consider dissociation associated with PTSD. Therefore, initial treatment was targeted to depression and psychosis on the inpatient unit, but due to the complexity of deconstructing his well-formed multiple identities, his care was transitioned to a residential treatment facility. After 12 weeks of management with pharmacotherapy and psychotherapy, he was able to identify these personalities as elaborate coping mechanisms rather

than actual dissociative identities. The patient was discharged home and continued care in an outpatient setting with no recurrences of acute hospitalization to our knowledge. With the influence of TikTok and the detrimental effect of mass social media-induced illnesses, there is a need for increased screening of social media use and appropriate counseling to young children and adolescents with mental health disorders who are more vulnerable to be negatively influenced by social media platforms like TikTok.

No. 40

Two Birds, One Stone: Lurasidone Pharmacotherapy for Comorbid Autism Spectrum Disorder and Schizophrenia

Poster Presenter: Emma Banasiak

Co-Author: Lauren Kaczka-Weiss, M.D.

SUMMARY:

A 15-year-old male with autism spectrum disorder, generalized anxiety disorder, and attention deficit hyperactivity disorder presented for a follow-up appointment during which he reported new onset visual and auditory hallucinations. He took Sertraline 50mg for the past two years before the onset of hallucinations without significant adverse effects. His previous medication trials included Risperidone for irritability and agitation related to Autism Spectrum Disorder. Risperidone was discontinued due to reported gynecomastia and QTc prolongation; therefore, the patient was started on Aripiprazole. After one week, Aripiprazole was stopped because he could not tolerate the side effect of sedation. A trial of Lurasidone was started because the patient continued to report visual and auditory hallucinations and new onset paranoia, *deja vu*, and thought broadcasting. He was also referred to pediatric neurology to evaluate for any neurological or organic causes of his symptoms. The patient had a normal EEG and an incidental finding of an unruptured left superior hypophyseal aneurysm that was subsequently coiled and clipped; this aneurysm was not thought to be contributory to symptoms of psychosis and his symptoms did not improve post-operatively. Two weeks after Lurasidone was started, the patient reported his symptoms of paranoia and thought broadcasting were less intense. A year later,

visual and auditory hallucinations returned and the patient was also having difficulty with reality testing at this time. The dosage of Lurasidone was increased and at a follow up appointment one month later, the patient reported lessened frequency and intensity of auditory and visual hallucinations however he noted these were still present. Autism Spectrum Disorder (ASD) and psychosis have high rates of comorbidity with some studies reporting up to 34.8% (1). Moreover, individuals with ASD experience their first psychotic episode younger than those without a history of neurodevelopmental disorders (2). Despite the high rate of comorbidity, there is little literature on pharmacologic therapy for patients affected by both (3). Risperidone and Aripiprazole are FDA-approved and typically prescribed as first-line pharmacotherapy for irritability and agitation symptoms related to ASD (4). Current literature is mixed regarding the effectiveness of the off-label use of Lurasidone for ASD related irritability and agitation symptoms (5). As an antipsychotic, Lurasidone is approved for schizophrenia in those over the age of 13 and is also considered to have a favorable side effect profile compared to other antipsychotic medications (6). Since Lurasidone is prescribed to treat symptoms of both disorders, it was chosen for use in the above patient, especially after he could not tolerate Aripiprazole and Risperidone. This case report describes using Lurasidone as a pharmacotherapy for symptoms of psychosis, which also decreased the patient's agitation and irritability symptoms.

No. 41

Excitatory Catatonia and First Episode Psychosis in a Child With Autism Spectrum Disorder

Poster Presenter: Elina Slobod, D.O.

Co-Authors: Mei Lin Margono, D.O., Archadhaa Sivakanthan, M.B.B.S., April Seay

SUMMARY:

Introduction: Autism spectrum disorders (ASD) and Schizophrenia are known to be comorbid disorders and potentially genetically related [1-2]. Catatonia can co-occur in psychotic disorders as well as in children with ASD [3-4]. Excitatory catatonia is a less common type characterized by prolonged periods of psychomotor agitation [5]. Children with ASD are at

risk for abuse and those with a history of trauma can present with increased activity as well [6]. Presence of all three can complicate the diagnosis and management of patients. **Case Report:** This is a teenager born in Haiti with global developmental delay and ASD. At baseline she speaks in phrases, eats independently and requires assistance dressing and bathing. One month prior, she displayed psychosis, which mother believed was due to her being possessed by a spirit. She was treated with risperidone 0.5mg twice a day for seven days as outpatient, without effect. On admission she appeared malnourished and was found to have a reportedly self-inflicted cut on her heel. Child Protective Services (ACS) were contacted. Psychiatry was consulted for agitation and bizarre behavior-walking around bouncing at the knees, putting on her sock and taking it off repetitively. Bush Francis Catatonia Rating score was 28. A presumptive diagnosis of excitatory catatonia was made and treated with lorazepam 1mg three times a day. The agitation slowly improved and the psychosis became more prominent, requiring increase in the dose of risperidone. Ultimately patient returned to baseline and was discharged to foster care due to suspicions of abuse by ACS. Conclusion: Given high risk of mortality, it is imperative to have high clinical suspicion of excitatory catatonia in non-verbal patients with ASD who appear to have a significant change in baseline behaviors. Further research is needed to clarify the relationship between ASD, Psychosis and Catatonia.

No. 42

Patient and Physician Perspectives of Telepsychiatry During Follow-Up Care Via Telehealth/Phone Session Versus Face to Face Encounter

Poster Presenter: Sharmin Kamrun, M.D.

Co-Authors: Olga Koblova, Md Kawsar

SUMMARY:

Aims: Telehealth /e-health is the use of digital information and communication technologies to access health care services remotely. Telepsychiatry (TP) is the application of telemedicine in the field of psychiatry. Over the last six decades, TP has been more popular and acceptable due to its easy accessibility, especially for those living in rural or

isolated communities or for people with limited mobility, time, or transportation options. We aim at conducting a literature review to highlight the advantages and disadvantages of TP from patient and providers perspective to help clinicians determine whether TP should be considered as a modality instead of face to face or in person visit. **Methods:** We conducted a literature review using 2 databases (Google scholar and PubMed) with search terms 'telepsychiatry, patient and physician perspective, telemedicine, videoconferencing, satisfaction, acceptability, and barriers. The papers in this review spanned 48 years of research from 1973–2021, total of 32 papers were included and reviewed based on the relevance. **Result:** Benefits of TP had the most data for treatment adherence (47 articles)¹³. It also showed TP is useful in special populations like HIV due to less perceived stigma and more acceptable in children and elderly with neurocognitive disorders ¹⁹and their caregivers. Providers found TP equally effective as reported in most studies ^{25, 26,27,29,31} . However, difficulty in building therapeutic alliance ^{26,27,31} and technical barriers ²⁹ were perceived most concerning by the providers. **Conclusion:** Based on the review from patient and providers perspectives, we may conclude that TP is effective as it may improve medication adherence, reduce stigma in special populations, save cost expenses and provide better patient satisfaction. Despite minor concerns regarding therapeutic alliance, privacy, and technology limitations from clinicians' perspectives ³⁰, TP can be an alternate option instead of face-to-face encounter as it renders a host of benefits.

No. 43

Covid-Induced Psychosis in an 11-Year-Old Child With Autism Spectrum Disorder and the Role of Depakote

Poster Presenter: Sharmin Kamrun, M.D.

Co-Authors: Olga Koblova, Sahil Gehlot

SUMMARY:

Post-COVID psychosis in children is very rare but several studies have indicated there is a risk of new onset or exacerbation of psychotic symptoms^{1,2}. To date, some case series report new onset psychosis, however, few cases have been considered in the

context of co-morbidity with autism spectrum disorder (ASD). ASD patients are more vulnerable to stress, which can precipitate psychotic symptoms due to particular genetic tendencies and cognitive vulnerabilities³. According to the most recent epidemiologic studies, ASD affects 1 in 54 individuals⁵. Most ASD patients have comorbid intellectual disability and other psychiatric conditions such as ADHD, anxiety disorders, disruptive/impulse-control/conduct disorders, depressive disorders, and obsessive-compulsive disorder⁶. Some developmental pediatricians consider children and youth with ASD are vulnerable to the effects of prolonged isolation and quarantine, leading to difficulty adapting to new form, especially as inflexibility and insistence on sameness are hallmark characteristics of ASD and highlights the necessity to address the needs of children with ASD and their families⁷. Research suggests that the first-episode psychosis with co-morbid ASD is likely to be resistant to treatment with antipsychotics⁸, as it is shown in the case presented in this case report. Patient is a 11-year-old boy with ASD, ADHD, expressive language delay who presented with aggressive behavior towards family members after he had asymptomatic COVID in September. Patient was increasingly psychotic with increased behavioral disturbances, physical aggression, verbal outbursts and his behavior remain unchanged despite being compliant with antipsychotics. In November, patient was transferred to Emergency department (ED) where he was found to be floridly psychotic, verbally non-redirectable, requiring multiple doses of intramuscular injections and oral PRN medications for emergent behavior. Pertinent labs including UTOX, COVID, CT head were unremarkable. Patient had at least 5 episodes of severe agitations that required Intramuscular sedatives. Afterwards, anti-psychotics were discontinued and he was started on intravenous loading dose of Depakote - 40mg/kg followed by oral Depakote that demonstrated remarkable improvement in mood and psychotic symptoms in patient. Due to genetic predisposition and cognitive vulnerabilities, children with ASD are prone to develop new onset of psychotic disorder and deterioration of existing mental illness¹⁵. Our ASD case presented with acute psychosis in the background of COVID infection that might have developed as a post-COVID sequelae. Use of

Depakote has been proven to be effective in treating affective instability, impulsivity, and aggression in autism spectrum disorder, however, the role of Depakote in post COVID psychotic episodes in patient with ASD has not been studied yet, hence more systemic research studies are needed in future.

No. 44

Psychological and Cognitive Factors Linked to Adherence to Treatment in an Outpatient Cardiology Clinic

Poster Presenter: Meghan Oswald, M.D.

Co-Authors: Aatman Makadia, M.D., Greg Haggerty, Ph.D., Naomi Dhawan, D.O., Michael Angela Omongos

SUMMARY:

Background: Approximately 50% of people diagnosed with cardiovascular disease had poor adherence to medications (Fredinand et al., 2017; Kornish et al, 2013). Nonadherence is linked to increases in strokes and mortality in stable coronary artery disease patients (Gehl et al., 2007). Our study looks to investigate the relationship between psychological symptoms, number of medications prescribed, ratings of physical health, social support and personality factors. **Methods:** 186 patients consented and completed a packet of self-reports who were being treated at a private cardiology clinic that is a teaching affiliate of neighboring hospital. Participants average age was 66.2, 55.4% were male, 85.5% were Caucasian, 6.5% Hispanic, 2.2% African American, 2.2% Asian, and 0.5% "Other." The packet included the Medical Outcomes Study Measure of Patient Adherence Survey Instrument (Hays, 1994), Multidimensional Scale of Perceived Social Support (Zimet et al., 1988), SPECTRA-Indices of Psychopathology (Sinclair & Blais, 2018), Inventory of Interpersonal Ambivalence (Siefert, 2015), and a rating of their general physical health at the time. We also collected chart data including how many medications they were prescribed at the time of the study. **Results:** Self-reported better adherence was positively correlated to perceived social support from family ($r = .18, p=.03$), friends ($r=.22, p<.01$), and overall support ($r=.17, p=.03$) and psychosocial functioning ($r=.29, p<.01$). Adherence ratings were negatively correlated with number of medications

($r=-.29$, $p<.001$), self-reported ratings of general physical health ($r=-.19$, $p=.01$), interpersonal ambivalence ($r=-.34$, $p<.001$), and symptom scales measuring depression ($r=-.25$, $p<.01$), anxiety ($r=-.23$, $p=.01$), social anxiety ($r=-.24$, $p<.01$), PTSD ($r=-.18$, $p=.05$), general psychopathology index ($r=-.20$, $p=.03$), and cognitive problems ($r=-.28$, $p<.01$).

Discussion: Findings highlight the importance of assessing and addressing patients' social support system, psychological and cognitive well-being as well as being mindful of the burden of the number of prescribed medications to improving adherence. This information could inform practitioners about who is at high risk for nonadherence and be better able to address these risk factors during the visits. This is an area where psychiatrists collaborate and educate our medicine colleagues in the importance of understanding how patients relate to others may improve physician-patient treatment alliance thereby improving patient care.

No. 45

Two Similar Cases of Comorbid Psychosis and Esrd: Opposite Results Dependent on Social Support

Poster Presenter: Cezary Czekierdowski Jr., M.D.

Co-Author: Facundo G. Sanchez, M.D.

SUMMARY:

Mr. AR is a 44-year-old single man with a history of schizophrenia and multiple hospitalizations, end-stage renal disease (ESRD) on hemodialysis, domiciled in supportive housing for the formerly street homeless, and absence of other social support. He was transported to our emergency department after an acute decompensation of his schizophrenia with grossly disorganized behavior and after missing multiple dialysis appointments and non-adherence to antipsychotic treatment. His behavior included scatological rituals. He was admitted to the inpatient unit for management and stabilization. His condition improved; however, due to a lack of social or family support, and the need for highly specialized medical treatment, his recovery and discharge planning were significantly prolonged, reaching almost three weeks. Factors affecting discharge included referral to Adult Protective Services and difficulty in obtaining referral to a psychiatric clinic due to comorbid ESRD. Conversely,

Mrs. PS, a 60-year-old Bengali married woman with a history of schizoaffective disorder with previous psychiatric inpatient hospitalization in NYC and in Bangladesh; history of diabetes, hypertension, and ESRD on hemodialysis was domiciled with her husband and two of her children. She was brought to the hospital by her family after exhibiting worsening paranoid and disorganized behavior, religious delusions, and sexual preoccupation, together with auditory and visual hallucinations. Due to her severe paranoia, she was refusing to receive dialysis. She was hospitalized for stabilization. Her family members were actively involved in the treatment plan and frequently visited her, which was noted to play a positive role in expediting her recovery. Throughout her stay, her condition improved, and she was discharged to her family within one week. This report presents two patients with acute psychosis and comorbid ESRD. In a population-based study, previous studies found that schizophrenia is associated with a 25% increase in the risk of developing CKD within only a 3-year follow-up. This may be accounted for by an unhealthy diet, smoking, metabolic syndrome, and low socioeconomic status.² In addition, psychosis may be precipitated by accumulated uremic toxins in adult patients with renal disease.² Although these two patients had similar medical conditions and acute psychosis, they had very opposite social support systems. Prior studies highlighted the importance of social support in reducing the number of hospitalizations, recovery time, length of stay,³ and improving adherence to treatment.⁴ In our cases, the patient with poor social support had almost three times longer recovery time and length of stay. Further studies are needed to assess the impact of social support on disease outcomes and prognosis in those with psychotic disorders and severe medical comorbidities.

No. 46

Admission Rate of Patients With Most Common Psychiatric Disorders During the 2020 Covid-19 Pandemic

Poster Presenter: Marshall Johnson

SUMMARY:

Context: With the onset of the COVID-19 pandemic, emergence of stay-at-home orders, and general

societal fears of infection, people in all parts of the world have been displaced into their own homes. This sudden exodus from places of work, school, and congregations ultimately boils down to an altering of an individual's routine. As creatures of habit, a change in activity and space may result in a change in neural and chemical pathways, manifesting as psychiatric pathology. With the world population continuing to grow and interconnect, our understanding of epidemiology and the gamut of infectious diseases continues to unfold. It becomes readily apparent that this will not be the last global microbial threat for our species. Thus, it is prudent to take this opportunity to determine the possible extent of mental distress a pandemic can cause and its taxing nature on certain divisions of our healthcare system. Objectives: The aim of this study is to determine if the COVID-19 pandemic caused an increase in detected psychiatric illness over all cause admissions within the emergency department, psychiatric unit, clinics, and medical units. Methods: We conducted a retrospective population-based study across the South Atlantic Division of HCA which served 1.9 million patients in 2019. A random sample of 69,024 patient encounters with psychiatric related ICD-10 codes were gathered from the 2020 calendar year, and compared against the 2019 calendar year. We calculated odds ratios, confidence intervals, and descriptive statistics based on the earliest clinical location for all patients. Statistics were run by clinical location and type of psychiatric diagnosis to determine the shifts in admission patterns to elucidate where and when patients were most likely to seek psychiatric care. Results: Our results show that among all patients, a diagnosis of any psychiatric disorder was slightly more likely in 2020 than 2019. This included the categories related to schizophrenia, mood disorders, anxiety, and also suicidal and homicidal ideations. Findings were noted with an overall low occurrence for each category. Interpretation of the data showed more significant changes in the inpatient settings followed by emergency room settings. No significant changes were observed in nonpsychiatric outpatient and surgery centers. Conclusion: The data partially reflects our initial hypothesis that admission rates would fluctuate during the defined study dates, a decrease in admission rates would be observed during the COVID-19 pandemic, however an

increased rate in psychiatric encounters in acute care facilities. A better understanding of the comprehensive impact of a pandemic, including the effect of the disease itself, quarantines, and social climates can help better inform healthcare leaders, policy makers, and other authorities about groups of patients who are at risk for undertreatment for mental illness.

No. 47

Town or Country: A Comparison of Residents' Experience in Rural and Urban Settings

Poster Presenter: Marley Ann Doyle, M.D.

Lead Author: Tony Le

Co-Author: Riley D. Machal, M.D.

SUMMARY:

According to the 2020 National Survey on Drug Use and Health, 52.9 million people above the aged 18 or older report have any mental illness.¹ 17.0 million people aged 18 or older report having any mental illness and substance drug use. In the 2020 National Survey on Drug Use and Health, the number of adult psychiatrists will decrease by 20% in 2030 while the demand for their services will increase by 3%. These shortages are particularly felt in rural America as there are 3.28 psychiatrists per 100,000 while urban areas have 10.62 psychiatrists per 100,000 (2). Nebraska faces even further shortages of rural behavioral health providers. 88 of Nebraska's 93 counties are designated as federal behavioral health professional shortage areas. In 2020, Nebraskan rural counties had 3.0 psychiatrists per 100,000 while urban communities had 11.3. From 2010-2020, the percentage of psychiatrists in urban communities remained constant while rural counties decreased by 39%. Rural rotations have been implemented by many programs to increase the number of people pursuing careers in these areas. Past literature has shown rural origin, rural practice intention and duration rural rotations strongly predict future rural practice (3). Evaluations of rural and urban rotations from psychiatry residents in Nebraska were collected and analyzed from 2009-2021. Evaluations contained the overall rating of the rotation, quality of support staff, quality of facilities, quality of education and workload based on a Likert scale. Scores were statistically similar in both rural and urban rotations.

71% of residents cited their state of origin and location of family to be the main driver of practice location. Other factors cited that influence location of practice include obligation to serve rural areas, established professional/social networks in an existing city and quality of life associated with a city, including being family-friendly, safe and affordable. Psychiatry residents from Nebraska have found rural rotations to be beneficial to their training. Exposure to rural rotations during residency and supporting residents from rural communities are critical in addressing the shortage of psychiatrist in rural areas. BHECN will continue to fund and support rural psychiatry resident rotations

No. 48

L- Theanine Effect on Cognition, Anxiety and Negative Symptoms of Schizophrenia: A Comprehensive Review

Poster Presenter: Migena Dervishi

Co-Authors: Ashley Fuchs, M.D., Shahan Sibtain, M.D.

SUMMARY:

L- theanine is a non- protein amino acid that is present in tea, and it is known to alter aspects of the brain function in humans. It is presented in tea (*Thea sinensis*, Theaceae), *Ilex guayusa* (Aquifoliaceae) and *Boletus badius* (Basidiomycetes), *Camellia Sinensis* (green tea). Animal neurochemistry studies suggest that L-theanine increases brain serotonin, dopamine, GABA levels and has micromolar affinities for AMPA and NMDA receptors. Chemically, theanine is L- γ - glutamyl ethylamine or 5-N-ethyl- glutamine, with two chimeric forms, which is principally synthesized in the root of tea and accumulated in the leaves that are consumed as beverages. Therefore, its mechanism of action is mediated through glutamate receptors. Earlier research studies showed that L- theanine plays a role in critical aspects of attention, mental alertness, and arousal. It has also been proven that L-theanine relaxes the brain by increasing the Alpha frequency band (as detected on electroencephalograph), without causing drowsiness. This integrative literature review aimed to supply a comprehensive review of research studies that analyzed the effect of L-Theanine effects on cognition, negative symptoms of schizophrenia, stress, depression and anxiety. Literature researchers

from (2015-2022) performed a meta-analysis on the effect of L-theanine by evaluating the depressive symptoms, anxiety, sleep rate, attention and by obtaining blood samples. This systematic literature review was conducted based on sources such as Web of Science databases. The literature review addressed human studies with more emphasis on research trials conducted between 2017- 2022. With high confidence, we concluded that the effect of L- theanine is superior to placebo in improving cognitive functioning and sleep quality, decreasing stress and anxiety level. In conclusion, L- Theanine is effective in improving the positive symptoms in patients with schizophrenia. In addition, it improves sleep quality in such patients. There are limitations in evaluating these symptoms due to short duration of the research studies conducted so far.

No. 49

High Yield Psychiatry for the Non-Psychiatrist

Poster Presenter: Christopher M. Ramsay, M.D.

Lead Author: Julie B. Penzner, M.D.

Co-Authors: Ye Kyung Song, M.D., Ph.D., Heather Vestal, M.D.

SUMMARY:

Intro/purpose: Psychiatric patients are often first seen by non-psychiatric providers.^{1,2} Pandemic-related strain has increased mental health needs in US adults, but an increase in mental health services has not yet occurred³. Therefore, psychiatric patients would benefit from efforts to teach psychiatry to non-psychiatric colleagues. However, work in psychiatric education focuses on teaching to psychiatrists,⁴ despite evidence that teaching psychiatry to non-psychiatric providers can improve provider confidence and patient outcome.⁵ To address the educational gap, we created a curriculum for the non-psychiatrist. Materials were developed from psychiatrist responses indicating what they feel is high-yield for non-psychiatrists to know about psychiatry. Methods We surveyed 100 psychiatrists across two institutions, asking "What are ten things that are important for ALL providers to know about psychiatry?" Answers were free-response. To translate subjective to objective data, team assigned each response to one of 25 ordinal categories. Answers often fit multiple categories, but

were only placed into the one that was their “best fit.” Once all responses were categorized, we used the content in the most common ten categories to generate accessible lecture material. We then gave talks to non-psychiatrist providers, and allowed them to vote on which of the ten topics they would like to learn about. They then heard short lecture modules on those topics, followed by Q&A. Results The top ten categories are depicted in Table 1. The most common topic considered important is psychiatric medications, followed by delirium and then a broad category of “diagnosis or evaluation.” Interestingly, the combined “top 10” list of all responses did not focus on diagnostic criteria for major psychiatric diagnoses. In the first lecture given from these materials, a Grand Rounds to the Department of Emergency Medicine, participants selected Agitation, Suicide Risk Assessment, and Therapeutic Technique in the Acute Care Setting to learn about. Q&A at the conclusion of the lecture focused on therapeutic technique in the acute care setting. Conclusions The main finding of this study is that when asked, psychiatrists most often said that “medications,” “delirium,” and “diagnosis or evaluation” were most important for non-psychiatrists to know about. Psychiatrists of all stages are an important group from whom to collect “pearls” about psychiatry that are educationally useful, particularly for non-psychiatric colleagues, who will be increasingly relied upon for mental health care, and do not have sufficient resources to do this effectively. Future research-related directions include teaching to other non-psychiatric learners, to further examine what topics they feel are important. We will also refine lecture materials as we gain experience with them. A limitation of this study is that categories were created heuristically by psychiatrists, ultimately shaped educational content.

No. 50

Successful Use of Buprenorphine Microdosing to Taper High-Dose Opioid Use in Patient With Dependent and Narcissistic Traits

Poster Presenter: Christopher M. Ramsay, M.D.

Co-Authors: Stephanie Karvosky, Pharm.D., Jason Tatreau, M.D., Amber Kapuganti, Pharm.D.

SUMMARY:

Introduction: Commonly used for medication assisted treatment in opioid use disorder, buprenorphine use may be limited in acute care settings due to precipitation of opioid withdrawal. Micro-dosing, or micro-induction, is the addition of small, incremental doses of buprenorphine, often while on a full opioid agonist.^{1,2} Microdosing is a known effective strategy for pain management of opioid-induced hyperalgesia.³ Buprenorphine’s high binding affinity and slow dissociation enable low doses to progressively displace full agonists from the receptor without precipitating withdrawal. ⁴ Although microdosing was initially implemented at Duke for opioid-induced hyperalgesia, here we describe a case in which micro-induction was used in a patient with Narcissistic and of Dependent personality traits, prominent pharmacologic fixation, and high post-operative opioid usage. Case: A 43 y.o. M with a past history of depression and anxiety, more than 20 lifetime psychiatric admissions, trialed on at least 20 psychotropics, presented to Duke Regional Hospital Inpatient Psychiatry following minor surgical procedure 3 days prior. He had a history of many ED visits in between hospitalizations for depression and SI, one lifetime suicide attempt and minor history of non-suicidal self-injury. Past visits included extensive documentation of dependent and narcissistic behaviors, including perseveration about medications, indecision, prolonged daily rounding, and self-sabotage leading to prolonged hospital stays. Still on the Inpatient Psychiatry floor 3 weeks status-post procedure, patient was unable to wean opioid requirement, still needing on average 40 mg oxycodone per day for pain control. Additionally, the patient had concomitant benzodiazepine use from prior 10+ year history of outpatient prescription at a dose totaling 6 mg daily of lorazepam. Patient continued to endorse SI throughout protracted hospital course. After consultation with Psychiatric Pharmacy team on-site, the decision was made to start patient on modified micro-induction regimen over the course of 12 days. Results: The patient completed the taper without adverse event, including prolonging opioid use past originally intended course. Patient was able to discharge two days after completion of taper, without need for opioid prescription and with improvement in SI. Conclusions: We present a

successful use of buprenorphine micro-dosing to remove opioids from a high-risk pharmacologic regimen. Furthermore, given this patient's psychiatric comorbidity, microdosing may show some promise to aid in discontinuation of unwanted opioids from patients with personality disorders or other psychiatric diagnoses. Though we are doubtful that the microdosing helped with patient's SI directly, he was eager to discontinue opioids and was frustrated by an inability to do so previously. Overall, the microdosing may have improved outcomes, including no outpatient opioid prescription and reduced healthcare utilization.

No. 51

Consensus Building and Implementation of the Online Training Module to Prepare Clinical Skills Evaluation (CSE) Examiners in Psychiatry

Poster Presenter: Tolulope O. Odeunmi, M.D., M.P.H.

Co-Authors: Katharine Nelson, M.D., Michael D.

Jibson, M.D., Ph.D., Lora Wichser, M.D.

SUMMARY:

Background The Clinical Skills Evaluations (CSEs) is the board eligibility component required by the The American Board of Psychiatry and Neurology (ABPN) for psychiatry trainees. The American Association of Directors of Psychiatric Training (AADPRT) has previously developed educational materials to improve the precision of faculty evaluations and improve inter-rater reliability. With support from an ABPN educational research grant, we have developed an online training module which utilizes three simulated resident-patient interactions for which we have worked to establish consensus ratings for key items on the evaluation rubric. Module participants are provided feedback throughout the module regarding their ratings and any degree of difference from the consensus ratings. We aim for every psychiatry residency in the United States to implement this training from their faculty evaluators. **Methods** We produced three new simulated video vignettes using actors who provided full consent to the right to use their images. Each vignette emphasized the three major competencies of the CSE: 1) Physician-patient relationship 2) Interview conduct & mental status examination and 3) Case presentation. Consensus ratings for the performance

of the residents in each video will be obtained from board certified psychiatrists at two major national conferences and two multi-institutional zoom meetings hosted by the Principal Investigator. The ABPN CSE rubric will be used as an evaluation rubric for the consensus ratings. Each participant that takes the training will undergo a process of informed consent to allow their evaluation responses after each video to be used in a de-identified manner. Results Data analysis will include the number of times the module is completed and the comparison of participants' ratings with the consensus ratings. An analysis of variance test will be conducted to detect differences for each video, in the order the videos were completed. We expect to see a higher degree of inter-rater reliability with the consensus scores with each subsequent video vignette. **Discussion:** We hypothesize that the results will provide insight into the effectiveness of the online training module and its ability to improve the standardization of CSEs. This will also provide more substantial support for the reliability of this training and the ability to produce consistent responses.

No. 52

Electroconvulsive Therapy and Clinical Response Rate

Poster Presenter: Andreysis Mosquea

Co-Authors: Ashley Fuchs, M.D., Shahan Sibtain, M.D.

SUMMARY:

Electroconvulsive therapy (ECT) is considered an effective, safe and generally used treatment in an array of neuropsychiatric conditions. Although ECT has been shown to be efficacious there has been limited evidence on the rate of response and prognosis of patients who do not achieve remission. In major depressive disorder, ECT has been extensively investigated but not many studies have examined the speed of response of ECT in other neuropsychiatric disorders like schizophrenia and the ideal number of sessions required for response. The aim of this study is to evaluate rate of response and effectiveness of treatment in our academic hospital patient cohort treated by ECT in the months of January 2022 to June 2022. Our research questions were: (1) How many sessions our patients needed to present any sign of improvement?, and (2) What was

the significance in terms of score difference in the PHQ-9 and HAMD-19 during the course of treatment in those that presented improvement? This was a single centre retrospective cohort study on patients receiving electroconvulsive therapy from June 2022 to January 2022 at Bergen New Bridge Medical Center, Paramus, New Jersey United States. Patients aged 18 and older referred to the ECT-unit and accepted for treatment were included in the cohort and if they received at least 4 ECT treatments during the study period. 15 patients who had been diagnosed with, major depressive disorder, bipolar disorder or any other psychotic disorder were included. They were analysed until ECT discontinuation or transition to continuation in a different facility. This study analyses demographics, response rate, and number of ECT sessions. Data from 13 of 15 patients was included, as 2 patients did not complete ECT treatment course. The PHQ-9 and HADM-17 scores improved from initiation to completion of ECT course, thereby reflecting a marked improvement in the symptoms of depression in the patient sample. There was also a noticeable improvement in psychotic symptoms evaluated by the investigator's view of the patient's symptoms. 14 patients received right unilateral and 1 patient received bitemporal ECT treatment with a mean number of 10.9 ECT sessions per patient and a mean number of 4.9 sessions needed to observe first response (Figure 1). We found that 53.3% of the patients responded after the first three sessions, 26.6% after six sessions and 16.8 after 12 sessions. When comparing the improvement between time points the greatest improvement was between the third and sixth session. As result of our study, we found that the mean of the number of ECT sessions needed to observe response was 4.9. Results were consistent with previous literature which reported more than 50% improvement in symptoms as the primary outcome measure after the third ECT session.

No. 53

Is There a Doctor in the House? Managing Role Confusion When a Physician Presents as a Patient in the Psychiatric Inpatient Setting

Poster Presenter: Brigette Torrise, M.D.

Co-Authors: Shannon Henry, Karina Stone, M.D.

SUMMARY:

The current medical system and culture of medical training bolsters the myth that physicians maintain some sort of exceptional immunity to illness [1,3]. In spite of this, physicians can and do require medical attention, including for psychiatric morbidities. As demonstrated by the case presented here, the juxtaposition of this circumstance — a non-psychiatric attending physician requiring inpatient psychiatric treatment — allows for a particular experience of role confusion wherein attempts to preserve the identity of physician are in conflict with being a patient [4]. Dr. J, a 52-year-old patient with no past psychiatric history presented on a voluntary basis for psychiatric evaluation. This patient reported that they were not experiencing any acute psychiatric issues, however she was referred by family due to concerns about her well-being. On initial evaluation, the patient was paranoid, laughing bizarrely, somewhat grandiose, additionally speech was loquacious and disorganized. Eventually, Dr. J was assessed to be experiencing a medication-induced psychosis and admitted for inpatient treatment. While on the unit, this patient's course of care was complicated by several instances of role confusion [2,5]. They would often moderate conversations as an educator, taking on a didactic discourse with both trainees and fellow patients, in particular regarding pharmacological education. Her treatment course also included a uniquely elevated elopement risk due to her capacity to convincingly present as a physician, alongside her knowledge of health care systems. As well, she interrupted unit protocols to attempt to de-escalate a severely agitated patient. In this poster we discuss the challenges and importance of managing a physician-patient relationship in the circumstance your patient has a lack of insight and is, as well, a physician.

No. 54

Bipolar 1 Disorder and Pcos: Challenges in Managing the Interplay Between These Conditions in a Patient Presenting With Acute Mania

Poster Presenter: Brigette Torrise, M.D.

SUMMARY:

Ms. G is a 22-year-old woman with a history of bipolar 1 disorder, and a medical history significant

for untreated PCOS, who presented with acute mania with psychotic features in the setting of long-term abstinence from all medication. In the psychiatric emergency setting, this patient was begun on divalproex, but had not been taking any medication for at least a year prior. Upon admission to the inpatient unit, the patient disclosed a complex history of psychic and physical suffering related to the course of her PCOS diagnosis. Polycystic ovary syndrome (PCOS) is a common disorder among young women encompassing a spectrum of symptoms that include hyperandrogenism, intense physical pain, and substantial metabolic sequelae [1]. The course of the disorder is often characterized by delayed diagnosis and unsatisfactory treatment regimens in addition to an increased risk of experiencing psychiatric illness [2,5]. The case presented here considers the inpatient psychiatric management of a patient whose bipolar disorder was complicated by comorbid PCOS. Medication management in this circumstance required consideration of the metabolic effect of second-generation antipsychotics as well as the androgenic and teratogenic effects of valproate [4]. Further, estrogen has been hypothesized to produce an antipsychotic effect, elevating the importance of proper management of this chronic disease in order to ameliorate psychiatric well-being [3]. In this poster we discuss the challenges of managing the interplay between a psychiatric and medical diagnosis with significant potential to afflict the same population— young women—and propose that appropriate management of either insists upon appropriate management of each.

No. 55

Prevention of Assault Incident in Psychiatric Inpatient Units: A Comprehensive Review on Current Guidelines and Insights From Interventions Worldwide

Poster Presenter: Ahmed Chaudhry

Co-Authors: Sakshi Prasad, Ozge Ceren Amuk, Anil Krishna Bachu, M.D.

SUMMARY:

Background: Gaps still exist due to the heterogeneity of differences in policies to control assault incidents in psychiatric units effectively. **Objective:** We aim to

review hospital guidelines and policies to compare them with the clinical guidelines on the prevention and management of assault incidents in inpatient psychiatric settings at the international level.

Methods: We conducted a narrative review by using the scale for the quality assessment of narrative review articles (SANRA). We searched EMBASE, PubMed (MEDLINE), and Google Scholar databases with key terms ‘inpatient psychiatric unit’, ‘agitation’, ‘physical restraints’, ‘seclusion’, and ‘restraint’ combined with using the Boolean operators (AND, OR). The search terms used for EMBASE and Google Scholar were ‘Verbal aggression’, ‘Physical assault’, ‘Restraint and seclusion’, ‘Assault’, and ‘Psychiatric hospital’. We included articles published between 2009 to 2022, interventional studies (randomized control trials, clinical trials), post-interventional observational studies, meta-analyses, and systematic reviews. **Results:** Upon reviewing the national standards for violence prevention and management methods in the United States and other countries, differences in the prevention of assault incident management techniques were present. Considering characteristics of patients with a high risk of an assault incident were male, younger age, involuntary hospitalization, substance use, diagnosis of schizophrenia, a history of violence, and a pattern of self-destructive behavior. Inpatient nursing personnel, particularly nursing assistants, mental health providers, and technicians, are at a heightened risk. Ward size, degrees of staff supervision, professional experience of nurses, and preventive techniques implemented were common predictors of high risk of assault. Based on current available guidelines and studies, measures to minimize agitation and aggressive behavior in psychiatric settings identified. Establishing one or two beds per room, good sanitary conditions, and light and sensory reduction showed a decrease in restraint interventions. Meeting psychosocial needs, providing group therapy, DBT, training staff in prevention techniques, patient-centered care approach, regular incident reviews, debriefing after each incident with root cause analysis for future improvements found to be effective. A community-based approach to mental health overall to prevent and decrease the severity of acute episodes with input from the patient, family, general physician, and social worker was suggested. **Conclusion:** Identifying

risk factors of assaultive behavior is a critical step toward improved predictability and enabling staff to prevent and guide mental health services to develop new strategies.

No. 56

Patient Use of Herbal Psychopharmacology: An Emerging Frontier for Depression: What Psychiatrists Need to Know:

Poster Presenter: Alyssa Lynn Arena, M.D.

SUMMARY:

Background: Before the 1950s, options were limited for severe depression. However, the groundbreaking discoveries of imipramine, the tricyclic antidepressant, and iproniazid, the monoamine oxidase inhibitor, changed the trajectory of psychiatry. Prozac in the 1980s was the next landmark for antidepressants, and perhaps one could name NMDA antagonists and psychedelics as a third. Unfortunately, even with all these advances, up to one third of patients report insufficient control of their mood symptoms. Many of these patients consider alternative medicine, despite the relative paucity of evidence and regulations. As physicians, it is our job to advise our patients how to manage psychiatric illness to the best of our ability. The authors of this abstract do not condone the use of herbal psychopharmacology, especially in lieu of FDA-approved treatment, however we must be informed of alternatives some patients may utilize. **Methods:** Using Google Scholar, we formulated a list of the more well-studied herbal options in humans. In most of these studies, scientists carefully standardized the herbs and their major bioactive components. **Results:** We examined the most studied herbal options for mood, including *Bacopa monnieri*, *Camelia sinensis*, *Citrus limon*, *Crocus sativus*, *Cuscuta planiflora*, *Echinacea angustifolia*, *Hypericum perforatum*, *Panax ginseng*, *Scutellaria*, and *Theobroma cacao* (also known as water hyssop, tea plant, lemon, saffron, dodder, narrow-leaved purple coneflower, St. John's Wort, ginseng, skullcap, and cocoa respectively). **Conclusions:** Herbal options in medicine remain fringe territory, controversial and heavily debated. However, the fact remains that many of our patients will turn to them, and it is important that psychiatrists have some knowledge of

what is and is not indicated in evidence.

Unfortunately, each plant has a slightly different molecular makeup, with varying concentrations of the most bioactive components that some of our patients hope to utilize. Additionally, this area is largely unregulated, with capsules sold by many companies varying from 50-200% of the claimed quantity of medication. This means that we still have a long way to go before herbal options can even be considered second or third line. This poster will discuss some of the select herbal supplements commonly used to educate regarding known potential medication interactions, adverse effects, and long-term effects.

No. 57

Patient Use of Herbal Psychopharmacology: An Emerging Frontier for Anxiety: What Psychiatrists Need to Know:

Poster Presenter: Alyssa Lynn Arena, M.D.

SUMMARY:

Background: Shortly after WWII, scientists discovered meprobamate, the first minor tranquilizer. This was quickly replaced by barbiturates, then benzodiazepines, and now SSRIs. Still, anxiety is uncontrolled in many, and is ultimately at the root of the sedative-hypnotic-dependency epidemic plaguing America, with the death rate more than quintupling in the past twenty years. A largely unexplored option has preceded these advances, perhaps even humanity itself, in herbal anxiolytics. Many patients are now turning to these options, despite the limits of evidence-based literature and regulations. As physicians, it is our job to advise our patients how to manage psychiatric illness to the best of our ability. Therefore, we must be informed of alternative herbal medications some patients may utilize. The authors of this abstract do not condone the use of herbal psychopharmacology, especially in lieu of FDA-approved treatment. **Methods:** Using Google Scholar, we formulated a list of the more well-studied herbal options in humans. In most of these studies, scientists carefully standardized the herbs and their major bioactive components. **Results:** We examined the most studied herbal options for anxiety, including *Curcuma radix*, *Eucalyptae radix*, *Lavandula*

angustifolia, Ocimum sanctum, Passiflora incarnate, Piper methysticum, Rhodiola rosea, Rosmarinus officinalis, Salvia officinalis, and Valeriana officinalis (otherwise known as turmeric, eucalyptus, lavender, holy basil, passionflower, kava, rose, rosemary, sage, and valerian respectively). **Conclusions:** Herbal options in medicine remain fringe territory, controversial and heavily debated. However, the fact remains that many of our patients will turn to them, and it is important that psychiatrists have some knowledge of what is and is not indicated in evidence. Unfortunately, each plant has a slightly different molecular makeup, with varying concentrations of the most bioactive components that some of our patients hope to utilize. Additionally, this area is largely unregulated, with capsules sold by many companies varying from 50-200% of the claimed quantity of medication. This means that we still have a long way to go before herbal options can even be considered second or third line. This poster will discuss some of the select herbal supplements commonly used to educate regarding known potential medication interactions, adverse effects, and long-term effects.

No. 58

Lumateperone Treatment of Intermittent Explosive Disorder in Those With Autism Spectrum Disorder

Poster Presenter: Nikita Mehdiratta, M.B.B.S.

Co-Author: Shweta Kalita

SUMMARY:

Introduction: Use of lumateperone in reduction of aggression in patients with both autism spectrum disorder and intermittent explosive disorder has not heretofore been described. Two cases are reported.

Methods: Case report 1: An illiterate non-verbal 18-year-old male, presented with a lifelong history of behavior problems and developmental and intellectual delays. He has attended special education programs at school where he has had marked difficulty interacting with peers and teachers. For three weeks prior to presentation, he has displayed more anger and aggression, biting his hands, pounding on the walls and furniture, and screaming. Psychiatric examination: Nonverbal, intermittently grunting and screaming, eyes darting, and not responding to verbal commands.

Intermittent posturing of arms in the air, in a hostile stance. Ten days after starting nightly lumateperone 42 mg the patient was no longer banging furniture or the walls nor biting. He remained non-verbal but without screaming and hostile behavior. **Case report 2:** This 18-year-old male, presented with a history of hypsarrhythmia, Lennox-Gastaut syndrome, severe developmental delay, deficit in socializing with lack of interaction with others and autism, presented with one month of aggression, agitation, and hostility, banging on walls and furniture and throwing objects. Coincident with this was an increase in frequency of myoclonic seizures occurring up to twenty-five seizures per day followed by a post-ictal period of shouting and screaming. Psychiatric examination: Non-verbal screaming and throwing office equipment and furniture, hitting walls, uncooperative to verbal commands. One month after beginning lumateperone 42 mg nightly, while the seizures persisted, the patient's violent attacks were not as severe. Two months after beginning the lumateperone, the aggression was much less severe, so much so that he was able to attend school. Behavioral problems with aggression would recur an hour before the next evening's lumateperone dose. **Discussion:** Lumateperone modulates a variety of neurotransmitters including glutamate, functions as a presynaptic partial dopamine agonist and postsynaptic dopamine antagonist, and enhances N-methyl-d-aspartate, an inhibitor of serotonin reuptake (Reddy, 2020), input, on any of these, may be its mechanism of action (Vyas, 2020). Perchance its action as a 5HT-2A receptor antagonist may be its method of reducing aggression, as has been posited for its anti-aggression effect in schizophrenia (Vyas, 2020). Lumateperone impacts on neurotransmitters, including substance P, which modulate aggression (Gretchen, 2020). Alternativity ASD correlated with dysfunction of Area VIIIA of the right posterior cerebellum and its connection with the left frontal cortex (Heemkerk, 2021). Lumateperone may act to stabilize these areas and thus inhibit aggression (Heemkerk, 2021). In those with aggression associated with ASD and IED, a trial of lumateperone may be worthwhile.

No. 59

Reliability of Diagnostic Advice for Autism on TikTok: A Cross-Sectional Analysis

Poster Presenter: Afsara Haque

Co-Author: Oday Alsarraf

SUMMARY:

Over the past several years, TikTok, a popular social media platform, has become a hotbed of medical advice. A significant portion of this content is related to psychiatric disorders—currently, videos tagged #autism and #adhd have 8.6 billion views and 11.1 billion views, respectively. Although other authors have begun to explore the TikTok psychiatric medical advice community, to our knowledge there have been no studies about the quality of information posted about autism spectrum disorder (ASD). In this study, we investigate a cross-section of videos posted on TikTok to measure reliability of diagnostic information on ASD. The top 150 videos about autism diagnosis were categorized by author self-identification (caregiver, patient, or healthcare provider) and intended demographic (diagnosis in children or adults), and were scored with a modified DISCERN instrument, a validated quality criteria for consumer health information. Signs and symptoms presented in these videos that were consistent with DSM-5 criteria for ASD were labeled group 1, and other signs and symptoms inconsistent were classified as misinformation and/or nonspecific to ASD (group 2). The most frequently presented signs classified as group 1 were hand flapping, not responding to name, poor eye contact, verbal regression/delay, repetitive spinning of objects. The most frequently presented signs classified as group 2 were decreased concentration, memory loss, emotional lability, fatigue after social interaction, and having a dominating personality. Categorization was validated by a second rater highly experienced in the diagnostic assessment of ASD. Of the top 150 videos, a subset of 110 met inclusion criteria. 13.6% of videos in this sample mentioned misinformation or signs non-specific to ASD. Videos that addressed adult diagnosis ($N = 18$) were more likely to contain misinformation and/or signs nonspecific to ASD in comparison to those focused on childhood diagnosis, $X^2(1, N = 110) = 24.2, p < .01$. Videos created by patients ($N = 20$) were also more likely to contain misinformation and/or signs nonspecific to ASD

compared to those by caregivers and healthcare providers, $X^2(2, N = 110) = 37.0, p < .01$. Videos scored highly on DISCERN criteria measuring relevance to audience (mean score 4.94 out of 5), but poorly on citing sources (mean score 1.07 out of 5) and providing a balanced and unbiased opinion (mean score 1.11 out of 5). Patients seeking information about adult signs of autism on TikTok are at especially high risk of coming across misleading diagnostic content. Given the high utilization of TikTok, with billions of unique users per month, it can be assumed that many patients requesting ASD evaluation will have seen this content prior to seeking professional services. It is thus important for clinicians to be aware of this information to minimize its impact on providing quality care.

No. 60

Asymptomatic Creatine Kinase Level of 183,645 U/L in a Patient With Symptomatic Bipolar Disorder: A Case Report

Poster Presenter: Lacey Jeong

Co-Authors: Kristen Palmer, Rameez Sultan, D.O., Estee George

SUMMARY:

A 20-year-old male with bipolar 1 disorder presented to the emergency department (ED) with a three-day history of delusions, disorganization, and agitation. The patient had been feeling more depressed, and his olanzapine dose was recently decreased. Shortly after, he began exhibiting sleeplessness, flight of ideas, and hyperactivity followed by worsening symptoms of psychosis. In the ED, he received oral olanzapine 30 mg, intramuscular haloperidol 7 mg, and oral ziprasidone 30 mg for agitation. His initial creatine kinase (CK) level was elevated at 29,253 U/L. His lithium level, leukocytes, electrolytes, and renal function panels were within normal limits. His urine drug screen, urinalysis, and electrocardiogram were unremarkable. The patient was transferred to the medical floor given concern for rhabdomyolysis and neuroleptic malignant syndrome (NMS). He did not exhibit signs or symptoms of rhabdomyolysis or NMS, despite his CK level increasing to 183,645 U/L within six hours of presentation. He did not have a recent history of trauma, infection, or surgery. Psychiatry was consulted and recommended

benzodiazepines for agitation management. All other psychotropic medications were held until his CK level was below 2,000 U/L. He continued to exhibit signs and symptoms of mania but remained otherwise asymptomatic. He was eventually medically cleared and transferred to the psychiatric unit where varying doses of olanzapine and sodium valproate were trialed. His CK level reached 10,632 U/L when treated with olanzapine and 7,756 U/L when treated with sodium valproate. Therefore, both medications were discontinued. He frequently displayed aggressive behavior, requiring four-point hard restraints. Sometimes, the patient's CK level increased with increased agitation or medication changes; at other times, his CK level increased without agitation or medication changes. He ultimately stabilized on oxcarbazepine 600 mg twice daily and aripiprazole 20 mg daily with a CK level of 817 U/L. He was discharged home in stable condition. CK levels greater than 1,000 U/L are associated with rhabdomyolysis (1). Aggressive hydration is recommended for levels greater than 5,000 U/L (2). Numerous reports have documented antipsychotic-induced CK elevations, many of which are included in Khelfi et al's prospective study (3). In this study, the highest reported CK level was 115.07 U/L with muscle hypertonia. A rare case of asymptomatic hyperCKemia in which the patient's CK level was 22,552 U/L was reported by Shaikh and colleagues in 2021 (2). This is the first case reporting a CK level as high as 183,645 U/L without associated symptoms. Interestingly, the patient's CK levels fluctuated without a recognizable cause. His psychiatric treatment options were limited due to elevated CK levels. Psychiatric patients with asymptomatic CK elevation should undergo a thorough evaluation with cautious but continued consideration of neuroleptic use.

No. 61

A Perplexing Case of Post Covid Mania in a Geriatric Patient

Poster Presenter: Jasira Barrientos

SUMMARY:

The COVID-19 infection has inflicted significant impacts in physical health acutely and chronically for millions of individuals worldwide. Post COVID-19

syndrome has caused many long term physical ailments, but unfortunately an increasing variety of neuropsychiatric symptoms have also emerged. As the pandemic has emerged mutated new variants of COVID-19, there has been a continued number of post-COVID neuropsychiatric disorders ranging from depression to one of the most dramatic psychiatric presentations mania. This has led to research and postulations on multiple etiologies to determine causes of post COVID neuropsychiatric disorders. Recent research has discussed the possibility that hypoxia is largely responsible for neurological damages, thus leading to neuropsychiatric conditions post COVID19. Further research indicates support for this hypothesis, as any severe acute respiratory illness can lead to equally increased incidence of neuropsychiatric conditions. Several case reports have shown neuropsychiatric diseases manifesting in patients with no known psychiatric history. To illustrate this concept further, we present a case report of a 65 year old male with past medical history of COVID pneumonia requiring ventilation, Type II DM and no known past psychiatric history. Patient was hospitalized in the ICU with COVID pneumonia for four months. Soon after pt was admitted to the inpatient psychiatric unit on more than one occasion for post COVID psychosis. However patient was noncompliant with medications and later placed under a involuntary psychiatric hold for erratic behavior outside of his church. Collateral from wife confirmed noncompliance, increased hyperactivity, decreased need for sleep and pressured speech. Extensive neurological workup was done on previous hospitalizations revealing all findings to be within normal limits. After 3 weeks stay, patient no longer demonstrated mania symptoms. Management of post COVID psychosis did not differ in any way from mania management in this case study. As patient was managed with Olanzapine 20mg QHS, Divalproex Sodium 750mg mg BID and Clonazepam 1mg BID. With consistent numbers of individuals worldwide contracting COVID 19, we will continue to see development of new onset neuropsychiatric illnesses in the future. Therefore, further research is needed to link acute severe respiratory illness and it's impacts neurologically.

No. 62**Use of Electroconvulsive Therapy (ECT) to Treat Delirious Mania in a 57-Year-Old Man**

Poster Presenter: Dominic DeMarco, M.D.

Co-Authors: Elias Smith, Heidi Hoffman, George Grossberg, M.D.

SUMMARY:

Mr. H, a 57-year-old male with a past psychiatric history of Bipolar I Disorder, was brought to the emergency department by his son for an evaluation of bizarre behavior and altered mental status. Mr. H was discharged from an outside hospital two months prior to presentation, and the patient's son was concerned about his decompensation due to medication non-adherence. The patient's history of bipolar disorder was first diagnosed in his mid-30s. He had numerous past medication trials and psychiatric hospitalizations throughout his life. Prior psychiatric medications included lithium, divalproex, ziprasidone, risperidone, lumateperone, lorazepam, diazepam, clonazepam, and benztropine. Due to prior stabilization with antipsychotic medications, used as mood stabilizers, the patient developed debilitating dystonia in 2009 and was eventually treated with a bilateral globus pallidus internus (GPI) Deep Brain Stimulation (DBS) device in 2015 with good success. Given the broad differential for this patient's symptoms and the acute decline in his mental status, he was initially admitted to the medical floor to rule out organic causes or dysfunction of the DBS device. Diagnostic testing was unremarkable, and interrogation of the DBS device determined that it was working properly. The patient was subsequently transferred to inpatient psychiatry as his symptoms persisted and his behaviors worsened. His inpatient stay was complicated by significant agitation, bizarre behavior, lack of sleep, and disorientation. The most appropriate diagnosis was determined to be Delirious Mania, and treatment was undergone. Numerous psychiatric medication trials were attempted with limited success, but the patient ultimately began decompensating again. Benzodiazepine therapy provided some clinical improvement in the patient; however, he retained bizarre behavior, poor mentation, and a lack of ability to care for himself. The prospect of Electroconvulsive Therapy (ECT) was then discussed as treatment. A petition for

involuntary ECT was filed and granted. He ultimately underwent 9 treatments during his inpatient stay with significant improvements in manic symptoms, mentation, and affect. By the time of discharge the patient's overall mental status had improved to near-baseline, and he was discharged home to family. This case highlights a rare instance of Manic Delirium, a catatonia spectrum illness, and discusses the use of ECT as a potential treatment modality.

No. 63**Electroconvulsive Therapy in Prolonged Depressive Symptoms of First Psychotic Manic Episode Following Covid-19 Infection: A Case Report**

Poster Presenter: Jin Hong Park, M.D., M.S.

Co-Authors: Megan Kummerlowe, Christopher Sola, David Fipps

SUMMARY:

Background Coronavirus disease 2019 (COVID-19) can cause neuropsychiatric symptoms related to the neurotropic profile of the virus. Few case reports describe long-term clinical progress following the initial remission of an initial mania/psychosis after a COVID-19 infection. We present a case, which responded with electroconvulsive therapy (ECT), of a first psychotic mania with prolonged psychiatric symptoms lasting five months following a symptomatic COVID-19 infection. **Case** A 50-year-old man with no previous psychiatric history experienced a COVID-19 infection initially manifesting as upper respiratory tract symptoms, but over 10 days progressed to new-onset psychotic and manic symptoms. Initial diagnostic evaluations were unrevealing, other than a positive COVID test, CRP (1.1 mg/dL), and ESR (64 mm/hr). Psychiatric symptoms responded to olanzapine 20 mg daily during a psychiatric hospitalization. Following discharge, olanzapine 20 mg daily was cross-titrated to quetiapine 75 mg q.h.s. over one month, and he continued to struggle with marked functional decline, ongoing anxiety, amotivation, and decreased verbal output. Four months after his initial infection, he was admitted to our Neurology inpatient unit for further assessment of his symptoms. Extensive diagnostic evaluations including CSF autoimmune panel were unremarkable, other than nonspecific global patchy hypometabolism on a brain PET-CT.

Given lack of improvement with 5-day IVIg treatment, psychiatry was consulted. On examination, he was densely anxious about his status with intact orientation, and speech was notable for limited spontaneity and latency. Marked anhedonia and amotivation were reported by family. Response to internal stimuli and delusional thoughts were not noted. Despite titration of quetiapine to 200 mg and adding vortioxetine, symptoms did not improve. ECT was conducted for 11 sessions which drastically improved his affect and speed of thought. With relapse in 3 months, another 12 sessions of ECT were conducted with improvement of his mood, motivation, and speech. **Discussion** Previous case reports on psychosis/mania following COVID-19 were mostly treated by atypical antipsychotics other than few by ECT.(1) Utility of ECT in neuropsychiatric complications of COVID-19 has been reported.(2) Our case is the first one on the ECT treatment in a depressive episode after the psychotic mania induced by COVID-19. We speculate that proposed mechanism of ECT on mood disorder or inflammatory response could be applied in this case.(3) **Conclusion/Implications** Cases of COVID-19 incident psychosis/mania could have prolonged symptoms after initial response to pharmacological treatment. It would be worthwhile to follow these cases and for clinicians to monitor symptoms and clinical course including relapse and need for adequate maintenance therapy. ECT can be considered as a strong treatment agent after non-response to initial pharmacological trials.

No. 64

The Divine Mania and Introspective Depression: The Greeks' Sublimation of Bipolar Disorder Into Art and Self-Understanding

Poster Presenter: Vincent Colucciello

Co-Author: Benjamin Griffeth

SUMMARY:

Bipolar disorder, one of the first-described psychiatric illnesses, was characterized by Hippocrates himself (Angst & Marneros, 2001). Interestingly, the ancient Greeks described two forms of bipolarism, one as a debilitating mental disorder, and the another, a more productive and creative state (Mason et al, 2016). The former, was

an illness, but the latter, a divine gift from the gods. While the Greeks considered these conditions to be separate, modern psychiatry presents a different understanding. Greek artists may have sublimated self-destructive mania and depression into art and self-realization. The modern definition of mania is characterized by an intense energy which frequently leads to a disregard for social and cultural standards (MacQueen, 2001). In this perspective, mania is destructive. However, some Greeks utilized this same energy in an artistic way. For them, mania provided a creative potential stemming from a state of disinhibited consciousness. This state offered a unique perspective allowing them to create works of art that represented freedom and primordial energy. This art resonated with the ancient Greeks because it mirrored unconstrained joy and near complete freedom present in the heart of all people. Many Greeks, including Plato, believed that mania was essential for crafting great works of art (Plato, *The Phaedrus*). However, the converse is also true: great works of art were essential for people to cope with mania. If mania is the release from social and cultural conceptions, then depression is the mind's unrelenting grasp on these concepts. Modern psychiatry views depression as an unhealthy obsession with negative aspects of life while rejecting the positive (Mennen, 2019). Yet, some Greeks saw depression as a gateway to introspection. They realized that viewing the negatives as well as the positives provided a more complete understanding of the world. Cycles of depression and happiness were like the alternating succession of night and day, not simply opposites, but a more complete world. Depression offered a unique perspective that gave happiness its vibrant color. As two eyes are required to give depth to objects, these contracting focal points of depression and happiness gave depth to the world. In the ancient Greek world, mania and depression were successfully sublimated into art and self-understanding. They understood the negative aspects of bipolar disorder as a comprehensive understanding of the world, both with boundless highs and tragic lows. Their world was balanced by a creative mania with tree branches reaching the artistic heavens and bittersweet depression with roots plunging into the psych.

No. 65

Multidisciplinary Glance in the First Manic Attack of a High Functioning Patient

Poster Presenter: Wasib Malik

SUMMARY:

Treating early episodes of mania has been largely understudied in literature in contrast to other psychiatric illnesses. Moreover, it is accepted that bipolar disorder includes significant limitations in functions, alarmingly high rates of suicide that are associated with elevated mortality secondary to suicide and increasing psychosocial barriers. Despite possible benefits of having therapeutic targets that can reclaim baseline functioning if early intervention is made, there are still a lack of guidelines in a first manic episode of a patient. As with most psychiatric illnesses, early aggressive control of mania has been shown to have better recovery of functioning and higher remission rates. The choice of medications can be assisted with the history of pharmacogenetics, however there are limited algorithms in first line therapies in a first episode of mania. The following case is a 47-year-old female with no significant past history who developed a manic episode under a multitude of stressors during the pandemic. Due to atypical onset of age and acute change in behavior, a multidisciplinary approach included infectious disease, neurology and the psychiatry team to rule out any medical causes of acute behavior change before a definitive psychiatric illness was identified. Nonetheless, without any ruled-in medical cause, the patient showed hallmark signs of bipolar of increased energy, flight of ideas and hypersexuality. Thus, a decision was made to treat her acute mania with antipsychotics and after several days of rest she was discharged with Depakote, PRNs for agitation control, and psychoeducation of her condition. This case illustrated the difficulty of treating the first manic episode due to the lack of general guidelines and the scarcity of high grade evidence coupled with need for an individualized treatment regimen for first episode mania patients as each patient will demonstrate varying adherence to different medications.

No. 66

Medication-Induced Hypersexuality and Aggression in a Patient With Prader-Willi Syndrome: A Case Report

Poster Presenter: Rameez Sultan, D.O.

Co-Author: Reetta Marciano, M.D.

SUMMARY:

Prader-Willi syndrome is a genetic disorder in which there is an imprinting defect, maternal uniparental disomy, or deletion of the paternal copy of chromosome 15 (q11- q13). Phenotypic features include obesity, hypotonia, hyperphagia, hypogonadism, short stature, and characteristic facial features. Patients express behavioral changes such as skin-picking, compulsions, and agitation. Common comorbidities include diabetes mellitus, disruptive sleep patterns, autism, and mood disorders. While management of behavioral components of Prader-Willi syndrome has been documented, there is a paucity of research on the management of concurrent psychiatric disorders. Many of the psychotropic medications prescribed to these patients treat the behavioral features of Prader-Willi syndrome. While providers may be attempting to regulate a patient's behavior, they may be missing symptoms of an underlying psychiatric disorder. Examined here are 1) the role of stimulants in managing Prader-Willi syndrome and 2) pharmaceutical management of Prader-Willi syndrome and bipolar I disorder. Changes in medication resulted in an increase in sexual drive, impulsivity, aggression, and irritability within the patient. As such, medications were altered to manage his specific psychiatric illness, rather than his behavioral symptoms.

No. 67

Virtual Warrior Renew: A Pragmatic Pilot Trial of an Online Adaptation of a Manualized Group Therapy Protocol for Survivors of Military Sexual Trauma

Poster Presenter: Nicole Myers

SUMMARY:

In progress, data collection and analysis will be completed by May **Abstract Background:** Sexual trauma is prevalent in both military and civilian populations with significant long-term consequences

if not adequately treated. This pragmatic pilot trial investigated the feasibility, acceptability, and efficacy of a semi self-paced, therapist-supported online adaptation of a manualized group therapy protocol for survivors of military sexual trauma (MST).

Methods: This pilot study used a pre/post measure design to test the feasibility, acceptability, and efficacy of a novel delivery of an emerging evidence-based trans diagnostic treatment protocol for MST survivors. Five cohorts of 10-12 veterans who self-identified as woman who had experienced MST were recruited from Long Beach VA clinics and affiliated sites. The study intervention was an 8-week treatment delivered via self-paced online multimedia learning modules with video guided activities and exercises, supported by weekly therapist-led group discussion sessions. Acceptability of the intervention was assessed by drop-out rate, adherence (as measured by logins and online module completion tracked by the learning platform), brief weekly questionnaires on participants' experience with the content and delivery of each week's modules, as well as a post-treatment feedback form consisting of both Likert-scale and open-ended questions. Pre- and Post-treatment measures to evaluate efficacy were the General Anxiety Disorder-7 (GAD-7) for anxiety, the Patient Health Questionnaire-9 (PHQ-9) for depression, Posttraumatic Cognitions Inventory (PTCI) and PTSD Checklist for DSM-5 (PCL-5) for PTSD, Work and Social Adjustment Scale (WSAS) for functioning, and Revised Life Orientation Test (LOT-R) for optimism. **Results:** Warrior Renew has been studied and shown effective in a variety of settings, such as a 5-day/week 12-week Intensive Outpatient Program, once a week 12-week Outpatient group, 8-session primary care group, 60-day residential substance abuse treatment program, 5-day intensive retreat, and video conferencing. Trials have demonstrated low drop-out rates, decreased symptoms of PTSD, anxiety, and depression, and increased positive factors such as self-esteem and optimism with large effect sizes. We anticipate similar results for the online adaptation of this intervention. **Conclusion:** If preliminary data from this pilot study proves promising, this intervention should be tested in a larger-scale randomized trial against control groups of in-person or video teleconferencing-delivered Warrior Renew (as evolving public health guidance dictates) and

traditional CPT, as well as with male veterans and in civilian and active duty military populations to further assess for generalizability. of results. An effective online treatment option will help overcome accessibility issues that create barriers to care, and could provide a way to disseminate a highly scalable treatment with excellent fidelity.

No. 68

New-Onset Psychosis Due to a Presumed Pheochromocytoma

Poster Presenter: Nicole Myers

Co-Author: Alexis Seegan

SUMMARY:

Background: Some studies have suggested that psychosis caused by a medical condition is often misdiagnosed as a primary psychotic disorder. Pheochromocytomas are extremely rare, yet evidence indicates they may be underdiagnosed. **Case:** A 39-year-old woman with a history of hypertension and anxiety presented to the emergency department (ED) stating that she was having a "heart attack" in the setting of recent life stressors. She reported a "fast heart rate with palpitations" and endorsed decreased sleep. EKG and troponin were negative for acute coronary syndrome. Toxicology screen was positive for THC and she was noted to be tachycardic to 152 and hypertensive to 182/133. On psychiatric evaluation, she was disheveled with rapid speech and an illogical thought process. She exhibited hyper-religiosity, persecutory delusions, and delusions of pregnancy despite negative pregnancy tests and a prior bilateral tubal ligation. She was admitted to the psychiatry unit for grave disability due to her acute onset psychosis and was hospitalized for 13 days. She was discharged on risperidone with a diagnosis of unspecified psychosis with outpatient follow-up. She followed-up in psychiatry clinic once at which point she had returned to baseline and had been adherent to half the dose of risperidone. She then presented to the ED two months later with similar persecutory delusions and delusions of pregnancy. During her second hospitalization, she was again noted to be tachycardic to 122 and hypertensive to 154/98. Workup including CBC, CMP, TSH, cortisol, NMDA IgG, ANA, heavy metals, HIV, syphilis, vitamin B9,

vitamin B12, methylmalonic acid, and routine EEG were all within normal limits. Given her episodic paranoid psychosis with delusions of pregnancy accompanied by autonomic instability and multiple ED visits for palpitations with severe anxiety, she underwent screening with plasma free metanephrines which revealed a Norepinephrine 1,187 (reference range 0 - 520 pg/mL), indicating increased probability of a neuroendocrine tumor. The patient left the hospital against medical advice after winning her probable cause hearing before these results were available. The patient has been lost to follow-up since and the diagnosis has not yet been confirmed on imaging. Discussion: We hypothesize that a pheochromocytoma is the cause of her psychosis and identification and removal of the tumor would result in resolution of her psychosis. The exact mechanism for how pheochromocytomas may cause psychosis is unclear, but multiple have been proposed. Increased circulating dopamine causing psychosis would align with the dopamine hypothesis, however it is unclear how peripheral dopamine would contribute to psychosis. Another possibility is that these tumors secrete similar antibodies to those seen in NMDA receptor encephalitis. Conclusion: Pheochromocytoma should be on the differential anytime a patient presents with new onset psychosis and autonomic instability.

No. 69

Identifying Risk Factors for Administrative Separation From the US Navy to Enhance Collaboration With Operational Providers

Poster Presenter: Aaron M. van Dyne, M.D.

Co-Author: Savannah Woodward

SUMMARY:

Military psychiatrists bear a unique burden to evaluate a patient's suitability for service in addition to providing treatment. We often collaborate with operational physicians and military Commands to offer insights into the impact of service members' mental health and mental health treatment on the Command's mission. One important outcome measure for military psychiatrists is the number of patients separated from the service due to being unfit for continued service, and psychiatrists must

balance the benefit to patients of separation versus the costs associated with separating large numbers of sailors. During fiscal year 2008 alone, 20.7% of US Navy Sailors failed to complete their first enlistment term¹ and we know that in general 40% of administrative separations are performed due to mental health conditions (specifically adjustment disorders). A 2006 study of attrition during boot camp demonstrated a correlation between higher rates of attrition due to mental health and older age at time of enlistment, female sex, and being Caucasian or Native American². This study builds on this previous work to draw more statistically robust conclusions with data on separations from 2019 to 2022. Separated sailors were disproportionately female compared to the Navy as a whole (31.8% versus 20.4% of sailors overall, $p < .01$). There was also a disproportionate number of African American sailors who are administratively separated compared to the Navy as a whole (27.9% versus 17.5%, $p < .001$). The average age of separated sailors is 22.2 years old compared to the average age of all sailors, which is 27.6 ($p < .01$). With this data, we can aim to collaborate with our operational colleagues working with patients in the fleet to identify sailors at risk of separation and intervene early to deliver mental health care. We will also examine ways in which collaboration with and education of military leaders would be effective in reducing these disparities.

No. 70

Mental Healthcare Gaps and Highlights From the Perspective of a New Critical Access Mental Health Care Center in Iowa City

Poster Presenter: Jack D. Ohringer

SUMMARY:

From January to May of 2022, eight narratives were collected from mental health workers working in a range of fields at GuideLink, a new critical access mental health center in Iowa City, Iowa. These narratives were collected to provide qualitative information that can help GuideLink identify ways to improve, communicate to funders on the organization's benefits, and share with peer organizations to improve health and well-being nationwide. GuideLink opened its doors in January 2021 and is one of three critical mental health access

centers in the state of Iowa. It is also the only access center in the state that combines a detoxification unit, crisis stabilization unit, and sobering unit under the same roof. These services are housed together to facilitate the treatment of patients with complex needs who may benefit from multiple, or all services during their visit. Narratives were collected from the executive director, a peer support specialist, multiple detoxification unit nurses, a detoxification assistant, a triage counselor, a paramedic, and another administrator. Thematic analysis of these narratives was conducted to identify the most common themes that were discussed in these narratives. Themes that arose in four or more of the narratives that highlighted positive attributes of GuideLink included: partnership with community organizations, offering collaborative services, client-centered care, short waitlists compared to local hospitals, jail/emergency room diversion, easing of the burden of care for patients with complex needs, and prioritization of staff needs and well-being. Themes also addressed gaps in our mental health care system including a lack of resources dedicated to treating chronic mental illness, lack of short-term and low-barrier housing, continued but slowly diminishing stigma that prevents patients from seeking care and funders from supporting mental health care more actively, and high caseloads for clinicians. Narratives further highlighted recommendations to improve GuideLink and other peer organizations by suggesting that a campus of even more services should be created (including residential detoxification, short-term housing, assistive outreach programming, more peer support specialists, and more spiritual/religious adversaries). In Iowa City, ambulances are not currently allowed to drop off at GuideLink due to its classification as an urgent care center, so it has also been recommended to modify this local policy. In conclusion, this analysis identified many positive attributes of GuideLink and areas for improvement in our mental health care system and within GuideLink itself. Looking forward, GuideLink hopes to expand its services and act on many of the recommendations made by the staff. In the future, quantitative analysis of GuideLink should be done to assess its impact on the local community and additional areas for improvement.

No. 71

Neurocognitive Effects of Long Covid-19 Requiring Treatment With Stimulants

Poster Presenter: Emily S. Goncalves, M.D.

Co-Author: Thaddeus Foster Jr., M.D.

SUMMARY:

The patient is a 57 year old Caucasian female with reported history of depression and anxiety who was effectively treated with Fluoxetine for years. She went to see a psychiatrist for medication management for low energy and difficulties with work after contracting COVID-19 in March 2020. Patient worked as a SICU nurse for 20 years and after having COVID-19, had continued difficulties performing her usual tasks at work. Her symptoms improved after stimulant medication was started. For some patients, COVID-19 has lasting neurocognitive effects on some patients, requiring different treatment modalities to be utilized. Although predominantly thought of as a respiratory illness, COVID-19 is better classified as a multi-systemic illness. The pathobiology of COVID-19 appears to predominately be due to the virus's affinity for Angiotensin Converting Enzyme-2 (ACE-2) receptors, which are numerous on type 2 pneumocytes in the lungs, as well as other cell types throughout the body, including neurons and glial cells; and the virus appears to cross the blood-brain barrier as post-mortem studies have demonstrated the presence of viral particles in cerebrospinal fluid and the cytoplasm of the neocortex and hypothalamic neurons (Camargo-Martinez et al). Neurological symptoms including agnosia, ageusia, and headache are highly prevalent presenting symptoms of acute COVID-19 infections with more severe neurological manifestations of Cerebrovascular Accidents, Guillain-Barre Syndrome, seizures, and encephalopathy also being reported (Camargo-Martinez et al). Like Severe Acute Respiratory Syndrome (SARS) and Middle East Respiratory Syndrome (MERS), there is a post-viral syndrome characterized by fatigue, myalgias, and neuropsychiatric symptoms associated with COVID-19 (Yong). Neuropsychiatric post-viral manifestations of COVID-19 include non-restorative sleep, depressive symptoms, persistent anosmia, ageusia, and headache as well as cognitive impairment (Nalbandian et al). This cognitive impairment is often

described as “brain fog;” and is characterized by impaired concentration, memory, receptive language, and/or executive functioning (Nalbandian et al). Meta-analysis demonstrated a .22 proportion of individuals exhibiting cognitive impairment more than 12 weeks following COVID-19 infection (Ceban et al). These cognitive deficits carry the risk of significantly diminished occupational functioning; therefore appropriate detection and treatment are key to maintaining quality of life for affected individuals.

No. 72

Understanding the Relationship Between Delirium and Catatonia in the Clinical Setting: A Case Report

Poster Presenter: Cameron Lee Cottrill

SUMMARY:

Delirium is a reversible, neuropsychiatric syndrome encountered often in the hospital, typically presenting secondary to an underlying medical condition, toxicity, or infection. Clinically, patients with delirium experience acute changes in cognition and psychomotor function. Catatonia is a more severe psychomotor syndrome characterized by a wide range of marked motor, emotional, and behavioral deficits. Historically, the relationship between delirium and catatonia was poorly understood and lead to a lack of association between the two diagnoses. Current literature states that delirium can occur in as many as 80% of hospitalized patients. As catatonia has become further defined, so has the acknowledgment of the overlap between psychomotor symptoms of both syndromes. Further literature found that when considering catatonic symptoms in patients with delirium, there was overlap between both conditions in 32% of patients. However, catatonia is still likely still underdiagnosed. Management of the two conditions is quite different, therefore, understanding the crossover and co-occurrence of catatonia and delirium is imperative for appropriate treatment. We present a patient who initially was diagnosed with delirium but developed symptoms of catatonia. This patient, a 54-year-old Caucasian female, presented to the ED with complaints of weakness and increasing somnolence at home. During the first two days of admission, the patient

exhibited increasing levels of confusion and agitation. Workup in the ED revealed an underlying UTI, leading to a preliminary diagnosis of delirium. As this patient continued to decline in function, psychiatry was consulted to assess the possibility of an underlying psychiatric disorder given history of bipolar disorder, anxiety, and medications. Over the course of two more days, she became minimally interactive, with features qualifying for the diagnosis of catatonia per the DSM-V criteria and the severity assessed by the Bush-Francis Catatonia Rating Scale. She received four doses of lorazepam 1mg, orally, which resulted in improvement of catatonic symptoms. On day six, the patient was alert, oriented, and showing minimal signs of catatonia or delirium, albeit significant confusion over her hospital course. This case suggests a relationship between delirium and catatonia and brings attention to an issue that is fairly common in the clinical setting and may be under-recognized.

No. 73

Polynomial Relationships Between Subthreshold Amyloid-Beta Deposition and Cortical Volume Modulated by Apoe Genotype in Cognitively Normal Older Adults

Poster Presenter: Jiwon Kim

Co-Author: Dong Woo Kang

SUMMARY:

Background A growing body of evidence suggests a deteriorating effect of subthreshold amyloid-beta (A β) accumulation before the onset of clinical symptoms of Alzheimer’s disease (AD). Despite the association between the A β -dependent pathway and the APOE ϵ 4 allele, the modulating impact of this allele on the associations between subthreshold A β deposition, cortical atrophy, and neuropsychological performance is unclear. This study aimed to explore the differential effect of the APOE ϵ 4 allele on the association between subthreshold A β deposits, cortical volume, and cognitive performance in cognitively healthy older adults (CN). **Methods** A total of 112 CN with subthreshold A β accumulation, consisting of 80 APOE ϵ 4 non-carrier and 32 APOE ϵ 4 carrier, were included in the study. Participants underwent structural magnetic resonance imaging, [18F] flutemetamol (FMM) PET-CT, and

neuropsychological battery. Potential interactions between APOE status and A β deposition were assessed with F-tests implemented on both linear and quadratic interaction terms, adjusting for age, sex, and education years. **Results** We found a significant interaction between APOE ϵ 4 allele, subthreshold A β deposits, cognitive function for cortical volume of predefined brain regions vulnerable to early A β retention. In CN with APOE ϵ 4 carrier, regional A β retention in frontal, parietal, temporal lobe, and posterior cingulate cortex/precuneus showed a U-shaped relationship with cortical volumes of superior parietal, fusiform gyrus, and amygdala. Furthermore, cortical volumes of superior, inferior temporal lobe, and parahippocampal gyrus in APOE ϵ 4 carrier displayed a U-shaped relationship with attention and executive function scores. **Conclusions** This study is the first attempt to thoroughly examine the mechanism at play in the earliest phase of Alzheimer's disease, focusing on the influence of the APOE ϵ 4 allele on the association between subthreshold A β retention and cortical volume during the preclinical phase.

No. 74

Psychotic Manifestation of Complex Partial Seizure: A Case Report

*Poster Presenter: Oluwaseun K. Oke, M.B.B.S., M.P.H.
Co-Authors: Bamidele Johnson, Shahzad Chida, Victor Kekere, Shiraz A. Azim*

SUMMARY:

Introduction Complex partial seizures (CPS) refer to focal seizures that start in one hemisphere of the brain and are associated with an impairment in consciousness. The incidence of psychotic disorders is two to threefold higher in patients with epilepsy compared with the general population^{1,2}, and the pooled prevalence rate of psychosis in patients with epilepsy is 5.6 percent^{3,4}. This abstract presents a unique case of a patient with complex partial seizures presenting as transient psychosis. **Case Summary** Ms. K is a 67-year-old female with no past psychiatric history and a past medical history of hypertension and chronic kidney disease who presented to the hospital with an abrupt onset of disorganized behavior. Patient reported command auditory hallucinations of Jesus instructing her to

sing, take off her clothes, and walk outside. Patient presented two days prior at another hospital on account of irrational behavior, agitation, and combativeness. Patient was discharged the next day following stabilization and a negative work up. On evaluation at our emergency department, she was initially uncooperative and appeared catatonic. She exhibited selective mutism and staring. She responded well to a trial of Lorazepam. On re-evaluation, the patient was fully cooperative, exhibited no psychotic symptoms and was psychiatrically stable for discharge. However, the patient was admitted to the medical floor for management of acute kidney injury on chronic kidney disease. Neurology consult was performed and patient was diagnosed with complex partial seizure. Patient had reported no prior history of seizure. CT scan showed left temporal lobe volume loss. Patient was started on Valproic acid 250 mg PO daily and was discharged after 3 days on admission. Valproic acid was continued outpatient and at one-month follow up, the patient reported no further symptoms of psychosis or seizures. **Discussion** Patients with CPS may manifest with a wide variety of clinical features, including affective, behavioral and cognitive symptoms⁵. Associated delusions and hallucinations can be of religious themes^{6,7}. As a result, patients presenting with this condition can often be misdiagnosed as having a psychiatric disorder. As in this case, the behavioral and cognitive components were more predominant. Often EEGs can be used to diagnose the seizure disorder, but findings can be non-specific in complex partial seizures thus requiring further work up. Neuroimaging, particularly MRI, can be a sensitive and specific imaging technique for localization-related epilepsy⁸. **Conclusion** This case highlights the importance of thorough clinical evaluation, especially in elderly patients with a first episode of psychosis. A high index of suspicion is needed for patients with atypical presentations of seizure disorders to properly manage and prevent future seizure episodes. Clinicians should be aware that seemingly psychiatric presentations may be manifestations of underlying seizure disorders.

No. 75**Are Stable Patients With History of Depression at Increased Risk of Developing Psychosis After Deep Brain Stimulation for Parkinson's Disease?**

Poster Presenter: Facundo G. Sanchez, M.D.

Co-Author: Pronoy Roy, M.D.

SUMMARY:

Ms. NV, a 61-year-old woman with history of major depressive disorder (MDD) without psychotic features and Parkinson's disease (PD), presented to our emergency department complaining of depressed and anxious mood, and displaying paranoid delusions, auditory and visual hallucinations, and thought process disorganization. The patient was admitted to the psychiatric inpatient unit for stabilization. Per chart review, the patient was diagnosed with PD twelve years prior to the current presentation and progressively developed severe motor symptoms resistant to pharmacotherapy. Seven years after her PD diagnosis, she received Deep Brain Stimulation (DBS) of the subthalamic nucleus with excellent control of her motor symptoms. However, soon after the surgery, she suffered a recurrence of her mood symptoms but this time including blatant psychosis. The patient underwent multiple subsequent hospitalizations in the context of acute psychosis and treatment non-adherence. Brain imaging did not suggest another structural etiology for the psychotic symptoms. The Montreal Cognitive Assessment showed no evidence of a major neurocognitive disorder. During this last hospitalization, her depressive symptoms responded satisfactorily to 10mg of escitalopram daily, and the psychotic symptoms resolved with olanzapine 10mg nightly. To our knowledge, this is the only report of a patient with premorbid MDD in remission and PD who developed acute depression with psychotic features after DBS implantation. Prior studies found up to a 19% increase in the prevalence of depression within 6 months after DBS for PD. However, they did not record the presence of psychotic features. Additionally, they actively excluded psychosis from their analysis.¹⁻³ In the literature, the evidence for non-affective psychosis after DBS appears more consolidated than that for psychosis in the presence of significant affective symptoms. A case series encompassing 85 DBS patients determined that 2

(2.4%) of them developed non-affective psychosis within 6 months postoperatively.⁴ Ito M and colleagues found that 6 of 143 (4.2%) patients developed psychosis after DBS. Younger age at the time of implantation was the main risk factor for developing psychosis.⁵ In our case report, it is reasonable to inquire whether performing DBS in a patient with history of depression without psychotic features may represent a risk factor for developing psychotic features. Further studies, especially randomized controlled trials with longer follow-up periods are needed to better precise the incidence of psychosis after DBS and its risk factors.

No. 76**Mirror Autoprosopometamorphopsia of Senescence**

Poster Presenter: Shweta Kalita

Co-Author: Drushti Birwatkar

SUMMARY:

Introduction: The phenomenon of seeing a reflection of oneself while not looking at a reflective surface, yclept, autoscopic hallucinations, have been reported in those with a lesion in the non-dominant parieto-occipital lobe (Villarejo, 2014). The Mirror Sign, on the other hand, is an inability to recognise one's own image in the mirror, while still retaining the ability to recognise others' image. (Spunkenberg, 1998). Obligate autoscopic mirror hallucinations of senescence have not heretofore been described. Such a case is presented. **Methods:** Case Report: A 37 year old right handed female, with schizoaffective disorder, bipolar subtype with 4 past psychiatric admissions for depression with suicide attempts through overdose, presented with presence hallucinations, the perception that others were near her, even though she could not see or hear them. The patient was markedly paranoid and expressed that other patients are not real but are "undercover investigators." She described that when she would gaze at herself in the mirror, she would not see her current face, but rather the visage of an "old person". This would recur whenever she would directly look at herself in the mirror, and would avoid glancing at any mirrors because she was fearful of looking at her transform senescent countenance. She realized it was not another person but rather herself in the

future having become her geriatric self. Results: Abnormalities in Physical Examination: Mental Status Examination: Patient is awake with poor hygiene and poor eye contact. Hypervocal, grandiose with expansive affect, poor insight and judgment. Recalls 3 out of 4 objects in 3 minutes and all 4 with reinforcement. Other: Magnetic Resonance Imaging/ Magnetic Resonance Angiography of Brain with Infusion: Normal. Discussion: Autoscopic mirror hallucinations appearing only when embedded in a mirror are obligate autoscopic mirror hallucinations and suggest occipital and parietal lobe dysfunction (Virk, 2018). Autoprosopometamorphopsia, obligate to mirror reflection, but metamorphosed to enhance perceived senescence, has not been specifically localized. Possibly a single lesion in the non dominant inferior parietal lobe may have caused this phenomenon. In the general population, an individual's focus on a mild facial imperfection often is associated with a negative view of their image. Exaggeration of this to involve the entire face, with projection of imperfection of aging, may be a somatic manifestation of such negative self image. It is possible that such senescent autoprosopometamorphopsia may be prevalent, to a lesser degree, in the general population and may be a nidus for younger people seeking cosmetic and plastic surgical intervention of the face. Interviews of those undergoing botulinum toxin injections and collagen fillers placement may reveal an otherwise hidden endemic of obligate mirror autoprosopometamorphopsia. Such an investigation would be worthwhile.

No. 77

Positive Response to the Typical Antipsychotic Treatment in a Patient With Trigeminal Trophic Syndrome

Poster Presenter: Elena Ivanova, D.O.

SUMMARY:

Trigeminal trophic syndrome is a very rare condition that results in the damage of one of the branches of trigeminal nerve. The most common causes of the nerve damage are trauma, lesions in central or peripheral nervous system, procedures involving trigeminal nerve and infections [1]. The syndrome consists of classic triad of anesthesia, paresthesia

and recurrent or persistent facial ulceration that are typically painless [3,4]. The approach to the disease treatment typically involves topical agent for ulcer healing, behavioral modification for self-manipulating behaviors, medications to address the paresthesia and anesthesia, and plastic reconstructive surgery for more serious cases that resulted in facial disfiguring from self-mutilating behaviors [2]. This is a case of a 72-year-old woman, who presented at the Neurology clinic with the chief complaint of recurring self-manipulating behaviors resulting in severe, disfiguring damage to the right nasolabial fold. The initial presentation was at least ten years ago following a mechanical fall. The maxillary branch (V2) of the trigeminal nerve was damaged as a result of the fall. The patient was then diagnosed with TTS and treated with Haloperidol 2 mg po bid. She responded well to the short-term treatment with antipsychotic medication on initial presentation. Ten years after the initial diagnosis, relapse of the self-mutilating behavior was triggered by the reconstructive surgery done on her nose. Haloperidol was once again prescribed at a highly increased dosage of 2 mg po tid. She once again responded well to antipsychotic treatment providing symptom resolution. Trigeminal trophic syndrome is a rare condition and is commonly treated by neurologists, dermatologists and surgeons. Considering the pervasiveness of self-mutilating behaviors in this patient population that does not always favorably respond to behavioral modifications alone, psychiatrists also need to be aware of this condition and become an active part of the treatment team. Full psychiatric evaluations would be beneficial to determine whether this behavior is a result of the nerve damage in order to rule out other causes like dermatitis artefacta, excoriation disorder, obsessive-compulsive disorder, and rhinotillexomania.

No. 78

Understanding the Interdisciplinary Role in Evaluating Altered Mental Status to Thalamic Stroke

Poster Presenter: Joy Patel

Lead Author: Danielle Melton

Co-Author: Adam Chan

SUMMARY:

In today's medical culture, it has become more prudent than ever to work in an interdisciplinary team to provide the best care to patients. This is, perhaps, even more important when assessing geriatric patients (1). Altered mental status (AMS) has a broad range of etiology and can often be misattributed without thorough workup. Acute psychosis secondary to stroke is a rare but known phenomenon that can occur. Approximately 1 in 3 patients develop a mental health disorder after stroke, yet incidences remain relatively low (2). Furthermore, Post-stroke psychosis is associated with a greater 10-year mortality (3). In this report, we discuss the importance of interdisciplinary approach in evaluating new onset, acute psychosis in a 71 year old male with multiple comorbidities and how AMS initially appeared as psychiatric in nature but later to have neurological etiology of thalamic stroke. Mr. X is a 71 year old male with history of major depressive disorder, colon cancer which was treated with radiation and chemotherapy as well as colectomy with colostomy bag in 2014, vitamin D deficiency, hypertension, diabetes mellitus, hyperlipidemia, osteopenia, and hypogonadism on testosterone replacement who presented to the hospital ER after being brought in by ambulance and the local police department for firing a gun at visual hallucinations. In the ED, CT-head imaging was normal, UDS was only positive for cannabis, and medical work up was benign. Once medically cleared, he was admitted to the psychiatric ward for further work-up. Per wife, the patient's personality had significantly deviated from his baseline in the three weeks prior to admission. He was reportedly very easy going, pleasant, and friendly previously. Unfortunately, he had become more agitated, abrupt, and increasingly confused for the past three weeks; sometimes not oriented to time of the day, sometimes talking about his wife's deceased brother as if he were alive. The family pointed out that the timing of his change in behavior correlated with a recent medication change. On the psychiatric ward, he was appropriate, alert and oriented to self, time, and place most of the time. However, he was never oriented to situation during his stay. Using an interdisciplinary team approach which contained neurology, endocrinology, internal medicine, and psychiatry, we

were able to determine the etiology of his change in mental status.

No. 79

Recent Modalities and Efficacy of the Arts as an Intervention Aimed for Resident Physician Wellness: A Literature Review

Poster Presenter: Daniel Lee, Pharm.D.

Co-Authors: Tomotaro Monte, D.O., Grace Sungun Ro, M.D., Mark W. Nickels, M.D.

SUMMARY:

Background: Physician wellness has been an ongoing concern in the United States with an estimated physician burnout rate of 40 to 54%.^{1,2} The COVID-19 pandemic has accelerated emotional exhaustion, and a recent study found the pandemic was associated with increased use of mental health services by physicians.³ Resident physicians may be at greater risk of burnouts with increasing responsibilities and limited resources.^{1,4} As creative arts may be beneficial in improving burnout symptoms, this review examines the available literature on wellness interventions which allow resident expression, participation, and/or appreciation of the creative arts. **Methods:** The online database PubMed was used to identify potential studies to assess the current literature of resident programming which incorporated activities related to the arts and humanities from 01/01/2020 to 07/06/2022. The search strategy contained MeSH terms related to "Internship and Resident," "Education, Medical, Graduate/methods," "Burnout, Professional/prevention and control," and "Resilience, Psychological," as well as general inquiries for "art," "creative," "narrative," and "music." To be considered for this review, the articles had to be written in English, describe an intervention used in an ACGME-accredited residency program for the purpose of improving resident wellness, decreasing burnout and stress, or developing resilience. The intervention had to incorporate creative arts including classic art, narrative or creative writing, and music. **Results:** PubMed was searched on 7/6/2022 and resulted in 315 records. 4 articles were eligible for this review after screening against the inclusion criteria.⁵⁻⁸ Represented specialties included Internal Medicine, Dermatology,

and Family Medicine; 1 intervention was available for all trainees in a geographic location. 3 articles described a narrative writing intervention, and 1 described an art-based curriculum. Efficacy or effect was measured via Physician Well-being Index (PWBI), thematic qualitative analysis, and program-developed questionnaires. None of the articles observed or quantified statistically significant differences in burnout or wellness with program implementation. However, 1 article reported lower PWBI increase at the end of a difficult rotation compared to historic control. All articles described perceived benefit from participants. **Conclusion:** Our review suggests creative arts interventions provide subjective perceived wellness benefits, but there remains a paucity of literature in this pedagogical domain. Inherent challenges when evaluating the immediate and enduring benefits of such interventions include the lack of measurement paradigms, program size and transiency of training. As health systems continue to examine and endeavor to address stress and burnout, there is a need for development of effective and measurable interventions that specifically address resident wellness and resilience.

No. 80

Mental Well-Being of Residents and Fellows During the Covid-19 Pandemic: A Longitudinal Assessment

Poster Presenter: Jasmine Eunyang Kim, M.D.

Co-Authors: Patrick Arthur, M.D., Michele Pato, M.D.

SUMMARY:

Background: Clinical trainees, including residents and fellows, were exposed to increased stress during the COVID-19 (COVID) pandemic. Frontline workers' hardship was initially recognized, yet their long-term mental health became a concern due to varying challenges over time. In this longitudinal survey study, we assessed their mental well-being (MWB) and perceptions relating to the COVID pandemic from May 2020 to Feb 2022. **Methods:** We sent an anonymous Qualtrics-based survey at four time points over 22 months at a previously COVID-designated hospital. We sent the surveys in concordance with the rise of new variants; hence time point 1 [t1] coincided with the index virus surge wave, [t2] with Alpha variant in Sep-Nov 2020, [t3]

with Delta variant in Feb-Apr 2021, and [t4] Omicron in Nov 2021-Feb 2022. The survey included the perception of the COVID pandemic and questions about trainees' state of MWB—measured by burnout (Oldenburg), anxiety (Generalized Anxiety Disorder-7 items), and depression (Patient Health Questionnaire-2 items). General linear model and MANOVA analyses were conducted; F statistics, Wilk's lambda, and partial η^2 were used to interpret the data. **Results:** This study included 445 surveys with a completion rate of 67.6%. Among 296 unique trainees in various specialties, 50.7% were female, 15.5% underrepresented-in-medicine (URM), 8.2% Hispanic, 42.6% US medical graduate. For each time point, demographic factors such as URM, time spent with COVID patients, and International Medical Graduates status (IMG) did not predict trainees' MWB. When burnout was looked at separately, IMGs had lower levels of burnout on two time points (t2 & t4; $p < .05$). Notably, Hispanic trainees' had higher burnout (t1, t2 & t3; $p < .05$), anxiety (t2, t3 & t4; $p < .05$) and depression (t2, t3 & t4; $p < .05$) scores across all periods compared to their non-Hispanic colleagues. In terms of trainees' perception of the pandemic, initially at [t1], trainees reported a sense of responsibility ($F(3, 60)=2.98, p < .05$), perceived peer support ($p < .05$), and value to society ($p < .05$) while being frustrated with the insufficient personal protective equipment (PPE; $p < .05$). During [t2], they reported continued stress due to insufficient PPE ($p < .05$), and also reported an added stress of potential transmission to family ($F(3, 61)=5.63, p < .01$). At [t3], internal stressors such as feeling powerless about CV patient death ($F(3, 16)=8.67, p < .01$) became a pronounced issue relating to trainees' MWB. **Conclusion:** This longitudinal study outlines not only the fluctuations of MWB of trainees but also the changing nature of the stresses they faced at different times during the pandemic. The implication regarding the mental health of a vulnerable population (e.g., Hispanic trainees and IMG) will be discussed in detail.

No. 81

The Prevalence of Depression Among Female Healthcare Workers in New Jersey Since Covid-19

Poster Presenter: Magdalene R. Lederer

Co-Authors: Meghan Foos, Sahil Patel, Patrick Tawadros, Jamie Bono

SUMMARY:

Background: Mental health issues – especially depression - have affected the lives of many citizens of New Jersey, especially women who work in health care. At the onset of the COVID-19 outbreak, health care providers went to the frontlines to care for sick patients in stressful environments. Understanding the mental and psychological effects the pandemic inflicted on female health care workers is important in order to create interventions and improve systems that support them. **Purpose:** The purpose of this study is to evaluate the prevalence of depression in female healthcare workers (HCWs) since the start of the COVID-19 pandemic. **Methods:** This literature review searched electronic databases including SCOPUS, Web of Science, NCBI (National Center for Biotechnology Information), EMBase, and NIH and CDC Prevention using key terms including mental health, depression, burnout, female health care workers, doctors, residents, nurses, mental health resources, COVID-19, and New Jersey. **Results:** The first analysis investigated prevalence of depression in female HCWs, including existing data prior to the pandemic and what has been determined since. These studies conclude that women in the general population are twice as likely to be depressed than men and that trend is maintained when looking at the healthcare worker population. Female physicians have a higher incidence of suicide when compared to male physicians and compared to the general population. After the pandemic began, female HCWs (based on thirteen studies) were shown to have a larger increase in depression when compared to their male counterparts. These women were also found to have rates of PTSD two times higher than male counterparts. The second analysis investigated what factors were particularly affecting female HCWs. One study showed that caring for family members and caring for COVID-19 patients at work was correlated with greater signs of depression and mood changes. Other home stressors, such as having two or more children increased female HCWs's risk for depression. The third analysis investigated the mental health resources available to female HCWs since the pandemic. Since the onset of the pandemic, the state of NJ passed a bill allowing for a free 24-hour helpline for HCWs experiencing depression and anxiety. **Conclusion:** COVID-19 had a

negative effect on the prevalence among female HCWs working in the state of NJ. Interventions focusing on social support may be helpful in alleviating the burden female HCWs experience and may have a positive benefit on their mental health.

No. 82**Responding to and Supporting Psychiatry Residents Impacted by Adverse Events During the Covid-19 Pandemic**

Poster Presenter: Omar Munoz, M.D.

Co-Author: Vanessa Padilla, M.D.

SUMMARY:

Psychiatry residents and fellows may be exposed to adverse events at any given time during their medical training. Adverse events may include any of the following: patient elopement, assault on provider, suicide attempts, completed suicide, medical errors, falls, exposure to hazardous materials, homicide of or by patient, among others. These adverse events can be very difficult to avoid or predict when treating patients diagnosed with mental illness. In 2019, our institution implemented a pilot committee with the purpose of responding to resident-involved adverse events and improving access to and utilization of available hospital resources following adverse events. One year after implementation, the COVID-19 pandemic caused a disruption in all medical services. The pandemic changed the practice of medicine with the increased availability and use of telemedicine. In our residency program, there was an increased use of telehealth services across services, but especially in the outpatient setting which almost reached over 90% of telehealth utilization. We evaluated the efforts of our committee during the pandemic. From March 2020 to August 2022, the committee responded to a total of eleven adverse events at our institution, compared to twelve events that occurred during the year of 2019. The reported adverse events during the pandemic were categorized in three groups: direct physical assault to provider (N = 6), completed patient suicide (N = 3), patient's non-suicide related death (N = 1), and witnessing physical assault (N = 1). Over half of the affected trainees by adverse events were first-year psychiatry residents. The established committee protocol was followed in all cases, with

no challenges to implementation and full support from faculty members and program director. Virtual bi-annual educational sessions continued to be offered to all trainees during the pandemic. Even though it has been reported that the COVID-19 pandemic has led to more inpatient violence, our institution experienced a decline in reported adverse events. We propose that the reduction in the number of adverse events, following the implementation of our committee, may be mediated by the impact of the COVID-19 pandemic itself (less in-person presence of our residents in acute psychiatric care settings), as well as the ongoing virtual educational effort to make trainees aware of adverse events and crisis intervention.

No. 83

Psychiatric Innovations for Preparing Patients Diagnosed With Cancer for Climate Disasters and Pandemic Threats

Poster Presenter: Omar Munoz, M.D.

Co-Authors: Vanina Pavia Aubry, M.D., Sung Min Ma, M.D., James Shultz, Ph.D., Zelde Espinel, M.D.

SUMMARY:

In the current era of compounding disaster and pandemic threats, patients diagnosed with cancer experience disproportionate risks for harm, psychological trauma, and disruption of life-sustaining cancer therapies. Climate change is exacerbating the severity of disaster hazards for tropical cyclones, wildfires, floods, and heatwaves, making these events increasingly dangerous and destructive for populations in the path and for the critical infrastructure these populations rely upon, including electrical power, water, and healthcare services. The COVID-19 pandemic and the periodic emergence of virulent infectious pathogens, heightens risks for disease transmission while evacuating and sheltering. Psychiatrists working in the Cancer field can play pivotal roles in the protection of their patients diagnosed with cancer, helping them to prepare effectively for extreme events and maintain psychological resilience throughout all disaster phases. Patients receiving cancer treatment generally experience a degree of disability that prevents them from living at full capacity. Research indicates that, despite having

special needs, patients living with disabilities tend to be less prepared for disasters than their healthy, non-disabled counterparts. Yet these individuals experience elevated threats to their health and the continuity of their cancer therapies when disasters strike. Grounded upon the principles of disaster psychiatry, psychiatry teams can contribute their skills and leadership at multiple levels: The first level entails preparing clinic personnel and facilities to withstand the forces of harm and maintain, or rapidly restore, the lifeline of cancer treatment services as soon as the hazards subside. This involves having psychiatric professionals engage in all-hazards disaster preparedness for themselves, their families, their households, and their clinical facilities. At the second level, psychiatric support services teams can proactively assist their caseload of patients to be disaster-ready. This involves multiple modalities: patient preparedness surveys followed by individualized counseling; education via clinic websites and informational brochures; linkage to community services (transportation, shelters, home preparation assistance); assistance for creating family disaster plans; contingency planning for sheltering-in-place versus evacuation; and individualized guidance for the patient's specific cancer type, stage, treatment regimen, medications, and supplies. At the third level, psychiatric teams are in their element—preparing their patients for handling disaster stressors and employing a repertoire of effective coping strategies. This is an extension of the cancer support services provided routinely to patients grappling with their illness and the rigors of treatment. Similar psychoeducation strategies and techniques can be adapted for dealing with the potential trauma, loss, and life change that may occur during and after disaster impact.

No. 84

WITHDRAWN

Poster Session 2

No. 1

Mortality and Comorbidities Associated With Covid-19 Infection in Psychiatric Patients From a State Hospital

Poster Presenter: Nicole Ann Villa

Co-Author: Matthew Driben

SUMMARY:

Introduction: As dangerous as COVID-19 has been for the general population, it has been even more severe in psychiatric wards. A state hospital is a particularly transmissible location for COVID-19, and the medications that psychiatric patients typically utilize may contribute to the incidence of comorbidities including obesity, hypertension, diabetes, chronic kidney disease, chronic obstructive pulmonary disease, heart failure, and cancer. Studies have found that patients with preexisting mental health disorders and comorbidities tend to have worse COVID-19 outcomes, including death.

Methods: We performed a retrospective study on 24 patients (13 males, 11 females) in a psychiatric state hospital who are above 18 years old, tested positive for COVID-19, and experienced symptoms severe enough to be admitted to Reading Hospital between April 1, 2020 to June 30, 2022. Patients with multiple COVID-19 admissions to the hospital during this period were excluded if the period between admissions was less than two weeks. **Results:** The patient population had an average (IQR) age of 57.75 (48-64) and 2.12 (2-3) comorbidities (IQR). The most common psychiatric disorders were schizoaffective disorder (70.8%), schizophrenia (29.2%), and delirium (29.2%). For comorbidities, patients most commonly presented with hypertension (54.2%), chronic kidney disease (41.2%), diabetes (33.3%), and obesity (33.3%) upon admission. The most common psychiatric medications patients were taking as of their admission for COVID-19 were antipsychotics (83.3%), mood stabilizers (54.2%), antidepressants (54.2%), and benzodiazepines (41.7%). **Conclusion:** Though our study was descriptive in nature, it was meant to shed light on what conditions precipitate the worsening of COVID-19 infection in psychiatric patients that results in hospitalization. We recommend additional studies in order to make a conclusion about the extent to which psychiatric medications result in worse COVID-19 outcomes due to worse comorbidities.

No. 2

The Prevalence and Predictors of Long-Term Opioid Use After Pelvic Fracture Secondary to Trauma

Poster Presenter: Nicole Ann Villa

Co-Authors: Kristina Y. Shum, Allison Atkinson, Alison Muller, Adrian Ong

SUMMARY:

Introduction: In 2017, 67.8% of 70,237 drug overdose deaths in the US were opioid overdoses due to factors including pain control. Opioids are effective in the short-term treatment of pain; however, no evidence shows their long-term effectiveness. Many patients have their first exposure to opioids after a pelvic injury, but not much is known about persistent use afterwards. This study aims to assess the prevalence and predictors of long-term opioid use following pelvic fracture secondary to trauma. **Methods:** A retrospective study enrolled patients 18 and older with acute pelvic fractures from August 1, 2015 to July 31, 2020. Patient exclusion criteria were: transfers, subacute fractures, no opioids received, and death before discharge. Morphine milligram equivalents (MME) for each patient were calculated. Primary outcome was long-term opioid use for 60-90 days after discharge (60-90OP). Secondary outcome was intermediate-term opioid use for 30-60 days after discharge (30-60OP). Univariable and logistic regression analyses were performed with $p < 0.05$ considered as significant. **Results:** After exclusions, 277 patients remained. Median age was 43 (IQR 26-64) years, with 61% males and 5% sustaining penetrating trauma. Median total inpatient opioid MME was 422 (157-1667), with a median daily MME of 69 (26-145). The primary outcome, 60-90OP, occurred in 16% while 30-60OP occurred in 29%. Univariable analysis found that total inpatient opioid use and daily inpatient opioid use were each significantly associated with 60-90OP (median MME, 1241 vs 371; median MMEs, 127.7 vs 59.2, respectively) and 30-60OP (median MME, 1140 vs 326; median MMEs, 111.8 vs 57.9, respectively). Logistic regression analysis found that total inpatient MME (OR 1.000132 [CI 1.000034 -1.000231]) and pelvic fracture type (B/C), (OR 3.97 [CI 1.77-8.89]) were independent predictors of 60-90OP. **Conclusion:** We can conclude that total and daily inpatient opioid use were each significantly

associated with 60-90OP and 30-60OP, where there is a higher likelihood of post-discharge opioid use for patients who received >50 MME/inpatient day. Identifying the prevalence and risk factors for long-term opioid use after pelvic fractures requiring opioids for pain management is vital for informing clinical decision making to prevent adverse outcomes.

No. 3

Impact of Progressive Muscle Relaxation Psychological Symptoms on an Inpatient Psychiatric Unit

Poster Presenter: Penelope C. Farris

Co-Author: Emily Groenendaal, M.D.

SUMMARY:

Abstract: Objectives: To examine the effectiveness of short-term progressive muscle relaxation therapy in reducing symptoms of depression, anxiety, and aggression/agitation, in patients on an inpatient psychiatric unit. Additionally, to determine the impact of clinical and sociodemographic factors on its effectiveness. **Methods:** Psychiatric inpatients at a private, community-based psychiatric hospital were invited to participate in a progressive muscle relaxation activity and filled out pre- and post-activity surveys querying symptoms of depression, anxiety, and aggression/agitation, using a created Likert scale. **Results:** The 57 participants in this study showed an average decrease in every symptom domain, including -0.93 in agitation/aggressive symptoms ($p<0.001$), -2.14 in depressive symptoms ($p<0.001$), and -1.81 in anxiety symptoms ($p<0.001$). While diagnosis did not appear to be significantly related to change in score, patients with different primary diagnoses had changes in different symptom domains, with patients with Bipolar Disorder having statistically significant changes in aggression (-1.57, $p=0.012$) and depression (-2.36, $p<0.001$), but not in anxiety. Patients with Depression had significant changes in depression (-2.08, $p<0.001$) and anxiety (-1.96, $p<0.001$) but not in aggression/agitation, while patients with a Schizophrenia spectrum illness had changes in depression alone (-2.33, $p=0.008$). Sociodemographic variables had no significant impact. **Conclusions:** The findings in this study indicate that a short-term progressive muscle

relaxation intervention can lead to statistically and clinically significant changes across various symptom domains and in patients with a variety of psychiatric diagnoses and support the implementation of this non-invasive and budget-friendly exercise.

No. 4

Persistent "Ego Death" and Derealization Following Dextromethorphan Intoxication Treated With Quetiapine

Poster Presenter: Melissa Free, M.D.

Co-Authors: Sanjay Yadav, M.D., Natalie Eichner

SUMMARY:

Background: Dextromethorphan is an NMDA receptor antagonist that is mechanistically similar to Phencyclidine (PCP) and ketamine. It is known to be a substance of abuse that can be easily obtained over-the-counter. Acute intoxication can result in a variety of dose-dependent presentations including hallucinations, dissociation and agitation with injury to self and others at high doses. Additionally, a concept of ego dissolution has been discussed during the use of hallucinogens. We present a case of persistent psychotic symptoms including a description of "ego death" and derealization in the 3 weeks following dextromethorphan intoxication requiring antipsychotic treatment. **Case:** A 42-year-old male with a history of MDD, ADHD, alcohol use disorder and hallucinogen use disorder presented to a partial hospitalization program approximately 1.5 months following intoxication with dextromethorphan via excessive use of Mucinex DM. This intoxication led to self-injury and medical hospitalization in the ICU during which he experienced delirium which resolved prior to partial hospitalization. He had a history of using approximately 722 -1140 mg of dextromethorphan at times of intoxications resulting in multiple ED visits with agitation, impulsive self-injury, hallucinations, dissociation, derealization, nihilistic delusions, and reporting "ego death." In the partial hospitalization, the patient was initially maintained on escitalopram 10 mg for symptoms of depression. During his attendance to partial hospitalization program (PHP), he had a relapse on dextromethorphan use, and he continued to report "ego-death" and derealization for approximately 3 weeks following his last use of

Mucinex DM. His psychotic symptoms started to remit with the addition of quetiapine 300 mg nightly. The patient was transferred from partial hospitalization program to an inpatient substance use treatment facility at medication doses of quetiapine 300 mg nightly and an increased dose of escitalopram 20 mg daily following his relapse on dextromethorphan and alcohol use. Discussion: Dextromethorphan is relatively inexpensive and available over-the-counter. It is not detected on most standard urine drug screens. Given the abuse potential and ability to induce ongoing psychotic symptoms following intoxication, physicians need to be aware of screening for dextromethorphan induced psychosis and the potential need to utilize antipsychotics to achieve remission of symptoms. Per review of the literature, both olanzapine and quetiapine have now been reported to alleviate symptoms of sustained psychosis induced by dextromethorphan intoxication.

No. 5

Medical School Students Resilience and Its Relationship With Demographic and Non-Demographic Variables

Poster Presenter: Luis De La Garza Garcia

SUMMARY:

Introduction:?? Currently, mental health problems such as fatigue, sleep disorders, anxiety, irritability, and depression, are highly prevalent among students, primarily those in the medical field.1 Resilience is found to have an impact on learning experience, academic performance, course completion, and in the longer term, professional practice. 2 Although previous studies have been published regarding the relationship between resilience and personal factors, their aim was focused on: personality, coping mechanisms, and academic performance. 3. The objective of this study is to identify sociodemographic and non-sociodemographic factors in a student sample associated with the decrease/increase in the probability to develop resilience during academic training. Methods: A cross-sectional study was designed to associate resilience in first-year medical students with a failed gross human anatomy course (a 1st-year, 19-week long course). A modified

Connor-Davidson resilience scale, validated in Spanish was used with the aggregate variables of sex, birthplace, failing a previous academic semester or course, having a full- or part-time job, living status, and transportation-time. Results: There was no significant difference between sex. Of the 551, 387 were students living in the metropolitan area or nearby, with a resilience mean score of 70.7(±16.5), while 164 were out-of-state students with a higher mean score of 73.3 (±16.6) with a statistically significant difference (p=0.001).There was a total of 329 students who had failed a previous course with a mean score of 69.2(±17.5), the remaining 222 students who had not previously failed a course in medical school had a higher mean score of 74.8 (±14.4). The transportation time was divided into 4 categories. Those who spent <15min (n 107), 15-30min (n 92), 30-60min (n 176), and >60min (n 176) with mean scores of 75.5±14.3, 70.2±16.4, 72.2±17.0, and 69.0±16.3, respectively, with a statistically significant difference (p=0.014). Reporting significant difference in 3 categories of our survey. Conclusions: After analyzing our variables with significant differences in our results of the study (Locality, history of failing a subject and time of arrival at the faculty) we concluded that our hypothesis about the relationship of resilience with our aggregate variables was valid. It is of the utmost importance to emphasize how the hypothesis, although it is valid, is not concrete due to the questions that arise when analyzing our data. Future studies will have to be carried out to identify the relationship of each specific variable with significant data and how it influences the development of resilience.

No. 6

Prevalence and Correlates of Past-Year MDMA/Ecstasy Use Among Individuals Age >11 in the United States

Poster Presenter: Kevin H. Yang

Co-Authors: Benjamin Han, Joseph Palamar

SUMMARY:

Background: Although not as prevalent in the United States (US) as it was in the early 2000s, MDMA has regained attention in recent years for its efficacy in treating post-traumatic stress

disorder, and the drug was granted breakthrough therapy designation for such use by the US Food & Drug Administration in 2017.^{1,2} However, outside of medical settings, use of MDMA (also known as ecstasy or “Molly”), has misuse potential, and little is known about the current epidemiology of recreational MDMA/ecstasy use. Chronic use is associated with depression and cognitive deficits in some users,^{3,4} and research suggests that the increased media coverage of the medical benefits of MDMA may be influencing subgroups of people to use.⁵ As such, we sought to characterize subgroups of adolescents and adults who may be at high risk for ecstasy use to inform policy and harm prevention strategies. **Methods:** We estimated prevalence and correlates of past-year ecstasy (MDMA/“Molly”) use based on a representative sample of noninstitutionalized individuals age ≥ 12 in the US from the 2015-2020 National Survey on Drug Use and Health (N=241,675). **Results:** An estimated 0.92% (95% CI: 0.88-0.97) of individuals used ecstasy in the past year. Compared to those age 35-49, all younger age groups (12-15 [adjusted odds ratio, aOR=1.64, 95% CI: 1.19-2.26], 16-17 [aOR=1.42, 95% CI: 1.04-1.94], 18-20 [aOR=1.86, 95% CI: 1.45-2.37], 21-25 [aOR=1.75, 95% CI: 1.39-2.22], 26-34 [aOR=1.84, 95% CI: 1.41-2.41]) were at increased odds for use, while those age ≥ 50 (aOR=0.14, 95% CI: 0.08-0.23) were at low odds for use. Compared to heterosexual men, those identifying as bisexual women (aOR=1.32, 95% CI: 1.02-1.72) were at increased odds for use, and compared to White individuals, those identifying as Asian (aOR=1.92, 95% CI: 1.42-2.59), Black (aOR=1.70, 95% CI: 1.41-2.06), or multiracial (aOR=1.61, 95% CI: 1.19-2.16) were also at increased odds for use. Compared to those with less than high school education, those with at least some college education (aOR=1.61, 95% CI: 1.23-2.12) were at increased odds for use, while those married (aOR=0.63, 95% CI: 0.53-0.74) were at decreased odds for use. With regards to concurrent substance use, past-year use of cannabis (aOR=8.95, 95% CI: 7.29-10.97), LSD (aOR=7.77, 95% CI: 6.59-9.16), cocaine (aOR=6.54, 95% CI: 5.55-7.71), and ketamine (aOR=6.09, 95% CI: 4.14-8.95) were associated with the highest odds of use in the multivariable model. Finally, misuse of prescription pain reliever (aOR=1.46, 95% CI: 1.21-1.76), stimulant (aOR=1.88, 95% CI: 1.61-2.21), and

tranquilizer/sedative (aOR=1.49, 95% CI: 1.26-1.77) and alcohol use disorder (aOR=1.41, 95% CI: 1.25-1.58) were also associated with increased odds for use. **Conclusion:** While use of ecstasy continues to be relatively rare, findings from this study can help inform harm reduction strategies, especially among certain subpopulations that are at particularly high risk for use.

No. 7

The Efficacy of Varenicline in Patient's With Coexisting Alcohol Use Disorder and Nicotine Use Disorder

Poster Presenter: Joy Osaji

SUMMARY:

Introduction: Alcohol Use Disorder (AUD) causes significant impairment. Worldwide, it accounts for 5.1% of the global disease burden. In addition, alcohol-related injuries account for 132.6 million Disability-adjusted Life Years (DALYs) (Rehm et al., 2020). In the United States, it is estimated that 6.7% in their lifetime will develop AUD. Patients with Alcohol Use Disorder also tend to have tobacco-related disorders (NUD), including the use of nicotine vaporizers (Alcohol abuse statistics, 2022). Since it is generally in the patient's best interest to minimize polypharmacy where able, critical appraisal of whether Varenicline, which is FDA approved for smoking cessation, can be used for managing AUD, may open a new treatment strategy for clinicians working with addiction. Varenicline has been assessed for efficacy in AUD. Over time, studies conducted using Varenicline (Randomized Control Trials (RCT) and Non-Randomized Control Trials (NRCT)) for AUD have shown mixed results. Mitchell et al., in 2012, and Meszaros et al., 2013, showed some effectiveness for Varenicline in AUD, decreasing total alcohol consumption. Plebani et al., 2013, showed that Varenicline reduced alcohol craving. However, Miranda et al., 2022, showed no decrease in cue-induced craving when compared to placebo. The existing pieces of literature on the use of Varenicline in alcohol use disorder are reviewed below. **Methods:** A PubMed query was performed using search terms and criteria stated below. The initial search yielded 143 studies, which was reduced to 16 by exclusion. Eight RCTs evaluated Varenicline

in AUD alone, five examined effectiveness in both AUD and NUD, and two were systematic reviews in AUD alone. One non-randomized trial on the efficacy of Varenicline and AUD and NUD was included.

Search Terms: Alcohol abuse, Alcohol Use Disorder, Nicotine Use Disorder, Smoking Cessation, Alcohol Dependence, Alcohol Use Disorder treatment, Varenicline, Chantix, Medication, and Alcoholism.

Inclusion Criteria: English-language articles published between 2012 and 2022, RCT, Non-RCT, Systematic Reviews, or metanalysis. **Exclusion Criteria:** Conference paper, editorial, or other non-empirical. **Results:** Varenicline effectively decreased alcohol consumption, particularly for patients with NUD. **Conclusion:** Varenicline has some effectiveness in treating AUD, especially for those with comorbid NUD. It may be a viable pharmacological strategy for patients with both disorders. However, the effect on alcohol consumption may also be a transitive effect of nicotine discontinuation.

No. 8

The Impact of Child Protective Services Involvement on Pregnant and Postpartum Women in Substance Use Disorder Treatment

Poster Presenter: Darien Colson-Fearon

Co-Authors: Alexis Hammond, Denis Antoine, Michael Kidorf, Ph.D., Jessica Peirce, Ph.D.

SUMMARY:

Objectives The incidence of substance use disorder among pregnant women has continued to rise. A woman's ability to stay in treatment and complete treatment is influenced by numerous factors, including Child Protective Services (CPS) involvement. The goal of this study was to assess the relationship, if any, between active involvement with CPS while in treatment and treatment outcomes.

Methods This study is a retrospective analysis of data from 127 patients from the Center for Addiction and Pregnancy at the Johns Hopkins Bayview Medical Center in Baltimore, MD. The sample included ninety-two women with active CPS cases and 35 individuals without current CPS involvement. A log binomial regression with robust variance was used to estimate the relative risks of treatment completion and time spent in treatment (> 90 days vs. ≤ 90 days) between the active CPS-involvement

and non-involved groups when controlling for race, primary substance used, employment status, and co-occurring psychiatric disorders. Statistical significance was noted at a level of $p < 0.05$. **Results** Women with active CPS involvement during their admission were significantly more likely to spend at least 90 days in treatment (RR = 1.78, CI = [1.09, 2.93]). The active CPS group also trended toward higher rates of treatment completion (RR = 1.41, CI = [0.78, 2.57]), although this finding was not statistically significant. **Conclusions** While the associations are insufficient to determine causality, These findings provide preliminary evidence that CPS involvement facilitates treatment retention. While further study is needed with a larger sample size, these data highlight the importance of educating patients about what leads to local CPS involvement, what it entails, and how to best work with CPS staff as part of the treatment focus.

No. 9

Aripiprazole-Induced Neutropenia in a Patient With Early Psychosis Complicated by Catatonia

Poster Presenter: Mikaela Grace Miller, M.D., M.P.H.

Lead Author: Jason Compton, M.D.

SUMMARY:

Ms. O was a 26-year-old European-American female with a history of presumed schizoaffective disorder in addition to alcohol use disorder, benzodiazepine use disorder, stimulant use disorder, opioid use disorder, and nicotine use disorder who was found down covered with diffuse sun burns and with signs of recent sexual abuse. Psychiatry was consulted for disorganization, inability to attend to ADLs, and restricted oral intake. When seen by the psychiatry team, she endorsed auditory hallucinations, profound dysphoria, and disturbing delusions of being hunted by law enforcement for heinous crimes she believed she had committed. Her discharge plan was to travel to Mexico and die in a human sacrifice to atone for her sins, and she was thus admitted to the inpatient psychiatric unit on the grounds of grave disability secondary to serious mental illness. On admission she presented with somnolence, psychomotor retardation, disorientation, with restriction of oral intake and tachycardia. Differential for catatonia was broad: secondary to a primary

affective psychosis, hypoactive delirium, and structural brain disease. Initial labs revealed no obvious cause for delirium and brain imaging was negative. Her symptoms worsened with a trial of olanzapine, and subsequent use of risperidone resulted in worsening tachycardia and parkinsonian side effects. Lorazepam was partially effective but titration was limited by somnolence and inability to walk unassisted. We consulted internal medicine, and their team was ready to admit the patient for intravenous fluids and tube feeding if necessary. We then started aripiprazole and prepared for involuntary ECT. We did not resort to ECT as aripiprazole produced an improvement in her dysphoria, psychosis, and catatonia. Our plan was to optimize the dose and transition to a long acting injectable formulation of aripiprazole, as collateral revealed adherence concerns. However, subsequent lab monitoring revealed a leukocyte count of 3.2 with absolute neutrophil count of 1.4 (compared to a neutrophil count of 6 on admission 19 days prior). The remainder of the work up was normal, and this appeared to be an isolated neutropenia. Hematology was consulted. Three days later, her neutrophil count dropped to 0.6, and aripiprazole was discontinued. Given her favorable response to a partial agonist and the benefit of a long half life in a patient with adherence concerns, we started cariprazine. The patient responded well to cariprazine with significant improvement in mood and psychotic symptoms, and resolution of her neutropenia following discontinuation of aripiprazole. She was ultimately discharged to a residential substance use treatment program. This poster presents a rare case of aripiprazole-induced neutropenia and explores a treatment strategy to successfully manage a complicated combination of medico-psychiatric syndromes and comorbidities.

No. 10

Cult Beliefs or Prodromal Psychosis?

Poster Presenter: Andrew Mason

Co-Authors: Alexander Kaplan, Kelsey Junek

SUMMARY:

Religious practices and engagement can play a beneficial role in a patient's repertoire of healthy coping strategies. Globally, up to 68% of the

population identifies with some aspect of spirituality. Frequently, spirituality is viewed as a psychological protective factor. However, depending on the intensity, context, and timing of the beliefs, clinicians may be guided towards a diagnosis that may involve psychosis or delusional disorders. Diagnostically, when assessing for religious delusions, the viewpoint of the patient must not be a frequently shared perspective; this criteria is not clearly outlined when the perspective is shared amongst a minority such as a cult. In an acute setting, pervasive religious delusions or psychosis with religious elements are commonly recognized when there is a known abrupt change in personality or founded disruptions in the patient's usual activities or functionality. Nevertheless, when confronted with a patient who has joined a small subset of individuals with extreme or fringe religious beliefs, it becomes more difficult for the clinician to discriminate between a religious delusion secondary to a diagnosable psychiatric condition and an uncommon belief structure held by a select few. Here we present the case of a 24 year old female who, throughout several months of outpatient behavioral health and emergency room encounters, presented with unique and atypical thoughts related to religious fervor. The thoughts were initially deemed likely non-pathological as the individual was a member of a local cult with intense protocols and procedures. It was not until this patient began demonstrating other bizarre and disorganized behaviors and beliefs that behavioral health pathology became apparent. These beliefs and behaviors included, but were not limited to, the perception that her legs were broken, despite being able to walk, a complete inability to hear, despite being able to appropriately communicate, and an increasing response to internal stimuli. This individual was recurrently and extensively hospitalized over numerous occasions for schizophrenia. This case may be a beneficial learning opportunity for future clinicians in providing clinical clarity in which the distinction between religious delusions and religious beliefs are not obviously apparent.

No. 11

The Link Between Schizophrenia and OCD. a Case Report and Literature Review

Poster Presenter: Vanessa J. Montalvo, M.D.

SUMMARY:

The link between Obsessive-compulsive disorder (OCD) and Schizophrenia (SZ) has been discussed for years. Despite these attempts, the link has not been fully understood. Although these disorders are considered distinct entities, there are some overlapping characteristics in terms of epidemiology and etiology. Both of these conditions have their typical onset during adolescence and early adulthood with similar prevalence in men and women. Schizophrenia has a prevalence of 1% in the United States and similarly, OCD prevalence in the general population is also 1%. While having OCD is not clearly a risk factor to develop Schizophrenia, it has been reported that 25% of patients with Schizophrenia have obsessive compulsive symptoms (OCS) and 12% of patients with Schizophrenia have OCD as a co-morbid diagnosis. (Devi S, 2015) (Zink, 2013). This is clinically relevant because studies show that patients with Schizophrenia and Obsessive-compulsive symptoms have a poorer outcome as compared to them alone due to the presence of more severe psychotic and depressive symptoms, higher suicidality scores and lower social functioning. Obsessive-compulsive symptoms (OCS) are frequently observed during schizophrenia. These can be present during prodromal phase, first episode, chronic phase and after treatment with atypical antipsychotics. (Reddy, 2019) The management of patients with these two co-morbidities, can be challenging as the treatment of psychosis with some atypical antipsychotics, in particular, clozapine has been known to induce or worsen OCS in schizophrenia. (David D. Kim, 2019). The answers to the link between these two mental illnesses might lie at the level of interaction between different neurobiological systems that involve dopaminergic and serotonergic neurotransmitters. (Alexandra Bottas, 2005) The objective of this paper is to discuss the relevant literature regarding the link between the epidemiology, neurobiology and management of OCD and SCZ.

No. 12**Tuberous Sclerosis and Psychosis Comorbidity With Concurrent Hypersexuality: A Case Study**

Poster Presenter: Michael J. Shain

SUMMARY:

Tuberous sclerosis (TS) is a rare genetic disorder that affects 40,000-80,000 people in the United States that is mainly characterized by the development of tumors in different parts of the body. Other well-known disease components include intellectual disability (likely an Autism Spectrum Disorder), ADHD, ash-leaf spots, shagreen patches, and epilepsy. Multiple cases have also been documented of patients developing psychosis secondary to TS. Although TS-associated neuropsychiatric disorders have been described, a clear association between tuberous sclerosis and psychosis has not been established. We present a case of a 21-year-old male with a history of TS and Intellectual disability who presented with a chief complaint of suicidal thinking and symptoms of visual and command auditory hallucinations of a demon. His presentation was unique and challenging to manage as the patient lacked executive function, resulting in hypersexuality and impulsivity. Clinicians should be aware of the association of TS with psychotic symptoms, and the unique challenges in their management.

No. 13**“I Have Nothing More to Give”: The Role of Gender and Immigration Status on Burnout During the Covid-19 Pandemic**

Poster Presenter: Nancy Claire Shenoi, M.D.

Co-Authors: Nidal J. Moukaddam, M.D., Tianshi Wu, M.D., M.H.S., Gene Otuonye, M.D., Kalpalatha Guntupalli, M.D.

SUMMARY:

Burnout is a global epidemic affecting 1 in 2 healthcare workers with deleterious effects on patient care. The ongoing Covid-19 pandemic may be exacerbating this problem. This project explored the socio-cultural and gender norms that modulate burnout development in health care workers during the Covid-19 pandemic and analyzed burnout-related disparities associated with gender, marital and immigration status, family dynamics, and ethnicity. We conducted an online cross-sectional survey (August–November 2021) of 352 healthcare workers worldwide, including those directly involved in the care of Covid-19 patients. The Maslach

Burnout Inventory for health care professionals (MBI-HSS) was administered along with a survey assessing work-life balance. MBI subscales were measured for each respondent along with work and home related changes due to COVID-19. The association between life changes due to COVID-19 and odds of burnout in each MBI subscale was estimated by logistic regression. There was a high prevalence of burnout, with over half of individuals reporting emotional exhaustion (56%). 83% of individuals reported at least one life factor that was changed due to COVID. After covariate adjusted analysis, we found that any home-related life change due to COVID was associated with 143% higher odds of emotional burnout (adjusted odds ratio [aOR] 2.43; 95% confidence interval [CI] 1.49, 3.98). High emotional exhaustion was most evident when there were three or more life changes. Being a first-generation immigrant, being older, and being a trainee were identified as protective factors for burnout. Female gender was not associated with emotional burnout in a statistically significant manner (aOR 1.34; 95% CI 0.80, 2.24). Burnout remains pervasive among healthcare workers. This study highlighted risk factors for emotional exhaustion (changes in home life due to Covid-19) and identifies novel protective factors. Understanding job burnout may result in better mitigation strategies for health care workers and may improve patient care.

No. 14

The Relationship Between Psychoanalysis and Philosophy: Intersection With Literature

Poster Presenter: Dusan Kolar, M.D.

SUMMARY:

Psychoanalysis and philosophy have mutually influenced each other in many ways. The origins of psychoanalytic concepts can be followed from ancient times in the works of Plato and Socrates. Later in history, the philosophical works of Kant, Schopenhauer, Nietzsche, Spinoza, Husserl, and many others had a significant impact on the development of psychoanalytic ideas. Psychoanalysis and literature are "sister disciplines". The reading experience has much in common with the therapeutic experience. Literary studies were

historically focused on the text itself and the connection between the text and the author's life. Some newer literary studies have turned to the engagement of the reader and reading and comparing this reader response theory with the relationship between analyst and patient. Both psychoanalysis and literature explore unconscious motivations, the presentation of the self, object relations, attachment, separation, and abandonment. The intersection of philosophy and literature was best depicted in Simone de Beauvoir's concept of the metaphysical novel. Nietzsche's novel *Thus Spoke Zarathustra* is likely the best example of a philosophical novel. There is a number of other philosophical fictions in world literature written by Sartre, Camus, Kafka, Joyce, Proust and many others and some of these literary works may have characteristics of the psychological novel as well. All these three disciplines, psychoanalysis, philosophy and literature seek to explore deep truths about human conditions. Truth is one of the central subjects in philosophy, from the ancient Greek philosophers to Thomas Aquinas and then modern philosophers like Kant, Hegel, and Schopenhauer. Literature can also offer paths to truths not otherwise easily accessible. Psychoanalysis is a science and it applies scientific methodology in its theory and treatment. Certain branches of psychoanalysis like Jung's analytic psychology are sometimes closer to philosophy and art than to science. Philosophy as a humanistic discipline has always been in between science and art. Finally, in the modern and postmodern era, there is a tendency to question the role of philosophy in the modern world and the displacement of philosophy by the rise of science or even situating psychoanalysis or other psychological concepts beyond the end of philosophy.

No. 15

Antibody-Negative Autoimmune Encephalitis Induced Psychosis: When Your Life Becomes a Movie Story/Book Tale

Poster Presenter: Majd Alsayed, M.D.

Lead Author: Yahia Homsji, M.D.

Co-Author: Alfred Tager, M.D.

SUMMARY:

Ms. Doe is a 39-year-old Caucasian female with non-contributory past medical history presented to the emergency room complaining of two months of progressing auditory hallucination, persecutory delusions, paranoia, and worsening depressive symptoms and anxiety. She also endorsed intermittent blurry vision, headache, photophobia and phonophobia. Initial emergency room assessment including CBC, CMB, TSH, serum toxicology, and urinalysis were negative for any acute process. Urine toxicology was positive for amphetamine and benzodiazepine. Head CT did not reflect any acute intracranial process. Recent brain MRI showed Single nonspecific subcentimeter focus of T2 hyperintensity in the left frontal centrum semiovale. A neurologist ruled out multiple sclerosis (MS). The patient was admitted for a concern of another medical condition causing psychiatric and somatic symptoms. Positive work up came back for CSF Myelin Basic Protein 4.7 ng/ml (normal range 0-3.7); elevated CSF neutrophils and lymphocytes; serum anti thyroperoxidase antibodies 114 (normal range ≤ 21 IU/ml). The rest of lab work was negative including inflammation markers, vitamins deficiencies, HIV, CSF chemistry, CSF viral/bacterial/fungal panel, CSF Enterovirus-PCR, CSF Oligoclonal bands, CSF encephalopathy autoimmune antibodies, serum encephalopathy autoimmune antibodies, and serum paraneoplastic antibodies. Ms. Doe was not responding to antipsychotic medications. Her clinical picture was suggestive of autoimmune encephalitis therefore, she was started on Steroids and IVIG with symptomatic relief while the test results were pending. The diagnosis of antibody-negative autoimmune encephalitis was made after all work up came back negative with consideration for Hashimoto's encephalitis as differential diagnosis and future monitoring for developing MS. Ms. Doe is currently stabilized on monthly IVIG treatment (for 1 year then re-evaluate) and low dose of risperidone with early remission of neurological and psychotic symptoms. In this poster, we discuss autoimmune encephalitis induced psychosis: clinical presentation, workup, differential diagnosis, and management.

No. 16**Electroconvulsive Therapy Treatment for Patients With Parkinson-Related Psychosis With Bilateral Subthalamic Nucleus Deep Brain Stimulator**

Poster Presenter: Majd Alsayed, M.D.

Lead Author: James P. Griffith, M.D.

Co-Authors: Alfred Tager, M.D., Lynsey Soule

SUMMARY:

Ms. Doe is a 70-year-old Caucasian female with a history of Parkinson's Disease (PD) originally diagnosed at about age 59. At age 63, she was admitted to an inpatient psychiatric unit for psychotic symptoms and diagnosed with Parkinson-related psychosis. Her psychosis was refractory to PD medication reduction, and oral antipsychotics. She was treated with an acute course of electroconvulsive therapy (ECT) which resulted in prompt resolution of her psychosis. She was stabilized on maintenance ECT and quetiapine for several months. At the age of 64, patient's PD progression was unable to be managed with medication alone and patient underwent placement of Left then Right Subthalamic Nucleus Deep Brain Stimulators (STNDBS) in 2016 and 2017 respectively at a distant referral center. Soon after placement and activation of the device, she developed a recurrent psychosis which was refractory to both clozapine and Pimavanserin. With cooperation from a specialized neurologist, Ms. Doe resumed her ECT treatments, with right unilateral technique. Her STNDBS is deactivated prior to and reactivated immediately after each ECT procedure. She is maintained on a combination of Pimavanserin and maintenance ECT every 6-8 weeks with continued remission of her psychotic symptoms. In this poster, we discuss Parkinson-related psychosis: presentation, management, and the impact of neuromodulator intervention on both psychiatric and neurological symptoms.

No. 17**Depakote: It's Overuse, Misuse, and Liability?**

Poster Presenter: Carley Keim

Co-Author: Brian Ladds

SUMMARY:

Valproate is prescribed for the acute and maintenance phase of bipolar disorder and also for non-Bipolar patients for 'mood instability.' It is FDA approved for the treatment of acute mania. It is not FDA approved for the second phase of treatment, to prevent recurrence, limited research data supports its efficacy. The third situation in which valproate is often used is for patients who have not been diagnosed as Bipolar. It is often given as a so-called 'mood stabilizer.' This is not FDA approved. Off-label prescribing is a common and legal practice in medicine. It is unclear if medications lacking FDA approval should require disclosure of that fact. Some argue that such informed consent must disclose the lack of regulatory approval. Others argue against a requirement to explain the legal complexities of FDA approval. This was part of litigation 10 years ago involving a settlement of a billion dollars when Abbott was held liable for falsely promoting valproate for patients with Dementia or Schizophrenia. In a similar way, if clinicians do not obtain explicit informed consent for off-label use and there is an adverse effect the liability could be more severe. The term 'mood stabilizer,' especially in non-Bipolar patients, is not recommended by several authors (10-12). The term is informal and not officially defined (9). It is unclear whether to refer to valproate as a mood stabilizer in the maintenance treatment of Bipolar Disorder or with a non-Bipolar patient, in both cases the data is unproven. With patients who have never had a manic episode, valproate is commonly used but without empirical support. Some patients are said to have 'mood instability' but this too is poorly defined and there is no evidence to support the use of valproate for 'mood stabilization.' For every patient who has had a manic episode and is given valproate there may be many more patients who are non-Bipolar with 'mood instability' who are given valproate as a 'mood stabilizer.' There is little research on this. Without explicit definitions of these terms, it is difficult to investigate which medications target which symptoms (12, 14). Valproate is used by 900,000 people in the United States per year for various purposes (8). For purposes that are not FDA approved, the clinician may need to consider obtaining informed consent including the non-FDA approval. The clinician may discuss the research

supporting its use. This information would apply to maintenance treatment; valproate's efficacy is supported by some investigators (3-6). The situation becomes more difficult for the clinician with a non-Bipolar patient. The clinician should consider informing the patient that valproate's use in this circumstance is not only non-FDA approved but has little if any empirical support. This poses a greater challenge to obtain informed consent in what might be a common clinical situation in which valproate is used.

No. 18**Antivirals for Treatment of Acute Covid-19 Infection in Psychiatric Inpatients With Serious Mental Illness (SMI): A Case Report**

Poster Presenter: Akash Sudhir Halagur

Co-Authors: Mohamed Elsayed, M.D., Jeffrey Fetter, M.D., Elizabeth Sanders, M.D., Rose Akwaowo, N.P.

SUMMARY:

Background: Patients with SMI are more vulnerable to COVID-19 infection (COVID) and are at greater risk for negative outcomes. Although SARS-CoV-2 active antivirals are available, their use has been limited in patients with SMI due to possible drug-drug interactions. Of these, Paxlovid[®], a combination of nirmatrelvir 150 mg and ritonavir 100 mg, and Lagevrio[®], molnupiravir 200 mg, are approved for treatment of COVID. Yet, there are no specific guidelines for choosing antivirals in inpatient psychiatric settings where patients have not been stabilized and discontinuing psychotropic medications can lead to a relapse of symptoms such as paranoia and irritability. This, in turn, could endanger both patients and staff. Moreover, the combined use of psychotropics and antivirals can lead to serious drug-drug interactions but forgoing the use of antivirals may increase the risk of serious acute complications or post-acute sequelae of SARS-CoV-2 (PASC). We here report the case of a SMI inpatient with recurrent COVID with the use of two different antivirals in each episode of infection. **Case Summary:** Mr. Z is a 51 years old male diagnosed with schizoaffective disorder with multiple prior inpatient hospitalizations, history of violence, non-adherence to medication, and substance use. He presented to the inpatient unit for increased

agitation and irritability. Medical comorbidities included body mass index 29.3, well-controlled HIV (CD4 545 cells/mcL, viral load <30 copies/mL), chronic obstructive pulmonary disease, hyperlipidemia, and diabetes mellitus. His agitation was stabilized on lurasidone 120 mg daily. The patient developed COVID twice. In his first infection, he had malaise, myalgia, dyspnea, productive cough, and later transient desaturation (average SpO₂ 92% on supplemental oxygen). Paxlovid was the initial antiviral choice due to its superior efficacy profile compared to molnupiravir in preventing hospitalization and death in patients with significant medical comorbidities. Paxlovid[®] was given twice daily for 5 days with good effect. Lurasidone was tapered 5 days before starting Paxlovid[®] to allow for 5-half life (i.e. 90-hour) washout to avoid a contraindication to co-administration. However, the patient developed rebound agitation and irritability after stopping lurasidone. Restarting lurasidone 2 days after stopping Paxlovid[®] led to subsidence of agitation. A month later, patient had recurrence of COVID with symptoms of sore throat, diarrhea, dyspnea, and productive cough. Given that lurasidone was critical for his psychiatric stability, we started Mr. Z on molnupiravir 800 mg twice daily for 5 days after informed consent regarding the risk of teratogenicity. Patient's COVID-19 symptoms improved and his agitation did not recur. **Conclusion:** Patients with SMI on inpatient units are at high risk of contracting COVID and suffering poor outcomes. The barriers to routine use of SARS-CoV-2 antivirals to treat COVID in these patients are surmountable.

No. 19

Unintentional Bupropion Overdose in a 13 Year Old Presenting as Psychosis

Poster Presenter: Rahoul Gonsalves, M.D.

Co-Author: Raman Marwaha, M.D.

SUMMARY:

Background: Bupropion is a norepinephrine and dopamine reuptake inhibitor. Bupropion is not an FDA approved medication for the treatment of depression in children but is often used off-label. It is structurally related to numerous drugs of abuse like amphetamines, MDMA and bath salts[1]. Therapeutic dose is 150-300 mg daily. In this case we

discuss the clinical manifestations of an unintentional overdose of the extended release (XR) form of Bupropion in an adolescent male. Case Report: Mr.D is a 13-year-old Caucasian male with a past psychiatric history of major depressive disorder and oppositional defiant disorder, prior suicide attempts presents to the ED with a one day history of altered mental status, tremors and delusions. In the ED patient was disoriented, confused, paranoid and experienced visual hallucinations of someone shooting at him and bullet holes in the wall of his room. He exhibited generalized seizure-like activity for 10 seconds which extinguished on its own, after which he was given 1mg of lorazepam orally. Pediatrics, child psychiatry and child neurology were consulted. His urine toxicology was negative. CT head showed no acute intracranial abnormality. Prolonged video-EEG was normal. He was subsequently transferred to the PICU for observation for 48 hours. The patient's sensorium had improved, and he was able to tell us that he had been taking double the prescribed dose of bupropion XR 300mg daily for a week prior to presentation. He cited inadequate symptom relief and a belief that doubling the dose would help. He did report suicidal ideation, but denied intentional overdose of bupropion. The patient's tremors, hallucinations, seizure, tachycardia and his prolonged Qtc interval of 471 ms (from baseline of 416ms) were consistent with bupropion toxicity. Bupropion was discontinued and patient was started on olanzapine for psychotic symptoms. He showed rapid improvement over the course of 48 hours. He was admitted to an inpatient psychiatric facility for psychiatric stabilization and medication management. Discussion:It is important to recognize that bupropion toxicity can produce a wide range of effects like related drugs of abuse. Doses upto 10mg/kg can manifest as tachycardia, confusion, agitation, dyskinesia, hallucinations and psychosis. Seizures or coma are seen with higher doses. [2] There is additionally some evidence to suggest that bupropion may precipitate or worsen pre-existing psychosis which is an additional challenge in recognizing its presentation[3]. Ingestion of toxic doses of the sustained release or extended-release forms would require monitoring for atleast 24 hours post ingestion [4]. Conclusion: Adolescents are at risk for both accidental and intentional overdose and present with more severe toxicity. Early recognition,

a collaborative, multidisciplinary approach, and appropriate level of care based on symptomatology is required for its optimal management.

No. 20

A Case Report of Aripiprazole Induced Rhabdomyolysis

Poster Presenter: Jayasudha Gude, M.B.B.S.

Co-Authors: Viwek Bisen, Kie Fujii

SUMMARY:

Ms. A, a 32-year-old woman with a past history of anxiety, bipolar disorder, and borderline personality disorder, was undergoing treatment with lamotrigine, aripiprazole, trazodone, clonazepam, and hydroxyzine. She presented to the emergency department (ED) with myalgias, left upper and lower extremity numbness, and weakness. Her symptoms started at around 3 AM the same day, and she did not complain of fevers, chills, and shortness of breath, chest pain, abdominal pain, lightheadedness, or dizziness. She had been taking aripiprazole 5 mg daily for the past month and denied any past history of similar symptoms. Her vital signs were hemodynamically stable, but her pulse was 113. On examination, she appeared anxious and had decreased sensation in her upper and lower extremities with 3/5 strength on the left side. Her laboratory results indicated mild leukocytosis, hyponatremia (129), elevations in serum creatinine (3.7), AST (654), ALT (234), and troponin (2.11). A urinalysis revealed darkly colored urine with large RBCs. Neurology and cardiology consultations were requested to rule out stroke and acute coronary syndromes. A computed tomography scan of the head showed no acute intracranial findings. A creatinine kinase level was elevated (>42,670), which led to a search for causes of rhabdomyolysis. The patient reported no history of recent trauma or strenuous exercise. Infectious, endocrine, and other workups were negative. The most likely cause for rhabdomyolysis was the use of the antipsychotic aripiprazole. Thus, psychiatry was consulted. Ms. A was treated with aggressive IV isotonic fluids. Aripiprazole was stopped and the levels of the CK were monitored. CK levels continued to trend down and by day 6 of hospitalization her CK was 1648. Transaminase levels also improved and

were considered likely secondary to rhabdomyolysis. There was a notable improvement in the CK and transaminase levels after stopping the aripiprazole and the patient was discharged to follow up with a psychiatrist for further management.

No. 21

The Utility of Malignant Self-Regard in Evaluating Relationships With Psychopathology, Anger, Attachment Styles and Perceived Social Support in a Card

Poster Presenter: Nida Khan, D.O.

SUMMARY:

Background: The Diagnostic and Statistical Manual of Mental disorders proposes a dimensional perspective to personality disorders as an improved means of accounting for pathologies that fail to fit into concrete categories. This model focuses on impairment in personality traits and functioning as the core of personality pathology. Malignant self-regard is a personality construct which encompasses the Masochistic/Self-defeating, Depressive, and Vulnerable/Narcissistic personality disorders. This construct highlights features across personality disorders which impacts the way one perceives themselves and their relationship to others. These features include: 1) depression proneness 2) guilt, shame, inadequacy 3) self-criticism 4) hypersensitive self-focus 5) pessimism 6) perfectionism in the context of grandiose fantasies 7) desire approval and acceptance from others 8) masochism 9) problematic management of anger. It was hypothesized that malignant self-regard would negatively impact perceived social support, negative affect, stress and psychopathological traits, and psychosocial functioning. Methods: 184 patients waiting to be seen in an outpatient cardiology clinic completed Malignant Self-Regard Questionnaire-Short Form (MSRQ-S), Inventory of Interpersonal Ambivalence-6, PROMIS Emotional Distress-Anger-Short Form, and rating of general physical health. Results: Results show that malignant self-regard was positively correlated with interpersonal ambivalence ($r=.52$, $p<.001$), self-reported anger ($r = .49$, $p < .001$), and reports of poorer physical health ($r = .23$, $p < .01$). MSRQ-S was negatively correlated with self-reported adherence ($r = -.25$, $p < .01$) as well. Conclusion:

These results show the functional, psychological and social impact of Malignant Self-Regard scores. Further understanding of Malignant self-regard as a construct is necessary for the improvement of care of populations with personality pathologies in medical, and by extension, psychiatric settings.

No. 22

Borderline Personality Disorder, Suicidal and Parasuicidal Behavior

Poster Presenter: Leonardo Emanuel Hess, M.D.

Co-Author: Corina Ponce

SUMMARY:

Introduction Non-suicidal self-harm (NSSI), that is, deliberately injuring themselves without the conscious intention to die. There is a broad etiology that causes people to perform this type of behavior, being a reason for consultation, due to the concern of the patient or his family. It is more common in the adolescent population, and generally includes sharp wounds and burns in the superior and inferior extremities and also for the abdomen. Although the patient does not have an intention to die, this behavior constitutes a risk factor for possible complications, such as infections, musculoskeletal injuries, scars (body image), among others. Also, the adopted behavior can be dangerous, or for some reason become lethal, without the patient wanting death. The intake of non-suicidal medications can also become a non-suicidal self-injury behavior, in many occasions in order to make a call for attention to the patient's environment. Also, this problem is a risk factor for committing suicide in the future. Objective The present work focuses on this problem as a reason for consultation, admission to emergency services or to be detected as usual symptoms of some mental disorders, such as borderline personality disorder. Developing The main works and guides of international treatments have been reviewed, concluding that this type of behavior is more frequent in young women and adolescents, although men carry out behaviors with more serious injuries. Many patients are hospitalized for fear of future behaviors of this type and for fear of committing suicide. Cognitive behavioral therapies show promising results. Training in skills and attitudes is carried out to promote problem solving,

avoiding impulsive decision making. These therapies have better results if it integrates the parents or the patient's environment. Conclusions Non-suicidal self-injurious behavior is a complex issue to address and understand, Specially in borderline personality disorder. It requires a broad look and specialized services for the treatment of these patients, taking into account their environment, not only to understand, but also to actively participate in the treatment and recovery of the person.

No. 23

Case Report of Diffuse Alveolar Hemorrhage Associated With Electroconvulsive Therapy in Treatment of Bipolar I Disorder

Poster Presenter: Jacob Shumac, D.O.

Co-Authors: Wasila Madhoun, Meredith Brown, M.D., Heidi Johnson, D.O., Brady Kullen

SUMMARY:

The patient is a 42-year-old female with a past psychiatric history of Bipolar I Disorder and Social Anxiety Disorder, who was voluntarily admitted to an inpatient psychiatric unit to begin ECT treatments for medication-resistant Bipolar I Disorder depressive symptoms. The patient had previously been trialed on seven different antipsychotics, lithium, valproic acid, and oxcarbazepine, which were not effective in controlling her mood symptoms. In addition, the patient had a history of serotonin syndrome associated with antidepressant use, and therefore those medications were being avoided. The patient's most recent medication regimen consisting of aripiprazole, lamotrigine, and bupropion was not sufficiently controlling her Bipolar I depressive symptoms. The option of inpatient ECT for treatment of medication-resistant Bipolar I Disorder depressive symptoms was discussed with the patient, to which she was amenable. The patient was admitted to an inpatient psychiatric unit and ECT was scheduled. She underwent anesthesia with manual ventilation via bag mask. After being determined to have sufficient muscular paralysis, the patient received the electrical impulse. Adequate seizure duration of 52 seconds was noted on EEG and the treatment was initially considered successful. Upon arousal from sedation, the patient was observed to have oxygen saturation in the low to mid 80's, requiring

administration of supplemental oxygen. Pulmonology was consulted and performed imaging and bronchoalveolar lavage. It was determined that the cause of the patient's acute hypoxia was diffuse alveolar hemorrhage due to negative pressure caused by the partial paralysis of the diaphragm during ECT. There are very few cases of diffuse alveolar hemorrhage associated with ECT in the literature. This poster will discuss the mechanism of this event, as well as discuss related considerations that practitioners should be cognizant of when contemplating ECT for a patient.

No. 24

Evidence for Transcranial Magnetic Stimulation (TMS) on Thyroid Stimulating Hormone(TSH): A Systematic Review

Poster Presenter: Aysegul Aydogan

Co-Authors: Rakesh Kumar, M.D., M.B.B.S., Sandeep Pagali

SUMMARY:

Background: The hypothalamic-pituitary-thyroid (HPT) axis has been studied for decades in depression. It has been reported that patients with subclinical hypothyroidism often suffer from comorbid major depression and thyroid hormones have been used both to augment and accelerate the clinical effects of antidepressants. In terms of thyroid function, thyroid stimulating hormone (TSH) is the most sensitive marker. Non-invasive brain stimulation (NIBS) therapies such as repetitive transcranial magnetic stimulation (rTMS) are FDA-approved treatments for depression and have been increasingly investigated on various psychiatric disorders in the last 2 decades. Repetitive Transcranial Magnetic Stimulation (rTMS) has shown promise in neuroendocrinology. **Methods:** Comprehensive database search (Medline, Embase, Cochrane, APA PsycINFO, Web of Science, and Scopus) from the inception of the database - 05/2022 using keywords related to TMS, TSH, and neuroendocrinology. **Results:** We identified 11 studies/trials of rTMS on we will present the results of our systematic review on the use of rTMS for thyroid hormone level changes like Thyroid stimulating hormone (TSH), free T4, and T3. Overall, there is evidence that rTMS can improve TSH levels,

with some benefits lasting for several weeks. There was heterogeneity in the study designs and there was a wide range of target stimulation sites, rTMS dosing and treatment parameters, and outcome measures. The efficacy of the TMS is supported by existing data; however, further research is ongoing to optimize treatment parameters and identify neurophysiological biomarkers. This presentation will be an overview of the current efficacy of TMS on TSH levels. **Conclusions:** There is evidence that rTMS improves TSH levels in depression and healthy adult populations. Left DLPFC is the most common stimulation site, and five sessions are frequently used. There was variability in rTMS parameters of intensity and pulses. Further studies are needed to extend these promising findings and a possible future of TMS in neuroendocrinology.?

No. 25

Newly Matriculated Medical Students' Perceptions of Well-Being: A Qualitative Study

Poster Presenter: Madeline Schmiedeknecht

Co-Authors: John Svendsen, Meesam Zaheer, Joseph Asper, Taylor Mihalic

SUMMARY:

<p lang="EN-US" paraeid="{8351a0bd-7284-43e1-b962-197d3963cae5}{95}" paraid="1013102200" xml:lang="EN-US">**Background:** Medical students experience high amounts of stress from a variety of sources, such as academic requirements, personal obligations, and professional demands, leading to a considerable number of medical students with anxiety and depression (1). This study aims to understand how new medical students perceive wellness and self-care, and how non-mandatory lecture attendance can relieve stress and prioritize students' well-being. **Methods:** The incoming first-year class at the Marian University College of Osteopathic Medicine (n=160) was invited to complete a qualitative online questionnaire at their orientation regarding their perceptions of wellness and how their well-being might be impacted throughout the program (2). This class is 70% female, 30% male with an age range of 21 to 37, with 81% between ages 21-24. Four responses were filtered out due to participants' prior enrollment at a medical school. Six open-ended questions were asked about

perceptions and experiences of mental health, well-being, and views on interventions such as non-mandatory lectures. Thematic analysis was conducted across all 156 responses (3). **Results:** Participant responses were coded and grouped into the following eight themes: Spiritual Health, Physical Health, Mental Health, Financial Health, Academic Importance, Peer Support, Balance, and Control. When participants were asked what 'medical student well-being' meant to them, 82% of the responses were linked to Physical Health, encompassing codes such as exercise, getting enough sleep, and diet maintenance. Mental Health and Balance were the next most mentioned aspects of wellness, with 60% and 53% occurrence rates, respectively. The Mental Health theme encompasses codes like stress, positive mindset, and counseling. The Balance theme encompasses codes like work-life balance and time management. Non-mandatory lectures were viewed favorably, with 87% of participants appreciating the control it allows them to have over their schedule. Some participants mentioned that while they appreciated non-mandatory lectures, they would miss the socialization element of class and would try to attend the lectures in person. **Conclusion:** Our findings suggest that physical health, mental health, and balance are important aspects of how new medical students expect to maintain their well-being. An increase in mental health leads to overall decreased stress, which can propagate into better outcomes such as reduced dropout and professional development (4,5). Further results suggest that non-mandatory lectures allow students to feel in control and have the autonomy to choose what learning method works best for them. This research survey is now part of the wellness course curriculum at Marian and will be administered routinely as students complete the curriculum. One area of needed research is the mental well-being of medical students and interventions that can lead to greater academic success and residency placement (5). </p>

No. 26

Whole Brain Radiation Induced Bipolar Disorder With Psychosis

Poster Presenter: Krishna Smriti Taneja, M.D.

Co-Author: Arindam Chakrabarty

SUMMARY:

Although cranial irradiation is relatively well tolerated, it can at times cause different neuropsychiatric problems, either acutely or in the long term (Makale 2017). The literature in terms of management of radiation-induced acute neuropsychiatric manifestations is limited. In this poster we present a case of a patient who developed cognitive deficits and psychosis with an eventual diagnosis of bipolar disorder after receiving whole brain radiation. Mr. X, a 58-year-old male presented to the emergency room with worsening paranoid delusions, grandiose delusions of a religious nature, and auditory hallucinations leading to the patient physically attacking his neighbours. Family reports that his symptoms of psychosis started, and have progressively worsened after undergoing treatment with prophylactic whole brain radiation treatment following metastasis to the cranium in addition to chemotherapy. Initially, following radiation therapy the patient developed cognitive deficits in addition to behavioural changes of irritability, agitation, and explosiveness. He underwent neuropsychological testing which showed deficits in attention and higher-order cognition along with difficulties in processing speed suggesting impairments in the frontal subcortical regions. He was also noted to have depressive symptoms at the time. His behavioural changes progressively worsened with patient developing delusions of infidelity, and paranoid delusions of his food being poisoned. He was started on antipsychotic medications in the outpatient clinic, but his psychotic symptoms progressed with the development of auditory hallucinations, grandiose delusions and manic symptoms eventually leading to an ER presentation. Further course required involuntary admission and court-ordered treatment. MRI was unremarkable for intracranial abnormalities and further metastasis. In this poster we discuss neuropsychiatric manifestations of cranial radiotherapy (Moraes 2017). We also stress the importance of a comprehensive evaluation for the treatment and diagnosis of psychosis/mood disorders.

No. 27

The Heightened Propensity of Developing Depression in Children/Adolescents With Eczema: A Case Report

Poster Presenter: Daniel Ulloa

Lead Author: Narmada Neerja Bhimanadham, M.D., M.P.A.

Co-Author: Juan Penalosa

SUMMARY:

Abstract Eczema is a debilitating chronic inflammatory skin condition that impacts people of all skin color, race and ethnicity. In the United States, about 9.6 million children are living with eczema and they are two to six times more likely to have depression and other mental health disorders than those without. We highlight a case of a 17-year-old Caucasian female with eczema and bipolar II disorder. This case report strives to identify the connection between elevated inflammatory markers (CRP, IL-6, IL-12, TNF-alpha) found in eczema and their association with the increased risk of developing depression. A comprehensive literature review in the databases of PubMed and NCBI was conducted to gain insight into the mechanism behind the increased risk of developing depression in children and adolescents battling with eczema.

Introduction The peak incidence of eczema is during early childhood, with one in 10 individuals developing eczema in their lifetime [1]. In recent years, the association between eczema and mental health disorders has been well documented, yet the true nature of their interrelatedness remains unclear [2]. It is imperative to take into account the psychological effects that co-occur as the majority of children with eczema are treated by primary care physicians [3]. **Case** We relay a case of a 17-year-old Caucasian female with a past medical history of eczema (on no medications) who was brought into the Bergen New Bridge Medical Center on January 27, 2022 due to worsening suicidal ideation. On evaluation, she was noted to have an eczematous rash on her extremities. She was emotionally labile and endorsed ongoing depressive symptoms of depressed mood, anhedonia, lack of concentration, and feelings of worthlessness. She has a history of multiple inpatient hospitalizations, with her first inpatient hospitalization in October 2020 following a suicide attempt. The patient was stabilized and

discharged on Aripiprazole 10 mg po at bedtime, Lithium 600 mg IR po at bedtime, Lithium 300 mg IR po daily, and prazosin 1 milligram po at bedtime. At the time of discharge her lithium level was 0.8.

Discussion The prevalence of childhood eczema has steadily increased since 1997 from 8% to about 12% [1]. Mental health conditions and skin diseases are among the top 20 conditions with the highest personal healthcare costs in the United States for children and adolescents [3]. This patient was initially started on Lithium due to its proven benefit in treating BD and its role in suppressing inflammation through its effects on T suppressor lymphocytes [4]. Several studies in the past years have found a dose-response relationship between eczema severity and depression, yet the causal mechanism of this association remains unclear [5].

No. 28

Implementing a Narrative Medicine Curriculum in Psychiatry Residency

Poster Presenter: Briana Tillman, D.O.

SUMMARY:

The 2020 AAMC monograph, "The Fundamental Role of the Arts and Humanities in Medical Education," states that arts and humanities curricula are underutilized in medical education and could provide invaluable skills to help physicians address contemporary challenges. It asserts that medicine is both an art and a science, and thus requires humanistic values, principles, and skills, to include an understanding of the human condition.¹ Inspired by the aspirations and examples highlighted in this monograph, we resolved to implement a narrative medicine curriculum within the HealthOne Psychiatry Residency at The Medical Center of Aurora in Colorado. Our supplementation of residency education with narrative medicine occurred during the mandatory didactic instructional periods. Goals in implementing this curriculum focused on three areas: wellness, therapeutic techniques, and clinical skills. We began the narrative medicine workshop by investigating the definition and history of narrative medicine as well as its purported benefits, including the ability to help deliver more humanistic healthcare (Charon). Residents engaged in two different narrative

medicine experiences: a close reading of the short story *Blood*, by Zdravka Evtimova, and a reflective writing exercise, "Who is my patient?" The close reading was followed by small group and large group discussion of themes, especially those of boundaries in care-giving and the stressors of the patient-physician relationship. The writing experience culminated in small-group supportive feedback and naming of emotions and challenges. In total, residents from all four post graduate years and other team members participated in these narrative medicine experiences. We assessed the impact of this curriculum through surveys, focus groups, and qualitative interviews of residents and attending faculty. This poster explores the planning, implementation, and assessing phases of this narrative medicine experience; discusses the benefits and barriers; and proposes practical strategies for other healthcare groups in general and graduate medical education residencies in specific interested in integrating narrative medicine sessions into their training.

No. 29

Medical Students Are Motivated to Learn About Reproductive Psychiatry

Poster Presenter: Ann M. Oler

Co-Authors: Ainhua Norindr, Mousa Botros, M.D.

SUMMARY:

Background: Postpartum mood disorders are a major public health issue, with postpartum depression affecting as many as one in five new mothers. It is important that healthcare providers be able to differentiate between the normal postpartum blues that up to 85% of new mothers experience and more severe and enduring postpartum mood disturbances that require clinical attention. Although reproductive psychiatry is relevant to many specialties, it is often not present in medical school clinical curricula. According to a web-based survey, only 40% of residency program directors agreed that residents should be trained in reproductive psychiatry. **Purpose:** To address this, we developed an informational session on reproductive psychiatry to expose medical students to the growing, innovative field and gauge interest in reproductive psychiatry being integrated into the medical school curriculum.

Methods: We piloted this session to medical students by presenting a virtual slideshow that covered the symptoms, diagnosis, and management of postpartum mood disorders, and the relevance of reproductive psychiatry to various medical specialties. We administered a survey before and after the session to assess attendees' interest in reproductive psychiatry and thoughts on the importance of the topic. IRB exemption was obtained. **Results:** Twenty-one survey respondents included students in all years of medical school (23% MS1s, 8% MS2s, 62% MS3s, 8% MS4s) and both MD (62%) and MD/MPH (38%) students. Attendees' specialties of interest included OB/GYN (38%), pediatrics (15%), and psychiatry (8%), as well as a variety of other specialties (38%), such as orthopedic surgery, radiology, dermatology, and internal medicine. While 69% had not previously learned about women's mental health in medical school, after the session, 100% believe that postpartum mood disorders are a public health issue, feel that reproductive psychiatry is relevant to their specialty of interest, and plan to integrate trauma-informed care into their future medical practice. All survey respondents are interested in the session being integrated into the curriculum. **Discussion:** The results of this study demonstrate that there is an eagerness among medical students of different years, degree programs, and specialties of interest to learn about reproductive psychiatry, highlighting the potential for collaboration between specialties in addressing women's mental health issues. The large proportion of upper-year medical students who attended the session may indicate that enthusiasm for learning about women's mental health issues is strongest when students are preparing to apply for residency and contemplating their future in medicine. Students feel that reproductive psychiatry is relevant to a variety of medical specialties, particularly the model of trauma-informed care. Medical schools should consider integrating these topics into the clinical curriculum in order to meet students' motivation to learn.

No. 30

Interoception in Attention-Deficit/Hyperactivity Disorder: A Systematic Review

Poster Presenter: Laura Levy

Co-Author: Alisha Bruton

SUMMARY:

Background: Interoception is the perception of one's internal physiological state.¹ Decreased interoception may play a role in the pathogenesis of various psychiatric conditions² including attention-deficit/hyperactivity disorder (ADHD), which has a worldwide prevalence of 2.2% in children and 2.8% in adults.³ We sought to review existing literature on interoception and ADHD. **Methods:** Studies included pediatric and adult participants with ADHD as one of the primary diagnoses of interest. Participants with co-occurring neurodevelopmental or neurologic disorders were included. Interoception assessments included objective measures (ie, the heartbeat tracking test) and self-report questionnaires. We considered cohort studies, case-control studies, cross-sectional studies, pilot trials, randomized controlled trials, case papers, and systematic reviews. The literature search included the PubMed/MEDLINE, PsychINFO, and Scopus databases. Terms and MeSH headings related to attention, ADHD, and interoception. **Results:** Initially, 337 studies were identified. Of those, four cross-sectional studies met inclusion criteria. Two studies enrolled children with a diagnosis of ADHD, autism spectrum disorder (ASD), or ADHD and ASD. Two studies enrolled adults with ADHD. All studies had comparison groups; three comparison groups were "healthy controls" and one involved typically-developing children with parent-reported low or high autistic traits. Both studies in children found decreased interoception in those with ADHD and/or ASD versus the comparison groups. One study in adults found decreased interoception in the ADHD group versus the healthy controls, while the other study did not find between-group differences. **Conclusion:** Children with ADHD, including those with comorbid ASD, appear to have decreased interoception compared to their typically-developing peers. Interventions focused on sensory integration may suggest an avenue for treatment.

No. 31**Mta Sentinel Studies of ADHD: A Review**

Poster Presenter: Ishdeep Narang, M.D.

Co-Authors: Gurjinder Singh, M.D., Raman Marwaha, M.D.

SUMMARY:

Objectives: There are multiple Multimodal Treatment of ADHD (MTA) studies. With the increasing prevalence of ADHD and the morbidity and financial burden associated with it, we reviewed sentinel studies on MTA interventions in ADHD patients. We review studies assessing adult functional outcomes, risky behavioral development, treatment outcomes, implications & applications for clinical practice in patients with ADHD. **Methods:** A systematic search of PubMed, Scopus, Web of science was carried out. Inclusion criteria included children with ADHD, MTA interventions, and Randomized controlled trials and Observational studies. Exclusion criteria included Adult populations, adolescents, young adults, Non-MTA interventions, systematic/literature reviews, and grey literature. **Results:** A 2007 and 2017 trial conducted by Swanson et al. showed a decrease in relative growth in medicated patients, with one trial indicating an average growth of 2 cm and 2.7 kg less than the non medicated subgroup. A 2017 trial conducted by Johnson et al. reported risky behaviors in 44.7% of adolescents with childhood ADHD. A 2007 trial conducted by Molina et al. showed significantly higher rates of delinquency and substance use compared to the normative group. A 2015 trial conducted by Howard et al. also concluded that worsening symptoms and delinquency during adolescence predicted greater levels of early adult substance use. A 2015 trial conducted by Cruz et al. focusing on comorbid irritability showed the superiority of systematic stimulant treatment over behavioral management and combination treatment of community care and behavioral treatment. Irritability did not appear to influence the response to ADHD treatment. A 2009 trial conducted by Pappadopulos et al showed medication adherence is substantially low. Two clinical trials conducted by Vitiello et al. and Greenhill et al. in 2001 determined that both careful initial titration and ongoing medication management are required for optimal management. **Conclusions:** A comprehensive management approach to ADHD patients is required taking into consideration physical growth, comorbid psychiatric conditions, risky behaviors, medication adherence, individualized medication titration and a combined approach.

No. 32**The PRITE: Does Regular Participation in a Residency Question Bank Improve Performance?**

Poster Presenter: Raquel Atencio

Co-Authors: Greg Sullivan, Steven Gunther

SUMMARY:

Background: The Psychiatry Resident In-Training Examination (PRITE) is a two-part examination offered by The American College of Psychiatrists to residents in all stages of training as well as post-residency trainees. The PRITE's main objectives are to assess each trainee's knowledge base in the clinical science of psychiatry and provide feedback by comparing the examinee's performance to that of their peers. Objective: Evaluate the impact of daily questions on trainees' PRITE scores by looking for possible correlations between participation, percentage of daily questions answered correctly, and PRITE performance. Methods: Several small group interview-based needs assessments suggested that receiving daily PRITE-style questions would serve to not only review commonly tested concepts but reinforce study habits. A daily email with a single question from an internally developed question bank was sent out to 38 trainees every weekday at 7 am for six weeks leading up to the PRITE examination. The 38 participants were in all stages of residency training. Individual responses were tracked automatically. Participation was voluntary with the different levels of participation being defined as 50%-74% (moderate participation), and 75% or greater (high participation) of the questions. 12 hours after the question was sent, each trainee received an email with the correct answer and explanation. Once the PRITE is administered, participants are encouraged to complete a survey about their experience and suggest ways to improve this examination preparation strategy. Preliminary Results: The first three weeks of this PRITE-preparation strategy showed that about 51% (n=19) of residents participated at a moderate or high level with 8 residents across all levels of training not participating at all. The PGY-1 class had the highest number of non-participants in a class with 5 while the PGY-2 class had the highest number of moderate to high users with 7 out of a class of 10. The average

response time of moderate or high users by class was 3.97 hours for PGY-1, 1.77 hours for PGY-2, 2.31 hours for PGY-3 and 2.00 hours for PGY-4. There was an average of 19 responses per day. Questions that resulted in 50% or more of participants answering incorrectly had fewer overall responses (mean = 17). Conclusions: As this study is ongoing, more robust analysis will be reported including response rates over time, correlation of response rates between classes, and predictability of performance on these questions and actual PRITE outcomes. Additionally, a post PRITE exam survey will be given to residents to better understand their experience. Initial analysis does highlight some growing trends including, higher rates of participation amongst the PGY2 class, individuals who participated at a moderate to high level appear to have shorter response times than those with lesser response rates and that less individuals may be willing to participate in more challenging questions.

No. 33**Changes in Psychiatry Resident Well-Being and Burnout During the Early Phase of the Coronavirus Pandemic**

Poster Presenter: Varun Y. Rawal, M.D.

Co-Authors: Anne-Marie Duchemin, M.D., Julie Niedermier

SUMMARY:

Background: The Covid-19 pandemic has taken a toll on the mental and emotional well-being of healthcare workers. Resident physicians are a particularly vulnerable group of healthcare workers due to the rigors of their training. Research published prior to the Covid-19 pandemic has indicated that residents are susceptible to burnout and depression, but limited research exists exploring the effect of the pandemic on this population. Objectives: This study sought to examine changes in wellbeing and the utilization of personal wellness practices by resident physicians during the Covid-19 pandemic. Methods: Researchers performed a cross-sectional study by sending a survey to 43 psychiatry residents in June 2020. The survey respondents answered questions about changes in their baseline wellbeing, their wellness practices, and their clinical and educational experiences during Covid-19. The

researchers analyzed the responses to six of these questions, which focused on changes in wellbeing, and one question which investigated the use and frequency of personal wellness practices. Results: Overall survey response rate was 88% (38 out of 43) but the response rate to each of the questions analyzed in this study was 77% (34 out of 43). There was an increase in anxiety and irritability compared to baseline, among psychiatry residents working during the Covid-19 pandemic. There were no notable changes in sleep or levels of depression. Most residents reported that working in the pandemic was moderately stressful. Overall mental/emotional health was rated as fair or good by most respondents. Conclusions: It is possible that working during the pandemic increased levels of anxiety and irritability among residents. Further research is needed to determine factors that increase the risk of burnout or burnout symptoms among residents working during the Covid-19 pandemic.

No. 34

The Mental Health Burden of Covid-19

Poster Presenter: Sean Rumney

Co-Author: Summer Rolin

SUMMARY:

Background: Health priorities have shifted from understanding pathogenesis and treatment of pulmonary symptoms to targeting chronic sequelae of COVID-19. There is increasing evidence that a number of patients with COVID-19 may experience a range of neuropsychiatric symptoms during and persisting after COVID-19 infection. Depression, anxiety, post-traumatic stress disorder, sleep disturbances, fatigue, and cognitive deficits are most commonly reported among 'Long COVID' patients. Approximately 35% of patients with COVID-19 infection produce at least one moderately elevated score across measures of anxiety, depression, etc. This study analyzed if patients with Long COVID-19 symptoms are at increased risk for psychological disturbances based on mood data. **Methods:** Data was retrospectively collected from subjects over the age of 18 who were evaluated in a Rehabilitation Medicine outpatient practice between January 2020 and December 2021. Subjects were evaluated at

varying time periods post-COVID 19 infection. COVID-19 diagnostic status, time frame, and physical, cognitive, and somatic symptom report was also included. Posttraumatic stress disorder symptom severity was assessed using the 17-item PTSD Checklist-Civilian Version (PCL-5). The Patient Health Questionnaire (PHQ-9) and Generalized Anxiety Disorder (GAD-7) were utilized to assess the symptoms of depression and generalized anxiety disorder, respectively. The Spearman rank correlation was computed for each pairwise combination of Long COVID-19 symptom score and mood scores. Significance was determined at p-value less than 0.05. **Results:** For GAD-7 and PHQ-9 questionnaires, there was a high prevalence of moderate and severe depression among subjects at 40% and 52%, respectively. Long-haul symptom score was positively associated with GAD-7 ($r=.4$, $p<.05$) and PCL-5 ($r=.2$, $p<.05$). **Conclusion:** As seen in the accumulating evidence in the literature, as well as supported by this retrospective study, there is a high prevalence rate of psychiatric disorders after COVID-19 infection. These results have implications for current outpatient clinics, including primary care, who may encounter patients with Long COVID-19 and thus the need for screening and treatment recommendation in these settings.

No. 35

Screening for Anxiety and Depression in Women Undergoing First-Time In Vitro Fertilization (IVF) for Primary Infertility

Poster Presenter: Natalya Sinkova

Co-Authors: Taylor Brown, Erin Johnson, M.D., Brahm Coler, Brenda Houmard, M.D., Ph.D.

SUMMARY:

Background Depression and anxiety are highly prevalent in American society. Patients undergoing treatment for infertility are at high risk for depression, psychological stress, and anxiety – mood disorders that may persist for decades following attempts to conceive. Despite this increased risk, there are no current screening recommendations to evaluate mood disorders among patients seeking IVF, nor the impact that IVF may have on the reduction, exacerbation, or new onset of depression, anxiety, and stress. The Generalized Anxiety Disorder-7 scale

(GAD-7) and Patient Health Questionnaire-9 (PHQ-9) are reliable and validated tools used to screen for anxiety and depression, respectively. **Objective** To determine the risk for anxiety and depression in women seeking IVF for primary infertility and analyze potential corresponding factors. **Methods** Patients were recruited from a reproductive medicine clinic in Spokane, WA between April 2020 and May 2022. Participants were English-speaking women diagnosed with primary infertility and seeking IVF for the first time. To be eligible to participate, patients were required to have a primary care provider, no history of suicide attempts, or hospitalization for a mental illness. A total of 55 patients met criteria, consented to the study, and completed the GAD-7 and PHQ-9 prior to IVF treatment. Participants ranged in age from 21 to 44 years old. The greatest number of participants (n=37) were in the 30 to 39 age range. Consent and screening questions were conducted with patients via phone. A positive screen for anxiety was a score ≥ 8 , and a positive screen for depression was a score ≥ 5 . **Results** A total of 22 patients screened positive for either anxiety or mild depression. 13 patients (23%) screened positive for anxiety, and 16 (29%) screened positive for mild depression. Of the 13 patients who screened positive for anxiety, 9 additionally scored positive for mild depression. Patients who screened positive for anxiety were on average 31 years old ($SD=3.7$), while those who scored positive for mild depression were on average 31.5 ($SD= 5.0$). 29 patients previously completed intrauterine insemination (IUI) for fertility treatment, with 9 (31%) screening positive for symptoms of mild depression and 7 (24%) scoring positive for anxiety. **Conclusions** Within the general population, current estimates show that 11.3% of people report regular feelings of anxiety and 4.5% report regular feelings of depression; however, our study showed a 23% prevalence of anxiety and a 29% prevalence of mild depression. There was no considerable increased risk for anxiety or depression in those who previously underwent IUI, and the analysis of age as a corresponding factor was limited by the small sample size. However, given the high rates of anxiety and depression seen in patients undergoing IVF compared to the general population, this population may benefit from additional mental health support and routine screening throughout treatment.

No. 36

Psychosocial Interventions for Adults With ASD: A Review of the Literature

Poster Presenter: Jacob Hambrick

Co-Author: Jeremy Richards, M.D.

SUMMARY:

Autism Spectrum Disorder (ASD) is a chronic, pervasive neurodevelopmental disorder that significantly impacts functioning in multiple domains including social functioning, non-verbal and emotional communication, and in interpersonal relationships. Prevalence has also been increasing to 1 in 44 children in 2021 and research funding is largely focused on treatment during this age period with only around 2% of US-based research funding focusing on ASD in adults, a population which has been increasing steadily. Pharmacologic intervention is often used to manage comorbid diagnoses and aggressive behaviors, though has no significant impact on social functioning, communication skills, or emotional recognition which is associated with poor occupational outcomes and poor social integration as well as social isolation. Psychosocial interventions offer a promising alternative strategy to target these deficits with “social prescribing” which can be beneficial across multiple domains. With this in mind, a review of the literature was performed with numerous databases including PubMed and Google Scholar with inclusion of peer reviewed meta-analyses, systematic reviews, and literature reviews focused exclusively on adults with ASD without any research into pharmacologic treatment in order to identify any evidence based psychosocial interventions for adults with ASD. The interventions found able to be grouped into those focused on Social Skills/Communication, Educational/Vocational Support, and the other varied interventions that did not fit into the previously described categories. Upon review of studies that met strict inclusion/exclusion criteria there was the most evidenced based interventions noted to be the Program for the Education and Enrichment of Relational Skills (PEERS) targeting social skills and communication and the Stepped Transition in Education Program for Students (STEPS) which targets young adults in their transition into

post-secondary education. Other studies also demonstrate some promising alternative psychosocial interventions, but with limited overall research into management of ASD in adults significant continued research needs to be completed before establishing a gold-standard treatment plan to target social functioning and communication skills in adults with ASD.

No. 37

Tried-and-True Tricyclic to Treat OCD Reduces Self-Injurious Behavior in the Setting of Severe Comorbid Autism Spectrum Disorder: A Case Report

Poster Presenter: Ryan A. Behmer Hansen, M.S.

Co-Authors: Rosemary Talbot Behmer Hansen, M.A., M.P.H., Sarah Shoeb, B.S., Najeeb U. Hussain, M.D.

SUMMARY:

The behavioral features of obsessive compulsive disorder (OCD), which may overlap with those of autism spectrum disorder (ASD), are a frequent indication for pharmacologic intervention. Yet, there is little evidence to guide pharmacotherapy for adult patients with a combination of ASD, OCD, and self-injurious behavior (SIB) which has been refractory to mood stabilizers, antipsychotics [1], and SSRIs [2]. We present a case of a 38-year-old man with OCD, and severe ASD with intellectual impairment and SIB that only improved with clomipramine. Preceding clomipramine, Mr. E was prescribed numerous medications, including clonazepam, clonidine, valproic acid, quetiapine, olanzapine, fluvoxamine, topiramate, and sertraline, none of which affected therapeutic control of his SIB. Mr. E initially presented to the hospital from his group home for agitation, hyperactivity, and increased severity and frequency of banging of his head, arms, and legs for one day. He had a 2cm posterior head laceration requiring 4 staples, with multiple old ecchymoses in various stages of healing all over his body. The patient was mostly nonverbal, with a severely limited vocabulary. He was admitted to inpatient psychiatry for medication management and stabilization. SIB was the primary treatment target while in the hospital. "As needed" (PRN) antipsychotic injections were frequently required for calming early in his hospital stay. While we believe his hand and head banging were compulsions related to anxiety,

because of the patient's communications deficits, it was difficult to conclusively rule out that these behaviors were instead stereotyped repetitive motor movements. Mr. E was prescribed clomipramine on hospital day 39. He was started on 25mg, and this was uptitrated over the next couple of weeks. He then demonstrated a reduced frequency of banging and compulsive behavior, and required fewer PRN injections for SIB. Prior to the patient receiving a therapeutic dose of 150mg clomipramine, he required a mean number of 4.6 PRN injections daily. While taking clomipramine, in the subsequent 20 days that followed, the patient only required a mean of 1.1 PRN medication injections (dif: 3.5, 95% CI 2.5-4.5). By discharge, his behavior was notably improved: he was calmer, and there were long periods during the day when the patient did not bang or hit whatsoever. To our knowledge, there has only been one placebo-controlled trial investigating the effectiveness of clomipramine for SIB in adults with intellectual disability [3, 4]. This study included eight patients and found no statistically significant benefit of clomipramine for SIB [3]. The present case suggests that clomipramine may have utility for adults with OCD, ASD, and treatment-resistant SIB; further investigation of its use in these patients may be warranted.

No. 38

Challenges of Psychiatric Treatment in Patients With Systemic Lupus Erythematosus

Poster Presenter: Tanya Peguero Estevez, M.D.

Co-Author: Emil M. Achmad, M.D.

SUMMARY:

A 40 y/o Asian female with no past medical history and past diagnosis of bipolar disorder with multiple prior hospitalizations, presented to the psychiatric emergency for suicide ideations with a plan. Initially, the patient presented as dysphoric, guarded, minimizing symptoms, and denying suicide ideations. The collateral information gathered was significant for depressed mood, isolating behavior, poor sleep, poor appetite, and reported SI with a plan. The family disclosed a history of previous aborted suicide attempts and 5 previous hospitalizations since April 2016. The patient was admitted to the psychiatry service and started on Lithium. Review of the last

hospitalization disclosed a previous presentation of agitated, disorganized behavior, treated with Depakote DR 1750 Daily, Lithium 1200 daily, Olanzapine 30 mg PO daily. In the inpatient unit, a physical exam revealed an erythematous rash with malar distribution on the patient's face, with onset 11 days ago and left frontotemporal alopecia that has been ongoing for 4-5 years. Initial screening labs on admission were within normal limits with exception of a asymptomatic urinalysis positive for leukocyte esterase, protein of 30, and WBC of 17. Lithium was held due to the potential of exacerbating dermatologic findings and Abilify was started instead. Due to gender, age and dermatologic findings, differential diagnosis was expanded to include mood disorders due to medical illnesses. Further work up revealed Anti Ds- DNA quantitative positive (16 IU/ml), ANA >1:80, TPO of 84.7. The rheumatology team was consulted and recommended starting Plaquenil 200mg daily for diagnosis of Systemic Lupus Erythematosus (SLE). Patient showed marked improvement after initiation of SLE treatment alongside neuroleptic. The patient was transitioned to Aristada long-acting injection, 675 mg and 1064mg and discharged with rheumatology and psychiatric follow-up care. In this poster we discuss the case of a patient with multiple failed treatments for bipolar disorder who was found to have undiagnosed SLE. We consider the implication of a SLE diagnosis in the management of psychiatric patients, including the need to rule out a neuropsychiatric lupus. We discuss our pharmacological approach to treatment in this patient population, taking into consideration many psychotropic medications can exacerbate some of the symptoms of SLE. Interdisciplinary collaboration is needed for the management of these patients, as lack of treatment of inflammatory conditions can lead to persistence of mood disturbances, and psychiatric misdiagnosis.

No. 39

Computational Analysis of Spoken Language in Mania

Poster Presenter: Jeremiah Joyce, M.D., M.S.

Co-Author: Aysegul Ozerdem, M.D., Ph.D.

SUMMARY:

Mania, the hallmark of Bipolar I Disorder, often results in hospitalization, incarceration, or fatality (Fazel et al., 2013; Li et al., 2018; McCabe et al., 2013). In addition to core symptoms of elevated mood and energy, the mental status exam of mania characteristically identifies abnormalities in speech, thought processing, and thought content (American Psychiatric Association, 2013). While there is extensive diagnostic subtyping of manic contextual symptoms (*i.e.* grandiosity, paranoia), there has been less focus on the processing and delivery of such symptoms. As discussed, abnormalities in speech are a prominent sign of mania (Andreasen & Pfohl, 1976; Newman & Mather, 1938), yet there is no formalized, objective way to characterize these changes in the context of individual differences and symptom resolution. Early detection of speech and language pattern changes in mania may allow for earlier treatment intervention reducing illness progression (Gideon et al., 2019). Conversely, failure to identify mania and manic progression not only increases likelihood of misdiagnosis, as severe mania cross-sectionally resembles acute psychosis, but also reduces likelihood of optimal treatment response. Modern technology enables high fidelity speech recording and subsequent analysis of multiple speech parameters including speed, pitch, and volume, among others (de Jong & Wempe, 2009; Loukina et al., 2011). Detection of such changes begins with collection of high-quality audio data using appropriate recording equipment and techniques. In order to perform computational analysis, the analog sound signal is converted to a digital signal and preprocessed to remove noise artifacts. Speaker diarization to identify the individual speaker may be needed if there is more than one speaker recorded. Acoustic metrics, some of which cannot be naturally perceived, can be continuously quantified and analyzed with either automated or manual approaches (Martínez-Nicolás et al., 2021). Audio data can also be converted to text which in turn can be analyzed for semantic and syntactical elements via modern artificial intelligence techniques. For example, natural language processing of free text can be used to formulaically understand the meaning of words (Mikolov et al., 2013) and how words are connected into larger structures based on text content (Devlin et al., 2019)

and structure (DeRose, 1988). Converting subjective assessments of speech and language to quantitative metrics, in association with clinical markers of disease, allows for descriptive and inferential conclusions to be made in disease states for Bipolar I Disorder while controlling for important psychosocial confounders.

No. 40

Should We Be Silent About Silent Syndrome?

Poster Presenter: Harsimar Kaur

Co-Author: Jatinder Singh

SUMMARY:

Background: Lithium is considered a first-line agent in managing Bipolar 1 Disorder (1). However, lithium toxicity is common knowledge due to a narrow therapeutic index. Neurotoxicity from lithium can be reversible or irreversible and potentially fatal [2]. This necessitates frequent monitoring of its levels, kidney functioning, and its effect on thyroid hormones, the long-term sequelae of lithium toxicity are not as widely discussed. Here we present a rare sequela of lithium toxicity, the Syndrome of Irreversible Lithium-Effected Neurotoxicity (SILENT) syndrome. Case: A 46-year-old female with a history of Bipolar Disorder, ADHD, and morbid obesity status post gastric bypass surgery. Her story began in 2011 when she had her first manic episode, and several inpatient psychiatric hospitalizations followed this. Eventually, her symptoms were in remission on Lithium, Depakote, Adderall, and Trazadone regimen. In 2014, she was admitted to an outside hospital after being found lying in her feces. On admission, Her Lithium level was 1.0 with the absence of unilateral loss of vision, vertigo, lateralized weakness, and clumsiness. She was disoriented and had hypotension, tachycardia, and renal insufficiency with flattening of T-waves in EKG suggestive of Lithium toxicity. After her Lithium levels stabilized and mentation returned to baseline, she had new onset tics and gait disturbance, necessitating the use of a wheelchair. Neurology was consulted, and she was diagnosed with SILENT syndrome in 2015 due to persistent ataxia, slurred speech, and cognitive impairment. She has been seen consistently by neurology over the years, and various pharmacological, physical, occupational, and

speech therapy interventions have been tried without a resolution to her symptoms. Discussion: Although several cases of SILENT syndrome can be found in the literature, the underlying mechanism remains unclear. It has been hypothesized that it could be secondary to the demyelination in the cerebellum and brainstem (3). SILENT is a disabling but preventable neurologic sequela. Close monitoring of lithium, early identification of any risk factors, and imparting education to patients and their families should be paramount.

No. 41

Covid-19 Creating a “Long-Haul” Hospitalization for Bipolar Disorder

Poster Presenter: Mitchell McDaniel, M.D.

Co-Authors: Amret Kaur Sekhon, Jude Nkwelle, Neera Gupta, Garima Garg

SUMMARY:

Background: The impact of COVID-19 on various psychiatric conditions has been well documented since the beginning of the pandemic. The resulting neuroinflammation from infection with COVID-19 is attributed to the increase in prevalence of depression, anxiety, delirium, and PTSD, as well as some growing evidence for COVID-19 infection contributing to psychosis. The pathogenesis of bipolar disorder is understood to be more closely associated with genetics as opposed to environmental factors but there is significantly less known about the impact of COVID-19 infections on bipolar disorder. Here we present a case of a patient with bipolar disorder who required longer psychiatric hospitalization following COVID-19 infection Case Presentation: JK is a 45 year old married white male with a history of bipolar disorder who was admitted for bizarre behavior, depressed mood, delusions, paranoid thoughts, increased alcohol use, and sleep disturbances. His last known manic episode was in March 2020, in which he was hospitalized for two weeks. He tested positive for COVID in February 2021 and his home medications were risperidone, bupropion and lithium. On admission his lithium level was subtherapeutic and lithium therapy was reinitiated. Olanzapine was tried for 8 days and then switched to bupropion and risperidone. Bupropion was discontinued after 3 days due to worsening

paranoia. On day 14 there was noticeable improvement in affect and mood but no change in delusional thinking. On hospital day 23 patient was close to baseline and was discharged to family after receiving risperidone long acting injectable. Follow-up from family revealed depressive symptoms and delusional thoughts returned within a week of discharge and the patient was hospitalized again within two weeks of discharge. Discussion: COVID has been shown with varying degrees of evidence to contribute to the development or worsening of multiple mental health disorders. This is thought to be primarily due to both generalized inflammation and neuroinflammation as well as various psychosocial factors associated with the pandemic. The lack of in person visits due the pandemic and the questionable medication adherence may have led to the decompensation of this patient but the increased length of hospitalization and subsequent rehospitalization are likely a sequela of being infected with COVID-19. Conclusion: This case demonstrates the importance of including information about COVID-19 infections and vaccination status in a psychiatric history. Additionally, this patient was treated with antipsychotic medication that is not known to have a significant anti-inflammatory effect (risperidone). This may represent further support for reported success with psychiatric medications that also have anti-inflammatory properties through the sigma receptor such as Fluvoxamine and Haloperidol.

No. 42

Clozapine Use in Children and Adolescents Under 18 Years: Experience in a Chilean Pediatric Hospital

Poster Presenter: Sergio Zamora

Co-Authors: Catalina Mahaluf, Arturo Grau, M.D., Maria Victoria Bersezio

SUMMARY:

Background: In 2002, the FDA approved clozapine, the first synthesized atypical antipsychotic drug, for the treatment of resistant schizophrenia. However, its use in the pediatric and adolescent population has not yet been approved. On the other hand, the use of clozapine has been studied in the child-adolescent population, whose symptoms have been refractory to the use of other antipsychotics,

reporting a benefit that outweighs the adverse effects. There are few studies on the use of clozapine in children and adolescents in Chile. **Methods:** A descriptive analysis of the patients treated with clozapine at Doctor Luis Calvo Mackenna Hospital's child and adolescent psychiatry service (Santiago, Chile) was made, for which a review of the records in clinical charts was carried out between January 2018 and August 2022. The sociodemographic characteristics of the patients were analyzed and, in order to evaluate the effectiveness of treatment with clozapine, the number of visits to the emergency room and hospitalizations before and after the installation of the drug were compared. **Results:** There are currently 31 patients under treatment with clozapine, 67.7% of them are male. The youngest patient is 9 years old and the oldest one is 17 years and 10 month old, with an average age of 13.45 years. The main diagnosis in these cases corresponds to a severe behavioral disorder refractory to treatment with other antipsychotic agents and/or mood stabilizers. Of the total number of patients, it should be noted that 14 of them (45,16%) correspond to children institutionalized in "Mejor Niñez" residences. The average number of visits to the emergency room for disruptive, aggressive or suicidal behavior prior to the installation of clozapine corresponds to 5,16 visits per patient, with an average of 2 hospitalizations in the Psychiatric Inpatient Unit. After initiation of clozapine treatment, emergency room visits decreased to an average of 2,41 visits, with an average of 0,67 hospitalizations. In 25 patients (80,6%), visits to the emergency service decreased, and 21 patients (67,7%) reduced the number of hospitalizations. There were no hematological adverse effects, and most of the patients did not present other serious side effects that led to the suspension of clozapine, except for one case that had neuroleptic malignant syndrome, where clozapine had to be suspended, reinstalling it after 4 months. **Conclusions:** the majority of patients with disruptives conducts secondary to severe behavioral disorders, refractory to other pharmacological treatments, benefited from the installation of clozapine by reducing the levels of aggressiveness, irritability and emotional instability, with the consequent decrease of visits to the emergency service and hospitalizations.

No. 43**Juvenile Sexual Offenders: Two Case Reports in the Tristate Area**

Poster Presenter: Oluseun Dairo

Co-Authors: R. Gogineni, Kaitlin Sanzone, Janeni Nayagan

SUMMARY:

A juvenile sexual offender is defined as person who commits one or more legally proscribed sexual acts, including voyeurism, exhibitionism, violent physical assault like rape, etc. This case report highlights two juvenile sexual offenders who were placed at a residential treatment facility for adolescent males in the Tri-state area. This residential program provides treatment for individuals who have sexual offenses and provides a range of clinical therapeutic options including anger management, drug/alcohol counseling, and pharmacological options to help formulate age appropriate sexual relations. The first case is a 16 year old male with past medical history of ADHD, ODD, autistic spectrum disorder, poor impulse control, conduct disorder, and paraphilia disorder admitted to the residential treatment facility with the chief complaint of "doing inappropriate stuff at my house." His case displays signs of exhibitionism, aggression, and voyeurism that manifested as feelings of severe guilt/shame ultimately leading to self-injury during his treatment stay. The second case is a 17 year old male with a past medical history of ADHD, learning disabilities, and paraphilia, presenting to the residential treatment facility for inappropriate precocious sexuality culminating in sexual offensive behaviors towards his sister. His childhood consisted of complicated intra-familial relationships and trauma history. He now presents with multiple criminal charges including sexual assault on varying accounts. Both juvenile sexual offender cases display commonalities in their presentation. However, differences in their childhood development and past trauma history resulted in varying presentation of their sexual offense and ultimately, tailored clinicians medical treatment plans. In this poster presentation, we will compare and contrast these two juvenile sexual offender cases.

No. 44**Screen Time Among Children With Mental, Emotional, Developmental, or Behavioral Problems (MEDB): A US Population-Based Study**

Poster Presenter: Amanda Shapiro, M.D.

Lead Author: Saral Desai, M.D.

SUMMARY:

Introduction Excessive screen time in children has become an increasing concern for parents and healthcare professionals. One study found that 8-12 years-olds use screens for entertainment an average of 4 hours, 44 minutes a day, while teenagers 13-18 years-olds average 7 hours, 22 minutes each day. While research on the associations between screen time and obesity are well studied, the evidence specifically on associations between screen time and psychological wellbeing has been mixed. We aimed to identify the prevalence and odds of daily screen time among children with MEDB compared to children without MEDB. Methods We performed a retrospective analysis of the National Survey of Children's Health (NSCH) 2018-2019 data. We identified current MEDB among children (age 3-17). Daily screen time on TV, computer, cellphone, or other electronic devices was identified using survey questions. MEDB measure was derived based on 10 conditions: Tourette Syndrome, anxiety problems, depression, behavioral and conduct problems, developmental delay, intellectual disability, speech or other language disorder, learning disability, Autism Spectrum Disorder, and Attention-Deficit/Hyperactivity Disorder. Univariate analysis and multivariable survey logistic regression analysis were performed to identify the prevalence and odds of screen time among children with MEDB. A complex survey analysis method was used, and weights were applied for national estimates. Results Out of a total of 61,714,478 participants, 22.1% reported 1 or more current MEDB. Compared to participants with no MEDB, the prevalence of four or more hours of daily screen time was significantly higher in children with 1 or more current MEDB (30.0% vs. 19.0%; $p < 0.0001$). In regression analysis, after adjusting for age, sex, race, socioeconomic status, and overall health status, children with 1 or more MEDB were at higher odds of four or more hours of daily screentime (aOR: 1.85; 95%CI: 1.28-2.65; $p = 0.001$) than children without any MEDB.

Conclusion We found a higher prevalence and odds of four or more hours of daily screen time among children with MEDB using nationally representative US pediatric population data. Implications of higher screen time among children with MEDB warrant further research.

No. 45

Food and Drug Therapy: High-Dose Olanzapine and Family-Centered Exposure Intervention for Complicated and Refractory Psychosis in an Adolescent Male

Poster Presenter: James Burden, B.S.

Co-Authors: Edison Leung, Micah J. Knobles, M.D., Cristian Zeni, M.D., Ph.D., Gabriel del Carmen

SUMMARY:

In both adolescents and adults, complicated and treatment-resistant psychosis is often treated with clozapine or electroconvulsive therapy (ECT). Clozapine needs strict monitoring due to the potential for severe side effects, and ECT is a limited treatment modality for adolescent populations, as it is not available for those under 16 years old in Texas. Prior to initiating last-line treatment modalities, combining antipsychotic regimens with targeted psychosocial interventions may benefit adolescent patients by mitigating or resolving aspects of their psychotic illnesses. A 13-year-old African American adolescent male presented with first-episode psychosis complicated by catatonia and EPS (extrapyramidal symptoms). His psychosis featured illogical thinking and paranoid delusions, primarily of his mother and family poisoning food at home. Prior first-line treatments of risperidone and long-acting injectable aripiprazole at an outside facility were unsuccessful and induced complications of dystonia, speech latency, mutism, bradykinesia, and rigid posturing. After this initial psychiatric hospitalization and a negative neurologic workup, the patient was started on bupropion twice daily for EPS and lorazepam three times daily for catatonia before arriving at our psychiatric facility. While this regimen was discontinued after his EPS and catatonia resolved, the patient's psychosis and paranoia persisted despite adequate treatment with oral aripiprazole. He was transitioned to a high dose of oral olanzapine (30mg daily), which, after multiple

weeks, failed to significantly improve the persistent delusions complicating his psychosis. After failing three oral antipsychotics, the treatment team discussed initiation of clozapine or ECT (upon patient eligibility). Due to concerns for clozapine's side effect profile, the treatment team implemented a daily family-centered exposure intervention, which featured the family presenting the patient with home-cooked meals to challenge his delusion of being poisoned. After a week of combining his high-dose olanzapine with this intervention, the patient reached a breakthrough in his treatment by denying safety concerns at home and requesting discharge. This intervention was the most effective modality for improving his residual delusions, which signified sufficient improvement in his thought process for a safe discharge. He was discharged on olanzapine and continued family therapy for a final diagnosis of schizophrenia. While family-based interventions have shown efficacy in treating adolescents with psychiatric conditions such as OCD and anxiety, this modality can also augment regimens for severe and refractory psychosis in adolescents in the acute inpatient setting before resorting to clozapine or ECT. This case highlights how combination pharmacotherapy and psychosocial modalities can significantly reduce resistant delusions and help progress adolescents with complicated psychosis towards earlier discharge.

No. 46

Online Directory and Mobile Referral for the Happiness (Health Action for Psychiatric Problems in Nigeria Including Epilepsy and Substances) Project

Poster Presenter: Theddeus I. Iheanacho, M.D.

Co-Authors: Yvonne Uyanwune, M.D., M.P.H., Eze Iheanacho

SUMMARY:

Background: According to the National Bureau of Statistics, one in four Nigerians suffer from mental illness (Alabi & Kanabe, 2021; Mbamalu, 2019). Yet, with about 300 psychiatrists for a population of about 200 million people, only 10% of adults with any mental health disorder receive care, irrespective of severity (APN, 2018). In 2018, the Health Action for Psychiatric Problems In Nigeria including Epilepsy

and SubstanceS (HAPPINESS) project, a collaboration between the Yale Global Mental Health program and community partners, was launched in Imo State, Nigeria with the aim of integrating mental health into community primary healthcare centers (Chu et al, 2022). Even with this advancement, residual barriers include poor accessibility and care coordination. Possible solutions involve leveraging online and virtual communication via online directories and virtual consultation services. This is particularly relevant as the country has seen increased penetration of mobile devices and data usage (Caplan et al, 2020; Ronquillo et al, 2012). In Nigeria, there are little to no specific directories of mental health providers. To our knowledge, there is also no documented or published mobile application in Nigeria dedicated to enhancing and optimizing referral and consultation between primary health care workers and psychiatry specialists. **Methods:** This project describes the development, design and publication of an online, geospatial directory and deployment of the Vula health mobile application (Gloster et al, 2021) for specialist consultation and referral for mental health providers trained through the HAPPINESS project in Imo State, Nigeria. These include community health workers, primary care nurses and primary care physicians. Training was done with the World Health Organization's (WHO) Mental Health Gap Action Programme (mhGAP) Intervention Guide version 2.0 adapted to the local area. All HAPPINESS project trained mental health providers were invited to participate in the online questionnaire to collect demographic and contact information for online directory and mobile application. **Results:** The HAPPINESS Project has trained over 60 primary care workers from 30 primary centers across all 27 local government areas (LGAs) in Imo State. Of this population, majority identify as females. Majority occupation was nurses, followed by community health workers and primary care physicians. The data was published within the online directory that includes a map of Nigeria with geospatial integration for state and LGA specific providers. **Conclusion:** Overall, the online directory and mobile application for consultation and referral offer innovative tools for accessing mental health care in a low resource state. They can serve as a model for developing similar directories and mobile platform to strengthen the referral/consultation

pathway between community primary health workers and mental health specialists across the country.

No. 47

A Qualitative Study Exploring the Impact of Initiating a Women's Support Group for an Underserved Mental Health Population

Poster Presenter: Lily T. Yang, D.O.

Co-Authors: Roople Risam, M.D., Taylor Dodds, M.D.

SUMMARY:

Introduction: Research has identified disparities between women and men regarding the prevalence of mental disorders.¹ Additionally, psychosocial factors that contribute to women's mental health are often overlooked. According to the World Health Organization, "the COVID-19 pandemic triggered a 25% increase in anxiety disorders globally, with young people and women among those most hit."² Feelings of loneliness and isolation were compounded by the effects of the pandemic.³ The scarcity of mental health resources in rural upstate New York, staff shortages, long waitlists for appointments, and brief time slots decreased the supply of support at a time when demand was at an all-time high. Objectives: Psychiatry residents initiated a pro-bono women's support group comprised of female patients from the outpatient behavioral health clinic (BHC). This group was designed to empower women, decrease isolation, and form a community for therapeutic connection. Our goals were to provide an additional resource to benefit the mental health of this population, decrease mental health provider burden, and transition responsibility and accountability to the patients. Methods: Recruitment was an ongoing process and was limited to females over 40 years old who were established with our BHC. Patients with acute psychosis were excluded to allow for active, meaningful interpersonal participation. Resident physicians created a syllabus based on elements of cognitive and dialectical behavioral therapies to address common issues such as stress management, self-esteem, assertiveness, and goal setting. Sessions started in December 2021 and were held every 2 weeks, with some interruptions due to the pandemic. Group mediators debriefed with a

licensed mental health counselor following each session to make improvements for future sessions. Groups were open to new and returning members, allowing the flexibility to accommodate schedule changes but limiting the consistency required for meaningful quantitative data collection during this initiation stage. Results: Qualitative data collected during each session by group mediators reflected themes such as Isolation, Reframing, Interpersonal Connections, Thought Distortions, and Adapting to Change. The most significant outcome of this project was the collaboration between group members who began to create a mutually supportive community amongst themselves independent of the outpatient setting. Running these groups also provided skill-building opportunities for resident physicians to carry forward into future practice. Future considerations: As the group matures and the number of repeat attendees continues to increase, we will move forward with extracting chart data to track potential indicators of change, such as patient surveys, PHQ-9 scores, frequency of medication changes, and frequency of psychiatric visits and hospitalizations.

No. 48

Symptom, Perpetuator, Catalyst: The Impact of Homelessness on the Trajectory of Mental Health Care

Poster Presenter: Daniel Laor, M.D.

Co-Author: Liliya Gershengoren, M.D.

SUMMARY:

Mr. D is a 21-year-old undomiciled, unemployed army veteran with a history of multiple hospitalizations in the last year and numerous short-lived medication trials who self-presented requesting a psychiatric hospitalization for the treatment of suicidal ideation. The patient reported paranoid delusions and homicidal ideation toward family for the past year in the context of smoking K2-contaminated cannabis. He was diagnosed with substance-induced psychosis. While on the psychiatric inpatient unit, in addition to medication management, patient received brief, goal-directed psychotherapy with a focus on substance use, suicidality and anxiety. Patients often present with multiple psychiatric comorbidities, dealing with

fractured self-identity, interpersonal problems, and life challenges that cannot all be addressed during a short psychiatric admission. It quickly became apparent that the patient's current psychiatric problems are perpetuated and further worsened by his unstable housing. Social determinants interact with complex system of care in ways that impact treatment options and prognosis. This poster will discuss the challenges of planning and completing psychiatric interventions in acute care for patients with unstable housing. We recognize the importance of continuity of care and extensive patient follow-up to achieve these goals, especially in vulnerable populations such as the homeless.

No. 49

Patient safety and placement impacted as a result of the ambiguity between the diagnoses of Major Neurocognitive Disorder VS Chronic Schizophrenia

Poster Presenter: Shadee Moataz Giurgius, M.D.

Co-Authors: Tyler Torrico, M.D., Timothy Kiong

SUMMARY:

Background: A 2021 study of 8 million U.S. Medicare patients found that by age 80, the dementia prevalence in patients with schizophrenia was 70.2%.¹ Due to cognitive decline being a common sequelae of chronic schizophrenia, it is difficult to differentiate if a patient's neurocognitive disorder is due to schizophrenia alone, or if there is a concurrent organic dementia process. In 100 post-mortem brains of individuals with schizophrenia, 72% had moderate or severe cognitive impairment but only 9% met neuropathological criteria for Alzheimer's disease, suggesting that dementia diagnosed in schizophrenia may be neuroanatomically different, and may instead be reflect a form of accelerated aging.¹ The clinical ambiguity between these two diagnoses often leads hospitals to find difficulty in which service to admit the patient and which legal statutes are valid if an involuntary hold or conservatorship or capacity evaluation is required. Additionally, hospitals and clinicians often struggle in choosing the most appropriate discharge plan: to a longterm psychiatric facility or to a locked dementia/memory care unit. In this presentation, we explore potential solutions to

advocate for this at risk patient population with the goals of preventing unintentional harm as a result of their cognitive impairment. </p>

<p dir="ltr"><b id="docs-internal-guid-7ac8caaa-7fff-1558-624a-035376aae2f8">Case/Results: We present a case of a geriatric patient with diagnoses of both schizophrenia and major neurocognitive disorder who was hospitalized repeatedly over a 6 month period for behavioral disturbance and being found wandering the streets. After her 6th AMA discharges to street she was physically assaulted at a fastfood restaurant leading to a major pelvis fracture and significant delirium.

<b id="docs-internal-guid-7ac8caaa-7fff-1558-624a-035376aae2f8">Discussion: When patients with dual diagnoses of schizophrenia and major neurocognitive disorder are hospitalized for behavioral disturbance, hospital systems and physicians may struggle to determine the most appropriate treatment plan, and whom should presume the primary care role. From a legal perspective, this has multiple implications as it can be difficult to determine whether the lack of capacity is due to mental illness (schizophrenia) or major neurocognitive deficit (dementia), or a combination of both. Many systems of care have specific legal implications for those with mental illness lack of capacity, and for those with major neurocognitive disorder lack of capacity, but not for both. In various systems of care across the United States, this has unfortunately led to many patients "falling through the cracks" and suffering potentially preventable adverse events. We propose some potential solutions to improve patient safety and outcome while navigating the legal constraints in this complex diagnostic, ethical, legal, and social issue. Standardization for care across systems of care must be addressed and advocated for as our Baby Boomers are now in the age range of 58-76 years old and utilizing every aspect of the medical system more than ever before.</p>

No. 50

A Curious Case of Catatonia

Poster Presenter: Jonathan Mason Allen, M.D.

Co-Author: Maria Theresa Mariano, M.D.

SUMMARY:

26 year old LPS conserved male with an extensive psychiatric history beginning around age 18 which included multiple serious suicide attempts like jumping off a building and cutting his own throat. He had a recent seven month hospitalization at an outside hospital for bizarre and self-injurious behavior that required both medical and ICU level of care. Neurology was involved and an extensive workup including encephalitis with autoimmune panel, MRI, and EEG were unremarkable. During that hospitalization he was diagnosed with schizoaffective disorder and stabilized on a combination of mood stabilizers, antidepressant, antianxiety and antipsychotic medications. After his discharge, he was seen by an outpatient psychiatrist and due to side effect complaints and unclear history, some of his medications were decreased. He started exhibiting stereotyped movements (walking in circles), mutism (...include other symptoms of catatonia to tie into discussion below) and he was admitted to our hospital for stabilization. While on the inpatient psychiatry unit he required prolonged restraints for periods of agitation, developed rhabdomyolysis and leukocytosis and was transferred to the medicine unit. He also exhibited vital signs abnormality which were concerning for Malignant catatonia. ECT is not available at our hospital and despite high doses of lorazepam, his presentation continued to fluctuate between stuporous, excited, and malignant states. Novel approaches were used to treat his catatonia. Catatonia can present in various phases: stuporous, excited, and malignant. For some, catatonic symptoms repeat regularly and can fluctuate between stuporous and excited subtypes, referred to as periodic catatonia. While the literature talks about benzodiazepines as the first line treatment, some patients present with recurrent catatonic symptoms that do not respond to high doses of benzodiazepines. ECT is recommended for patients not responding to benzodiazepines but not all hospitals have this option and psychiatrists must rely on medications to treat the catatonia. We present a complex case of a patient with recurrent catatonia whose symptoms fluctuated between excited, stuporous, and malignant states that required 2 prolonged hospitalizations at different hospitals with complications including pneumonia, sepsis,

intubation, rhabdomyolysis, ICU admission which required a multidisciplinary cooperation between psychiatry, neurology, ICU, and medicine, with enormous help from nursing. We will review the patient's history, hospital course, his response to the most frequently utilized medications for catatonia, novel approaches used in the absence of ECT, as well as the importance of multidisciplinary cooperation in managing his severe illness.

No. 51

Seronegative Autoimmune Encephalitis With Catatonic Symptoms in the Setting of Synthetic Cannabinoid Use Treated by Therapeutic Apheresis

Poster Presenter: Stacey Roll, D.O.

Co-Author: Andrew M. Coulter, M.D., M.A.

SUMMARY:

Background: Little is known about the chronic effects of long-term synthetic cannabinoid use on the human body, more investigation is necessary for advancing research and public awareness. We present a case of an 18-year-old white male with first onset seizure complicated by status epilepticus, suicidal ideation, steroid-induced psychosis with catatonic posturing, and presumed seronegative autoimmune encephalitis in the setting of chronic synthetic cannabinoid use. **Case Report:** Mr. A., an 18-year-old white male with no medical history other than daily synthetic cannabinoid (SC) use presented with new onset generalized tonic clonic (GTC) seizures. Early on during his 20-day admission, his vape was discovered under his pillow which he had been using. Subsequently, he again experienced GTC seizures followed by severe agitation thus re-intubated for airway protection. He continued to experience refractory sub-clinical seizures recorded on EEG consistent with non-convulsive status epilepticus despite initiation of multiple anti-seizure medications. MRI revealed T2/FLAIR signal hyperintensity and restricted diffusion with differential diagnosis of recent seizure activity, or infectious/inflammatory encephalitis. An extensive work-up investigated infectious, autoimmune, paraneoplastic, and toxic causes which was mostly unremarkable with the exception of urine toxicology and pain panel positivity for cannabinoid. He experienced labile behavioral disturbances

throughout admission which required intermittent chemical and physical restraints for protection of self and hospital staff. Psychiatry was consulted and further elucidated his use of SC with camphor. The presumed diagnosis of seronegative autoimmune encephalitis was treated with high dose steroids, further complicating his behavioral distress resulting in severe agitation, suicidal ideation and catatonic posturing. FDG-PET revealed focal hypermetabolism in the left anterior mesial temporal region likely representing active seizure activity or encephalitis. Our patient did not improve until initiating therapeutic apheresis on day 11 of admission, with full recovery at the time of discharge. **Conclusion:** At discharge, our patient endorsed that he felt lucky to be alive and directly attributed his usage of SC as the inciting event. While autoimmune encephalitis was diagnosed clinically, the team could not rule out multifactorial aspects of acute toxic effect from substance use and the subsequent withdrawal from chronic use, continuous seizure activity and the sequelae of medication effects. An emerging body of literature continues to suggest the deleterious and unpredictable effects of SC use.¹⁻⁹ Including the potential for proinflammatory effects in the brain which may suggest a cause of encephalitis and autoimmunity.¹⁰⁻¹¹ In this poster, we will include a literature review of SC use that resulted in hospitalization, evaluating symptoms at presentation and hospital course.

No. 52

Difficulties in Evaluating and Managing Sedative, Hypnotic, and Anxiolytic Use Disorder and Withdrawal in a Patient With Tardive Dyskinesia

Poster Presenter: Jessica S. Gregory, D.O.

Co-Authors: Sakirat Akadri, Mackenzie Woodhouse, Elle Cleaves, M.D.

SUMMARY:

Ms. S is a 68-year-old female with a past psychiatric history of Major Depressive Disorder, recurrent, severe, and lithium-induced tardive dyskinesia (TD) [1] who presented to the Psychiatry Consultation-Liaison Service (PCLS) for recommendations for acute agitation in the setting of zolpidem dose reduction. The patient's TD was treatment-refractory to multiple agents and subsequently treated with high

doses of zolpidem [2] over the past year. While zolpidem was initially prescribed by the patient's outpatient neurologist at 5mg three times daily, the patient reports taking up to 40mg daily. As such, the patient presented to the Emergency Room (ER) requesting a new zolpidem script. Both the patient and her spouse report their main concern is an increasing frequency of agitation episodes at home which include pacing, shaking, "quacking" noises, and loss of control that are only responsive to additional doses of zolpidem. While in the ER, patient's agitation continued, displayed as reported violence towards staff members. Upon evaluating the patient in the ER, PCLS recommended zolpidem 5 mg one time, which was effective for agitation. Given the concern for GABAergic withdrawal complications [3], PCLS recommended admission to the Internal Medicine service, where management included zolpidem withdrawal monitoring during zolpidem taper and evaluation for sedative-hypnotic use disorder. The patient was managed with a zolpidem taper with a goal of 50% dose reduction over one to two weeks and continued TD treatment with botox injections once the zolpidem taper was completed [4]. The patient was ultimately transferred to an inpatient detoxification program with the goal to discontinue zolpidem over the course of several weeks and provide substance abuse rehabilitation. In this poster, we discuss the challenges of evaluating and managing zolpidem use and withdrawal in a patient with dependence for both psychological and physical symptoms. We also highlight the addictive potential of zolpidem when used in high doses, particularly in treatment-resistant TD.

No. 53

(Dis)Trust Your Gut: Serotonin and the GI Tract

Poster Presenter: Aydar Shaildayev, M.D.

SUMMARY:

Mr. X is a 70 year old, privately domiciled white male with a longstanding history of treatment resistant depression, multiple prior hospitalizations for depression and SI, considered for ECT, who was again brought in by family who were gravely concerned about his wellbeing and inability to care for himself. He was well known to the unit staff as he presented similarly less than 2 years prior, and generally

presents as a highly anxious, ruminative, obsessive and ambivalent patient. His ruminations and obsessions revolve around his GI tract and his bowel movements most of the time, and he is unable to discuss any mental health issues as his primary concern is always his constipation/diarrhea, though he does not use these terms in the same way that staff does. He frequented the GI clinic in the last few years, but was poorly responsive to all treatment regimens and certainly, no diagnosis was reached for his GI distress even though the patient had undergone scopes and imaging studies in this pursuit. Unfortunately, he does have a history of GI cancer with sigmoidectomy, as well as a remitting/relapsing course of biliary colic that led to a cholecystectomy over 6 years prior to admission. This complicated the picture as he had historic causes for GI distress. These concerns were addressed in GI clinic, however, and though he had gone years before without GI concerns, they seemed to return when he became depressed. His med trials included: fluoxetine, sertraline, tranylcypromine, nortriptyline, bupropion, valproic acid, risperidone, and venlafaxine without any lasting improvement. Considered for ECT in the past multiple times, but improving enough on med regimen until next admission. Complete med trial list includes augmentation with trazodone, mirtazapine, escitalopram, and aripiprazole. Current regimen of 100 mg desvenlafaxine and 10 mg aripiprazole daily. In 2015, a study was published in *Cell* that outlined the role of gut microbes in serotonin synthesis and that led to a larger push in the mainstream in a movement generally referred to as "gut health". This spurred multiple subsequent research studies regarding the GI tract of animals and thus, humans, and the interplay between serotonin, gut health, and ipso facto mental health. Here we outline several of these subsequent papers that outline the multiple gut microbe strains that have purported relationships with serotonin, and discuss their strengths and shortcomings in an ultimate forecast of research to come in a growing field of the relationships between gut health and mental health.

No. 54

Efficacy of Microdosing Psilocybin Compared to SSRIs for Treatment Resistant Depression

Poster Presenter: Deanna Egenburg

Lead Author: Ozge Ceren Amuk

Co-Author: Nikita Sedani

SUMMARY:

Background: Psilocybin has shown significant potential in revolutionizing the treatment of treatment resistant depression. Despite the fact that psilocybin has anti-depressant properties, there is minimal analysis on the comparison between efficacy of Selective Serotonin-Reuptake Inhibitors (SSRI) and use of psilocybin in the treatment of depression. Objective: In this review, we aim to analyze the efficacy and treatment outcomes of microdosing psilocybin use in microdoses over SSRIs for in treatment resistant depression. Method: A search was done on PubMed, APA PsycINFO, Scopus, CENTRAL, and Google Scholar databases for articles published from 1st January 2012 to 1st April 2022 in English language. Meta XL statistical software was used to conduct a prevalence meta-analysis. We used key words of "Psilocybin", "Selective Serotonin-Reuptake Inhibitors", "SSRIs", "Depression". 734 articles were initially identified. We used PRISMA guidelines and only included 11 original research studies in our final search. The two categories of SSRIs and Psilocybin were analyzed both simultaneously and separately. Results: The findings showed that micro dosing psilocybin is more effective than SSRIs for treating depression; however, the effects of the latter are mild and not adverse. In all the included studies in the review, no serious adverse events were recorded, while one trial found no significant difference when compared to a routinely prescribed selective serotonin reuptake inhibitor . This infrequent dosing regimen has been shown to produce durable effects with minimal toxicity. Considering the psilocybin effects are transient, micro-dosing found to be an alternative option since higher dosages intensify the adverse events. The treatment's most significant property is the sustained positive effects of psilocybin on patients with depression. Comparing to SSRIs, psilocybin takes shorter time to take effect; its effects are also sustained for longer periods ranging between 6 and 12 months after a few sessions. Conclusion: Due to its low toxicity and low risk of overuse, psilocybin has the potential to have a significant influence in treating depression. By assessing efficacy of these new methods will guide

clinicians to improve treatment outcomes and build an understanding of considering the adverse effects of all treatment options for more holistic review.

No. 55

Longitudinal Associations of Depressive Symptom Severity, Suicidal Ideation, Comorbidities, Trauma, and Social Support in a Precariously Housed Sample

Poster Presenter: Lianne L. Cho, B.Sc.

Co-Authors: Andrea A. Jones, M.D., Ph.D., Geoffrey N. Smith, Ph.D., Skye P. Barbic, Ph.D., O.T., William G. Honer, M.D.

SUMMARY:

Background: Homeless and precariously housed people have high rates of depression and suicidal ideation (SI).(1,2) Predictors of these conditions need investigation in longitudinal and community-based studies. The present study examined contributions of demographic factors, psychiatric comorbidities, trauma, and perceived social support to depressive symptom severity and SI over time in a community-based sample of precariously housed adults.

Methods: Participants (N=393, 308 men, median age 42 years [interquartile range 33-50]) were recruited from a low-income neighbourhood in Vancouver, Canada. Beck Depression Inventory (BDI) total scores of 0-9 indicated minimal, 10-18 indicated mild, and 19-63 indicated moderate-severe depressive symptom severity.(3) SI was defined by endorsement of both ≥ 1 on the BDI and ≥ 2 on the Maudsley Addiction Profile suicidality items.(4) Mixed effects ordinal or logistic regression models were used to identify predictors of depressive symptom severity and SI, respectively. Fixed effects assessed relationships between factors and outcome variables, and random effects examined the variability between subjects and across monthly repeated measures over one year. **Results:** Among a total of 3643 observations made over 12 months, there were 2125 observations of minimal, 802 of mild, and 712 of moderate-severe depressive symptoms, respectively, as well as 228 observations of SI. After adjusting for demographic factors, more severe depressive symptoms were associated with lifetime major depressive disorder (odds ratio [OR]=2.42, confidence interval [CI]=1.55-3.23, p=0.030), lifetime anxiety (OR=2.32, CI=1.60-3.35,

p=0.023), lifetime trauma (OR=1.16, CI=1.11-1.21, p=0.0005), trauma in the concurrent month (OR=1.56, CI 1.39-1.75, p=0.0001), satisfaction with social support received (OR=0.78, CI=0.70-88, p=0.037), and need for social support (OR=1.18, CI=1.14-1.22, p<0.0001). In a subset of the sample where moderate-severe depressive symptoms were experienced at least once during the year (n=178), SI was associated with lifetime trauma (OR=1.11, CI= 1.06-1.17, p=0.023), lifetime psychosis (OR=3.51, CI=2.27-5.42, p=0.003), and having moderate-severe symptoms in the concurrent month (OR=7.66, CI=5.92-9.91, p<0.0001). There was no evidence of reverse causality or interactions between predictors.

Conclusions: While living in precarious housing, adults with a history of mood disorders, past and present trauma, and reported need for social support were at higher risk for more severe depressive symptoms, which was lessened by satisfactory social support. The data also suggest that assessing psychosis history in those with moderate-severe depressive symptoms may help identify the presence of SI. These findings underscore the importance of social support in depressive symptom management, as well as evaluation of psychosis in those with depression, which may allow for timely and effective intervention in individuals vulnerable to suicide.

No. 56

Substance Induced Mood Disorder With Severe Suicidal Ideation After Treatment of Alopecia With Finasteride: A Case Report

Poster Presenter: Amber Wireman, M.D.

SUMMARY:

A 25 year old single Caucasian male with history of depression and alopecia presents to the outpatient psychiatry clinic for evaluation and intervention regarding persisting melancholic depression and pervasive suicidal ideation. Four months prior to establishing for outpatient care, he was admitted for brief voluntary admission to the psychiatric hospital for extreme insomnia, depression, paranoia, hallucination, and suicidal thoughts. He was initiated on olanzapine for Bipolar disorder type I and was discharged with outpatient follow up. He discontinued the olanzapine due to worsening

depression and did not follow up outpatient as scheduled. Later, he called for intake appointment in our clinic. He denied any current outpatient medications at the time of his initial evaluation in our psychiatric clinic. Differential diagnosis at intake appointment was broad but included unspecified mood disorder with bipolar disorder favored by history. Records from his psychiatric admission were requested. He was prescribed titration of lamictal for mood stabilization and was scheduled for 8 week follow up. Between visits, it was revealed that he had been taking Finasteride as prescribed by his PCP for alopecia for approximately 8 months and was reluctant to reveal this during the intake appointment because he feared discontinuation of finasteride. After further investigation and interview of collateral sources, it was determined that prior to initiation of finasteride he demonstrated no symptoms of mania or psychosis but had known history of depression since teenage-hood. Further, he reported marked increase in severity of depressive symptoms after initiation of finasteride therapy including anergia, insomnia, anorexia, anhedonia, feelings of guilt and hopelessness, cognitive fog, memory issues, psychomotor retardation, and severe suicidal ideation. Additional side effect of anorgasmia, erectile dysfunction, penile atrophy and testicular atrophy were reported. Literature illustrates that "Post Finasteride Syndrome" is a set of clinical findings observed in males treated with finasteride and includes symptoms of depression, suicidal thoughts, insomnia, paranoia, and sexual side effect. In this poster, we discuss the significant role of finasteride in substance induced mood disorder as well as the importance of an accurate medication reconciliation when making an initial diagnosis. We discuss that special consideration should be taken by physicians prescribing finasteride to male patients and these patients should be counseled on psychiatric risks accordingly.

No. 57

Pregabalin Withdrawal Induced First Episode Psychosis: A Case Report

Poster Presenter: Ananya Roy

Co-Author: Shaan Kamal

SUMMARY:

Abstract: Ms. S, a 36-year old female with a past psychiatric history of anxiety, depression, alcohol use disorder, panic disorder, residual spasticity and neuropathy secondary to repair of cervical chiari malformation presents for three hospital visits over a 12 day period for altered mental status. The patient initially presented to the psychiatric emergency department (ED) for altered mental status after being found unresponsive in bed by family. The patient had a recent recurrence of alcohol use after a period of abstinence and was inadvertently given a second dose of pregabalin by family immediately prior to presentation. She was initially diagnosed with hypoxic and hypercapnic respiratory failure. Her mental status began to improve during ED stay and she was discharged on hospital day two from the inpatient medicine service. Pregabalin was tapered and then stopped prior to discharge. The following day after discharge, the patient presented to the ED for memory issues and paranoid delusions that her husband and neurologist were conspiring against her. Given the onset of psychotic symptoms and recent cessation of pregabalin, symptoms were thought to be a result of substance withdrawal versus a primary psychotic disorder. The patient was admitted to the inpatient medicine service and was fully oriented with no psychotic symptoms upon discharge on hospital day two. Three days after the previous discharge, the patient presented to the ED for insomnia, delusions and auditory and visual hallucinations. Neurology and psychiatry were consulted and the patient underwent extensive workup for potential autoimmune etiologies including transvaginal ultrasound, EEG, CT chest/abdomen/pelvis, lumbar puncture, MR brain with and without contrast, and a chest x-ray, all of which were unremarkable. Patient was treated with olanzapine and discharged on the fourth hospital day with a full cessation of symptoms. Given that psychosis can have multiple potential etiologies, including a primary thought disorder, delirium, underlying medical conditions, neurologic etiologies (ie seizure), substance use, autoimmune etiologies, toxic substances, and medication overdose/withdrawal, a thorough workup and history in patients presenting for psychosis without an obvious etiology may be warranted. In this poster, we discuss when such a thorough workup may help

clarify the underlying cause of acute onset psychotic symptoms and rule out possible common and uncommon etiologies. There have been two previous case studies demonstrating pregabalin-withdrawal induced first episode psychosis in the existing literature. The precise mechanism of withdrawal precipitated psychosis has not been fully elucidated. As pregabalin is widely prescribed in a variety of psychiatric and neurological conditions, clinicians from multiple disciplines need to be aware of the potential implications of cessation of pregabalin including transient psychosis.

No. 58**Bipolar Disorder & Social Media: A Thematic Content Analysis**

Poster Presenter: Ananya Roy

Co-Authors: Anjali Corzine, Kristin Escamilla

SUMMARY:

Background: In recent years, social media platforms have evolved to represent main sources of mental health information sharing for both individuals and mental health professionals. Among content posted on the short-form video sharing platform Tiktok, videos regarding bipolar disorder are among the most popular with nearly three billion total views. We completed a qualitative analysis of bipolar disorder content to characterize the accuracy of information and educational value being disseminated on social media. Materials and Methods: A total of 150 videos meeting inclusion criteria under the hashtag #bipolar were included in this study. Demographic characteristics were collected for each video including the source, average number of likes, views and shares per video. Sources were defined as influencers, individuals, organizations or mental health professionals. Two independent reviewers thematically analyzed video content into three categories defined as educational, misleading or anecdotal. The overall quality, understandability and actionability of the video was assessed using The Patient Education Materials Assessment Tool for Audiovisual Materials (PEMAT-A/V). Results: Across all videos meeting inclusion criteria, 41% (n = 62) of videos were posted by social media influencers compared to 3% (n = 4) posted by mental health professionals. Of the 150 videos

analyzed, 53% (n = 80) were anecdotal, 41% (n = 62) were misleading and 5% (n = 8) were educational. Videos had an overall moderate level of understandability (72%, SD 28%) with a low level of actionability (11%, SD 25%). Half of the videos uploaded by mental health professionals (n = 2) were educational while half were misleading (n = 2). The average understandability of videos uploaded by mental health professionals (86%) was higher compared to both influencers (76%) and individuals (68%). Non-mental health professionals received a higher average of likes, views and shares per video compared to mental health professionals. Interpretation/Conclusion: A small minority of videos posted to TikTok about bipolar disorder are educational with a majority of content centering on anecdotal experience or presenting misleading information. Content posted by influencers is more likely to be shared and viewed compared to mental health professionals. These findings support the need for increased clinician awareness of misinformation dissemination regarding mental illness, increased patient education regarding information found on social media and the underutilization of social media by mental health professionals as a method to promote factual mental health content.

No. 59

Catatonia Rates Rise Amid Covid-19 Era: Coincidence or Causative?

Poster Presenter: Amal A. Bhullar, M.D.

SUMMARY:

Catatonia is a poorly understood neuropsychiatric syndrome of unknown cause although linked to several psychiatric presentations as well as medical illness, neurological conditions, and genetic disorders. Regardless of etiology, catatonia is associated with significant morbidity and mortality if left untreated and thus of crucial clinical interest (1). On clinical observation, we have noted increasing rates of catatonic patients in our hospital system since the eruption of the COVID-19 pandemic. The World Health Organization has also reported 25% increase in global prevalence of anxiety and depression alone (2). Other studies have commented on the risk of mental health disorders in those who

are both infected with and survivors of COVID-19 (3). Due to this, we found it imperative to evaluate the incidence of catatonic patients pre and post COVID era. A data collection tool from our EMR system called i2b2 was used to identify how many patients carried the diagnosis of catatonia in their charts through out their hospitalizations. We submitted a query to evaluate how many patients were diagnosed within a 2 year span pre and post March 2020. We found a ~30% increase in catatonia diagnoses. We then further analyzed the distribution based on age, gender, and race as well as documented history of COVID infection. Preliminary results demonstrated an increase in catatonia diagnosis in the population of 18-34 year olds and Black or African Americans after the COVID pandemic compared to before the pandemic. Conclusions to follow on further analysis, however this increase in diagnosis may signify a relationship between bio-psycho-social stress resulting from the pandemic and developing catatonia.

No. 60

Eating-Related Pathology in Adult Transgender Population: A Literature Review

Poster Presenter: Anne Marie Wannamaker, M.D., M.S.

Co-Author: Richa Aggarwal, M.D.

SUMMARY:

Background: Research in eating-related pathology among transgender individuals has increased in the last 5 years. According to previous studies, transgender individuals have high rates of body dissatisfaction, often associated with maladaptive eating habits in attempt to alter their body. This places them at risk for development of eating disorders. Previous research focuses on youth populations or tends to combine transgender patients into an LGBTQ+ group or mixes transgender with nonbinary individuals. Thus, isolated statical data for this population is difficult to discern. **Aim:** To examine recently published data on eating-related pathology among adult transgender individuals. **Methods:** Using PRISMA guidelines, a literature search of PUBMED was conducted using key terms "Transgender" or "Gender Dysphoria" and either "Eating Disorder," "Disordered Eating," "Anorexia,"

“Bulimia,” “Binge Eating,” or “Body Dissatisfaction.” After author review, a total of 30 articles met inclusion criteria. **Results:** Eight key take aways emerged from the literature review. 1) Gender dysphoria contributes to eating pathology. 2) Risk factors such as anti-transgender discrimination, minority stress, and internalization of sociocultural standards of attractiveness contribute to disordered eating. 3) Transgender patients have higher rates of disordered eating than cis gender individuals. 4) Current transgender-specific eating disorder screening methods are inadequate. 5) Tailor eating disorder treatment to the transgender population. 6) Increase provider education. 7) Gender affirming care improves eating disorder pathology. 8) Attempts have been made at obtaining statistical data on prevalence of eating disorders. **Conclusions:** Further research regarding eating-related pathology in the adult transgender population is needed to identify population-specific screening methods, risk factors, and statistics as well as better understand the physiology of transgender patients. Accessible education for providers is needed to reduce risk factors, improve identification of individuals requiring treatment, improve access to treatment for disordered eating, and increase knowledge of benefits for gender-affirming care for eating-related pathology. Current eating disorder treatment needs to be adjusted to better suit transgender population by incorporating gender into treatment and utilize ideas such as body neutrality vs body positivity, thus creating a more inclusive environment. Future research could focus on improvement of nutritional recommendations. Gender affirming treatment appears to reduce eating-related pathology, though may not eliminate it. Providers should continue screening eating habits to reduce risk of developing or worsening eating disorders. Ongoing assessment will likely reduce other mental health sequelae including depression, anxiety, suicidal ideation, and self-harm, which are prevalent in transgender individuals with eating disorders.

No. 61

The Dopamine Hypothesis of Anorexia: Emergence of Transient Manic/Psychotic Symptoms in Refeeding Phase of Anorexia Nervosa

Poster Presenter: Sumedha Purkayastha, M.D.

SUMMARY:

Our case is an 18 year old Caucasian female with PPH of depression (related to father's untimely death), who presented to the ER as a referral from an outpatient dietitian due to concerns for severe weight loss and associated physical symptoms. She had a BMI of 16.8, suggestive of moderate Anorexia Nervosa. On presentation, her vitals were significant for bradycardia and positive orthostatics, so she was admitted for medical monitoring and refeeding. Psychiatry was consulted for evaluation of concomitant psychiatric disorders. She reported no significant personal or family history of bipolar or psychotic illness. On day 10 of her admission, she reported visual hallucinations prior to bedtime, macropsia/micropsia phenomenon, and increasing sensitivity to light in the evenings. She reported only 4 hours of sleep over weekend, without any resultant exhaustion. The next day, there was a significantly noticeable hyperactivity with inability to stay in her bed, increased psychomotor activity, rapid, pressured speech, grandiosity, paranoia towards certain medical providers. She was administered Zyprexa IM for agitation. Medical and neurologic causes were ruled out. Over the course of next few days, she was increasingly suspicious and paranoid of staff, and also newly reported hearing the voices of her deceased father, who was also leaving messages to her by the movement of objects in her room. She started receiving more PRN doses of Zyprexa and Haldol for agitation, and was noted to get increasingly disorganized in her thought process and actions. She was stabilized on Risperidone with rapid cessation of symptoms and return to baseline behavior within a week of onset. In this poster, we explore the new emergence of mania and psychosis during the refeeding period, and discuss the potential role of Dopamine and Serotonin dysfunction in restriction and refeeding phases in patients with Anorexia Nervosa

No. 62

Physician Social Identities, Moral Injury, and Subjective Mental Health Outcomes During the Covid-19 Pandemic

Poster Presenter: Nina Djukic

SUMMARY:

Background Moral injury is defined as lasting distress due to perpetrating, failing to prevent, or witnessing acts that transgress or deeply violate one's moral or ethical code. During the pandemic, physicians caring for COVID patients were at increased risk of mental health challenges and moral injury. Existing studies have demonstrated stark inequities in susceptibility to COVID-19, with socially marginalized communities due to race and income disproportionately represented in hospitalization and death rates. However, little is known about the role of physician social identities (e.g. race, gender, immigration status) in susceptibility to moral injury and mental health and functional outcomes among those who cared for COVID patients. **Objectives** To 1) preliminarily describe the association between various social identities, experiences of moral injury, and mental health and functional outcomes in physicians and residents employed by the SFVA and UCSF who treated COVID patients during the pandemic; and 2) to gain physician perspectives on potential interventions. **Methods** This is a mixed methods, cross-sectional study. **Participants:** N=7 physicians who reported caring for COVID patients at the SFVA or UCSF during the COVID-19 pandemic (March 2020-present). **Procedures:** Quantitative questionnaire data was collected via Qualtrics and interviews with physicians were conducted via Zoom. In interviews, physicians were asked about salient social identities; any experiences of moral injury; how those social identities affected their experience of caring for COVID-19 patients; subjective current mental health symptoms and support sought; and ideas about interventions and support that could benefit providers. Thematic qualitative analysis was used to evaluate interview data. **Measures:** demographics (age, race/ethnicity, gender identity, sexual orientation, subjective social class and childhood adversity, spirituality, immigration status, years in profession, years at UCSF/SFVA) and screening measures for depression, anxiety, PTSD, alcohol use, moral injury, and psychosocial functioning were collected. **Results** Several initial key themes were reported which merit further exploration and analysis in our interview data. Physician self-identified social identities played a critical role in experiences of patient care and moral injury during the pandemic. Physicians would find

therapy and mental health support helpful for symptoms of moral injury and distress, but face barriers including concern for professional repercussions, scheduling accessibility, and expense, especially for trainees. **Conclusions** It is important to consider the role of social identities when examining the impact of the pandemic on physician experiences, and to consider both general and identity-specific barriers to mental health support for physicians to better support physician wellbeing.

No. 63

"No, Stop, This Is Wrong." A Question Into the Ethics of When "No Means No" in Healthcare

Poster Presenter: Sonja Johnson, D.O.

Co-Author: Joseph Jackmovich, D.O.

SUMMARY:

Mr. M is a 60-year-old Caucasian male with a history of multiple chronic medical conditions and no prior psychiatric history. He presented to the emergency department and was admitted to the ICU for treatment of sepsis and acute kidney injury. Psychiatry was consulted due to the presentation of nighttime hallucinations. He was diagnosed with delirium with the only reported symptom being visual hallucinations. As the patient had enough insight to know the hallucinations were not real, he was deemed to have decision-making capacity. When the psychiatry consult team rounded the next day a significant change was noted to patient's treatment. As part of his treatment plan, dialysis was ordered, and the patient declined this treatment on a religious basis. The note entered from the dialysis nurse stated that the patient's wife was present, and the wife told the nurse to continue with the treatment. The patient had contested, saying "no stop, this is wrong." Although the patient had been found to have capacity the treatment was continued against the patient's wishes and at the wishes of his wife. The patient described the experience as it had been written but later stated he was willing to continue with treatments as recommended. He ultimately improved physically and was transferred to inpatient rehab for strengthening and conditioning. Patients with mental illnesses are frequently ignored if their opinions differ from those of treating physicians. This case report seeks to

discuss the challenges and importance of considering and listening to the decisions made by patients regarding their own treatment. This helps to ensure that all patients receive optimal care, and that patient autonomy is not stripped away unnecessarily.

No. 64

“I Just Can’t Stop Myself”: Risk of Sexual Recidivism Escalation

Poster Presenter: Yarden Segal

SUMMARY:

Sexual offense is a grave international dilemma that is associated with devastating consequences to those affected. Sexual recidivism, is the tendency of those who have already committed a sexual offense, to reoffend. We present a male in his mid-30s with a past psychiatric history of schizoaffective disorder. He has a legal history of 5 sexual offenses with 2 convictions and prison sentences. He presented to our service with suicidal ideation due to intrusive and recurrent thoughts of committing sexual assault. Furthermore, the patient has been repeatedly going to a public location where he would choose a woman at random and follow her with the intention of committing a sexual offense. He also admits to excessively watching pornography. The only deterrent to acting on these thoughts is the possibility of re-incarceration. The patient believed it would “safer” for him to be in a long term psychiatric facility. Sexual offense can be divided into two types, contact, and non-contact. Here, we assess this patient’s risk for escalation of his sexual behavior using the SVR-20 scale.

No. 65

Developing and Adapting a Regional Asylum Clinic to Community and Pandemic Changes

Poster Presenter: Omar Abbas

Co-Authors: Isaac Ngo, Yasmine Suliman, Dalia Nahal Balsamo, M.D.

SUMMARY:

Each year, the United States receives hundreds of thousands of applications for asylum. However, not all requests for asylum are granted. While 37.5% of asylum applications are accepted, the number

increases to 89% of those who had received evaluations from Physicians for Human Rights were granted asylum. This is all the more important considering the shrinking number of asylum grantees; US Department of Homeland Security, 15% of the over 270,000 applications for asylum filed each year between 2018 and 2020 were granted . The manifestations of torture, including PTSD, depression, and anxiety 3, are some of the most common in asylum cases 4. In comparison to the immigration support infrastructure of Los Angeles and the Bay Area with several asylum clinics and immigrant justice groups, a much smaller support network exists for immigrants in Riverside and San Bernardino counties 5, and whose immigrant population faces disproportionate barriers to healthcare access 6. The region is also host to the Adelanto Detention Facility, a US Immigration and Customs Enforcement holding center for detainees which has been the site of medical neglect and whistleblower complaints 7 8 9. This is why we decided to establish Medical Students for Immigrant Justice. We invited all medical students interested in immigrant justice to a meeting where we collectively agreed on the Physicians for Human Rights model for an asylum clinic as the most effective intervention we could take. Our goal was to establish a regional network of medical students, community groups, physicians, and lawyers that could collaborate to provide pro-bono evaluations for those seeking asylum. We also aimed to deepen our ties with the Inland Coalition for Immigrant Justice, a prominent immigration nonprofit with whom we regularly collaborate. We partnered with them on efforts in the immigrant justice community and solicited feedback on our intake processes. With most cases being psychiatric 10, we followed the model of several other clinics in transitioning telemental health calls for the evaluation. While other clinics secured specific days for groups of evaluations, we scheduled them one by one based on provider and client availability. Another aspect of our outreach includes outreach to other medical institutions including psychiatric residencies, the national board, local asylum clinics, and medical students working to bring asylum clinics to other medical schools in the region We worked closely with the Los Angeles Human Rights Initiative to help build our clinic’s model. We hope that our experience will be

informative for other trainees (medical students and residents) aiming to establish such chapters at their respective programs and discussion of our challenges and adaptations illuminating for them.

No. 66

The Transgender, Non-Binary, and Gender Expansive and Attention Deficit Hyperactivity Disorder Nexus: A Systematic Review

Poster Presenter: Teddy G. Goetz, M.D., M.S.

Co-Author: Noah Adams, M.S.W.

SUMMARY:

Introduction: Prior work suggests an increased prevalence of Attention Deficit Hyperactivity Disorder (ADHD) among transgender, non-binary, and/or gender expansive (TNG) individuals. This systematic review summarizes primary literature on TNG/ADHD experience. Methods: Texts from databases, reference lists, and referral were screened per PRISMA guidelines, with author consensus. Eligible articles were: 1. primary literature, with 2. explicit TNG/ADHD participation, and 3. meaningful attention to the TNG/ADHD nexus. Results: Since 2014, 17 articles have been published on the TNG/ADHD nexus. Gender-affirming care specialists authored 65%. 71% reported prevalence, per medical records. Only case reports (n=4) discussed potential personal and/or clinical implications of the TNG/ADHD nexus. None avoided deficit-framing, nor included explicit TNG/ADHD authorship. Among TNG children and adolescents, literature reported ADHD rates of 4-20%, or 2-13 times greater prevalence than among cis peers; for TNG adults, studies found ADHD rates of 4-11%, or 3-11 times greater prevalence than among cis peers. Conclusions: The reviewed body of literature on the TNG/ADHD nexus is young, insufficient, and focuses almost entirely on the etiology of and possible problems caused by this overlap. As such it implies that TNG and ADHD experience are undesirable, if not pathological. The lack of explicit TNG/ADHD community involvement in existing work is additionally striking. Future work is needed that moves beyond incidence, etiology, and prevention, to explore TNG/ADHD healthcare needs and positive experiences of TNG/ADHD identity; such work should always include TNG/ADHD authorship.

No. 67

PTSD and OCD Presenting With Self-Harm Compulsions in a Transgender Patient

Poster Presenter: Julia Preusch

Co-Authors: Ethan Higginbotham, M.D., Brady

Kullen, Paul Doucet, Muhammad Jafary

SUMMARY:

"Brody" is a 28-year-old transgender male admitted involuntarily to a rural Appalachian psychiatric hospital following a suicide attempt after becoming a victim of sexual trauma perpetrated by a close family member. Brody meets diagnostic criteria for obsessive-compulsive disorder, major depressive disorder with psychotic features, post-traumatic stress disorder, gender dysphoria and intermittent explosive disorder; and has borderline intellectual functioning with a history of traumatic brain injury. He prefers to be addressed using male pronouns, and engages in harmful behaviors toward himself, staff and co-patients, commonly precipitated by consistent misuse of pronouns. This case highlights the inter-relational conflicts encountered in the inpatient psychiatric hospital setting during the process of developing a therapeutic environment for a patient with gender dysphoria and multiple psychiatric comorbidities in the context of rural Appalachian culture. The authors posit that behavioral interventions coupled with administrative action regarding staff use of preferred pronouns can effectively reduce gender dysphoria-related psychiatric emergencies.

No. 68

Disclosure of Elder Abuse in Psychotherapy: Legal and Ethical Considerations of Breaking Confidentiality

Poster Presenter: Laura van Dyck, M.D.

SUMMARY:

Background: It is estimated one in every 10 Americans over the age of 60 years has experienced elder abuse. Moreover, those with mental illness, particularly major neurocognitive impairment, are at elevated risk. As the aging population grows, elder abuse is expected to increase. In their position on elder abuse and

neglect, the American Psychiatric Association states the pivotal role of psychiatrists in the identification and reporting of abuse. However, mandated reporting varies by state law, leaving psychotherapists to navigate complex laws and ethics surrounding breaking confidentiality. Currently, there is a dearth of resources outlining the definitions of elder abuse and mandated reporters by state, especially in the setting of psychotherapy. The legalities and ethics of elder abuse reporting require the collaboration of multiple disciplines, including mental health providers, lawmakers, and patients. This work aims to elucidate various state laws of elder abuse and mandated reporting as it pertains to the psychotherapeutic setting. **Methods:** The authors surveyed state laws pertaining to mandated reporting of elder abuse to assess 1) whether elder abuse is reportable, 2) definitions of elder abuse, and 3) professions listed as mandated reporters by state. State medical boards were contacted by email or telephone to determine requirements of breach of confidentiality in the psychotherapy setting, specifically when an older patient discloses a form of abuse or neglect but asks the provider not to make a report to Adult Protective Services. **Results:** Profound differences exist between state laws regarding the reporting of elder abuse. Initial findings reveal significant heterogeneity in the language used to define elder abuse and the professions considered mandated reporters. In addition, there exist states without mandated reporter laws, including New York. Moreover, this current investigation highlights the ethical considerations of mandated reporting, especially in the psychotherapeutic setting. **Conclusion:** The variability of state law and unclear ethics of mandated reporting of elder abuse convey the need for a resource outlining clear guidelines for psychotherapists. The authors of this poster are in the process of compiling such a resource for publication. </p>

No. 69

A Case of Late Onset Schizophrenia: How Old Is Too Old?

Poster Presenter: Julie Pham

Lead Author: Jennifer Hong, M.D.

Co-Author: Anna J. Sheen, M.D.

SUMMARY:

PMH is a 61 year old female with a medical history of G6PD-deficiency, interstitial lung disease, inflammatory bowel disease and one previous episode of psychosis but no other past psychiatric history, brought in to the ED by her daughter with chief complaint of confusion and agitation. For the past 7 months, daughter reports disorientation, agitation, paranoid delusions, and inability to attend to personal hygiene. Over the past 2-3 months, her behavior and her paranoia have significantly worsened, with her daughter endorsing fixed persecutory delusions that the patient's mother has stolen her purse and the patient's son is actively trying to make her life worse. Daughter reports behaviors such as wandering outside of the home and getting lost, pouring gallons of water onto the son's bed, carving letters onto the wooden cabinets, and accusing the son of drinking her Cherry Coke. She has also displayed some increase libido and short-term memory loss. Prior to this, daughter reports she was high functioning at baseline having worked as a fraud analyst and a homeless services caretaker at Union Station, and she went to school for medical billing. She was working at Dollar Tree when her decline started and she was terminated from her position for being unable to complete her responsibilities. Of note, she had a psychotic episode approximately 20 years ago, where she stripped naked and defecated in public, required psychiatric admission in Evansville, IN but afterwards was not on any long-term antipsychotics. During her admission, she received a complete medical work up, including autoimmune encephalitis, paraneoplastic syndrome, CT head, MRI and CT PET, which came back negative. She continued to be agitated, requiring multiple emergency medications. She was started on Zyprexa 20 BID, which did not control her symptoms. She was subsequently cross-titrated to Haldol 10 mg BID. She still exhibited negative symptoms of psychosis, and her paranoid delusions persisted. The current plan is to start clozapine as patient will likely be discharged to a nursing facility. Discussion: Some studies report that the prevalence of LOS is much higher than thought, possibly up to 20% of patients with schizophrenia. The true prevalence of LOS is challenging to predict, as there isn't a standardized definition of LOS in DSM-V. Studies consider it after 40, or 45, and 60 for very late onset of schizophrenia.

The onset of schizophrenia has a binodal distribution for women, in their late 20s and again in the perimenopausal age. There is a higher tendency for LOS to occur in females, with a gender ratio of 2:1. Other common characteristics of LOS include weaker or no family history of schizophrenia, higher rates of persecutory delusions and better earlier in life psychosocial functioning. She has many of these traits, with female gender, strong persecutory and paranoid delusions, and functioning and working before the beginning of her decline ~7 months ago.

No. 70

Treatment Success With LAI Aripiprazole in a Schizoaffective 84-Year-Old

Poster Presenter: Amanda Actor, M.D.

Co-Authors: Stefanie Cavalcanti, M.D., Gauri Wable, M.D., Ph.D., Miranda Taing, M.D., Vineeth P. John, M.D., M.B.A.

SUMMARY:

Background: Schizoaffective disorder is a lifelong disease, and it is estimated that approximately 0.14% of adults over 60 years old meet criteria for schizoaffective disorder [1]. The disorder affects many domains including thought organization, perceptions, cognition, affect, and motor behaviors. Disease severity and health outcomes tend to be worse in the geriatric population with antipsychotic medication nonadherence as a primary cause [2,3]. Antipsychotic use in the elderly is often limited by side effects, with specific hesitation in using long-acting formulations [4]. We present a case of an 84 year old who experienced improvements in psychotic and manic symptoms with initiation of monthly aripiprazole long-acting injections. Method: Ms. B is an 84-year-old female with schizoaffective disorder, bipolar type, with symptom onset in early adulthood. She had been trialed on multiple medications including sertraline, mirtazapine, buspirone, lorazepam, and aripiprazole. Ms. B has a long history of multiple inpatient psychiatric hospitalizations for both manic and depressive episodes. She presented to a specialized geriatric psychiatric clinic with elevated mood, irritability, delusions, rapid speech, verbal aggression, disorganized behaviors, decreased sleep, and grandiosity, on an ineffective regimen of oral daily risperidone. As achieving a therapeutic

dose was limited due to medication inconsistency, aripiprazole was started in favor of a longer half-life with the future option of a long-acting injection. Aripiprazole was up-titrated to a daily dose of 15 mg over 2.5 months with significant improvements in the patient's irritability, aggression, speech, and sleep with no reported associated adverse effects. Monthly long-acting aripiprazole 300 mg was administered while aripiprazole 15 mg was maintained for 2 weeks after injection. However, upon completion of the oral schedule, the patient's irritability, disorganization, and aggression began to reemerge. Consequently, she was provided with 400 mg at her subsequent visits with remittance of the aforementioned symptoms. Discussion: Long-acting antipsychotic medications are underutilized in the geriatric population for treating psychotic disorders. Limited research has shown long-acting formulations to be superior to oral dosing due to the prevalence of medication nonadherence [3]. Difficulty understanding dosing instructions, sensory and visual impairment, and poor insight into the necessity of medication play a pivotal role in how oral medications may be ineffective in an elderly population [3,5]. Further research into the utility of long-acting antipsychotic injections is warranted to ensure optimal medication management in the geriatric population. Conclusion: This case highlights that aripiprazole long-acting monthly injections can be effective and well tolerated in treating schizoaffective disorder in the geriatric population.

No. 71

A Gendered Perspective on the Utilization of Coping Mechanisms Among Asylum Seekers: A Qualitative Analysis and Literature Review

Poster Presenter: Afreen A. Siddiqui, M.S.

Lead Author: Kim Griswold

Co-Authors: Oress Pratt-Macdonald, Alyssa Reese, Paige Guy

SUMMARY:

Asylum and refugee populations have an increased risk of psychological distress and psychopathology as a result of various pre and post-migration factors. The Human Rights Initiative (HRI) is a student-run organization at the University at Buffalo Jacobs School of Medicine and Biomedical Sciences that

aids the asylum-seeking population of Western New York by providing medical and psychological evaluations for asylum seekers who are victims of torture. In telling their stories during psychological evaluations, asylum seekers reveal coping mechanisms that they practice in order to manage their mental well-being. While other studies have assessed the methods of coping among refugees, this study aims to take a gendered perspective on these methods and analyze how they may differ among those who identify as men or women. Additionally, we conducted a scoping review of current literature addressing the use of such coping strategies among asylum seekers in relation to gender. Methods: HRI-conducted final affidavit forms are collected and coded using Dedoose for characteristics such as medical conditions, psychological diagnoses, and types of torture endured. These affidavits encompass the client's narrative of their upbringing, the events that led them to escape their native country, the journey they took to get to the US and their current living situation. Eighty-three psychological evaluations conducted by HRI were selected and analyzed based on the following criteria: gender, PTSD symptoms, mental health diagnoses, and fifteen specified coping mechanisms. A literature search was performed and articles were included if they were written in English and discussed coping mechanisms of male and female adult asylum seekers. Eighty-three patient files were included, of which 36.1% identified as women (n=30) and 63.9% identified as men (n=53). Of the four negative coping mechanisms studied, 13.2% (n=7) of men reported reckless behavior compared to 3.3% (n=1) of women. Additionally, 5.7% (n=3) of men reported drinking alcohol, 1.9% (n=1) men reported smoking, and 3.8% (n=2) men reported using illegal substances, whereas none of the women reported use of these coping mechanisms. Out of the eleven positive coping mechanisms studied, men most frequently reported working a job (n=7), attending church (n=6), and exercising (n=5). Less women reported use of positive coping mechanisms, as only reading (n=1), listening to music (n=2), working at a job (n=1), socializing with friends and family in the United States (n=1), and cooking (n=1) were utilized by women. Asylum seekers report using coping mechanisms to manage their mental well being. Our

analysis suggests that in this sample, male asylum seekers employ a wide range of coping mechanisms, specifically negative coping mechanisms, compared to their female counterparts. Current literature overwhelmingly discusses those mechanisms used by women. How these mechanisms are defined differs based upon gender and culture.

No. 72

Disaster Psychiatry: Psychosocial Stressors and Response to the 2021 Surfside Condominium Collapse

Poster Presenter: Sung Min Ma, M.D.

Lead Author: James Shultz, Ph.D.

Co-Author: Junghyun Lim, M.D.

SUMMARY:

At 1:16 AM on June 24, 2021, two sections of a 12-story residential condominium in Surfside, Florida, pancaked and toppled to the ground, resulting in the deaths of 98 occupants. The diversity of the disaster-affected town of Surfside was evident in the profile of victims from throughout the Americas, including members of the area's vibrant Jewish community. What ensued was a casebook example of impeccable emergency response. Energized search and rescue efforts, coordinating teams from the U.S., Israel, and Mexico, continued unabated for two weeks. Miami-Dade County Mayor Levine-Cava's connection to Surfside was supported by cohesive leadership from government officials at all levels. No survivors were extricated from the rubble after the first hours. Distinguishing features of the Surfside collapse that exacerbated the psychological impact included: human negligence, warning of structural deficiencies, premature loss of life, the horror of contemplating the final moments for those who died, and disproportionate impact on the Jewish community. Applying the concentric population exposure model to persons in physical and social proximity to the collapse, the 98 persons who were killed would occupy the epicenter. Next would be persons who experienced the most intense reactions, most significant distress, and most impactful life changes, including 37 persons pulled from the structure in the first hours. The next most affected were the surviving residents who evacuated the remaining standing portion of the building.

Profoundly affected were bereaved family members and close friends of those who died. Apart from these closely connected groups of civilians, first responders encountered threats to health and well-being that included heat exhaustion, respiratory exposures, and injury risks working on the unstable pile, punctuated by frequent exposures to bodies and human remains uncovered in the rubble. To a lesser degree, others affected psychologically included neighbors living in nearby buildings and the remainder of the Surfside and Miami communities. Family Reunification Centers (FRCs) were activated in the first hours, and Jewish Community Services (JCS) led the psychosocial response. Professional teams began working with families on the first day. JCS anticipated a long-term process of care and support focusing on “target groups” with potentially-traumatic exposures and severe losses: building residents who survived, family members and close friends of those who died or suffered severe losses, individuals/families who evacuated adjacent buildings rendered unsafe, members of local congregations most impacted by the tragedy, and first responders and caregivers who experienced secondary trauma. The hard psychological and psychosocial work of dealing with individual trauma, grief, and community loss will be prolonged. JCS and major response entities anticipate a 5- to 7-year time horizon for community healing.

No. 73

The Relationship of Level of Anger With Attachment, Interpersonal Ambivalence and Psychological Symptoms With an Outpatient Cardiology Clinic Sample

Poster Presenter: Megan Ines, D.O.

Co-Authors: Christopher Reggi, Peter Hsieh, Jenna Lee Taglienti, M.D.

SUMMARY:

Introduction: Research (Chida & Steptoe, 2009) have reviewed the link between anger and cardiovascular disease citing that behavioral management is an important aspect to cardiovascular health. Inappropriate anger expression styles can negatively affect both physical and psychological health (Ham & You, 2018). Greater interpersonal conflict has been linked with higher cardiovascular risk (Grove, et al,

2017). Our study investigated the link between self-reported anger and attachment styles, interpersonal ambivalence and psychological symptoms with cardiology outpatients. Methods: 186 people presenting at a cardiac outpatients were consented and completed the following self-reports: SPECTRA-Indices of Psychopathology (Sinclair & Blais, 2018) and DSM-5 Level 2 Anger (APA, 2013); 55.7% were male, 88.3% were Caucasian, 67.8% were married, 37.2% were employed, 64.7% had hypertension, 8.4 had congestive heart failure, 23.4 % had a cardiac procedure and the average age was 66.21 years. Result: Anger was correlated with SPECTRA’s internalizing spectrum ($r=.36$, $p<.001$), severe aggression ($r=.42$, $p<.001$), antisocial features ($r=.35$, $p<.001$), drug problems ($r=.21$, $p=.02$), externalizing spectrum ($r=.37$, $p<.001$), paranoid ideation ($r=.27$, $p<.01$). Discussion: Results showed that self-reported anger was linked with a number of maladaptive interpersonal styles and psychological symptomatology with a sample seeking cardiac outpatient care. These findings highlight the need for assessing mental health issues in cardiology clinics.

No. 74

Comparing in-Person, Telephonic, and Video-Based Treatment of Depression in Adult Primary Care During the Covid-19 Pandemic

Poster Presenter: Benjamin Metrikin

SUMMARY:

Objective: To determine if processes of care for patients with depression were different between in-person, telephonic, or video visits in adult primary care. **Methods:** Participants were patients 18 years and older from a large integrated health system in Southern California who received a new diagnosis of depression during a primary care visit of any kind from 3/1/2020 until 5/21/2021. A new diagnosis was defined as having no evidence of a depression diagnosis and/or receiving medication for depression in the 12 months prior to the visit at which they were diagnosed. Patients were followed through 6/30/2022 to determine care processes related to depression: administering a patient health questionnaire (PHQ9), providing medication, and having a follow-up visit. Differences between visit types were tested using the Chi-Square statistic and

one-way ANOVA. **Results:** A total of 34,011 patients were included in the sample; 17,752 (52%) had an in-person visit, 11,966 (35%) had a telephone visit, and 4,293 (13%) had a video visit. Patients who had telephone visits (43 ± 17 yrs) were younger than those who had in person (57 ± 20 yrs) or video (55 ± 21 yrs) visits ($p < .001$). They were also more likely to be women (71% vs. 67% telephone vs. 67% video; $p < .001$), and less likely to be African American (7.6% vs. 8.6% telephone vs. 10.6% video; $p < .001$). Patients who had in-person visits were the most likely to complete a PHQ9 at the time of diagnosis (49.3% vs. 37.8% telephone vs. 21.7% video; $p < .001$). A similar pattern was seen in depression-related follow-up visits, with in-person visits (81.8%) leading to a higher follow-up rate than telephone (78.7%) and video (76.4%) initial visits ($p < .001$). For patients initially diagnosed with moderate-to-severe symptoms of depression ($\text{PHQ9} \geq 10$; $n = 9,620$), those who had a telephone visit were most likely (56.3% vs. 47.0% video vs. 42.2% in-person; $p < .001$) to have a depression-related medication ordered. Interestingly, 77.0% of those who had an in-person visit received their medication, while fewer patients who had a telephone (31.5%) or video (27.7%) visit received theirs ($p < .001$). Finally, follow-up for patients who had telephone visits was more likely to be in the psychiatry department (29.4% vs. 15.8% in-person vs. 27.5% video; $p < .001$). For those who had in-person visits, follow-up was more likely to be with the primary care provider (30.6% vs. 14.9% telephone vs. 15.2% video; $p < .001$). **Conclusions:** Depression-related care processes differ significantly among in-person and telephonic/virtual visits. Patients who have in-person visits are more likely to get screened for depression and have follow-up visits, as well as receive a depression-related medication once ordered. However, patients who had in-person visits had fewer medications ordered and fewer follow-up visits in psychiatry. Further research is needed to understand the causes and impacts of these differences.

No. 75

A Pilot Study of App-Based Biofeedback in Active-Duty Service Members

Poster Presenter: Andrew Greenhalgh

Co-Authors: Katherine Hillman, Madeline Teisberg, D.O., M.S., Ashley Phares

SUMMARY:

Background/Objectives: Biofeedback improves emotional regulation during therapy for multiple psychiatric disorders. Studies on the Mightier™ app show promising results in helping children with emotional regulation. Our study aims to determine the feasibility of using this technology with adult Active-Duty servicemembers seeking behavioral healthcare. **Methods:** We enrolled 30 active duty, activated national guard or reservist servicemembers seeking behavioral health care services from recruiting at Walter Reed National Military Medical Center. They were provided 30 tablets with Mightier™ app installed for gameplay and 30 Mightier™ heart rate monitors to be used in conjunction with the app. The timeline of the study is 10 weeks. The participants first completed a recruitment survey, enrolled, and were assigned a study ID number and provided an anonymous account. Using an issued Mightier™ tablet and heart rate monitor (or instructions on downloading the app on their personal device if they chose), the participants were asked to play the Mightier™ game for at least 45 minutes per week on the device of their choosing for the 10 weeks of study enrollment. The participant heart rates were recorded only while playing and duration of play was sent to the research team weekly. Research staff checked in with the participants throughout the 10 weeks to send reminders and inquire about user experience. Participants returned the equipment at 10 weeks and completed follow-up surveys. COVID Option: Participants could choose to do virtual video meetings and have the Mightier equipment mailed to them if they wished. **Results:** Acceptability-80% of participants who would use this application at least 6 weeks, at least 30min a week. uMARS Scores indicating acceptability in 3 of 5 categories. Compliance-Participants who complete at least 6 weeks of the study and use the application at least 45min/week. This feasibility and acceptability study will help determine if active-duty service members who are seeking behavioral health care are willing to engage with the Mightier™ app for sufficient amount of time, as to constitute part of their treatment. The process of data collection will be completed by 02NOV2022 to ensure data, discussion, and conclusion for the publication of this poster in 2023.

Hypotheses: Active-duty servicemembers, activated National Guard and Reservists will utilize the Mightier application at least 45 minutes per week as instructed and will complete post-application assessment. **Conclusion:** If Minimum Acceptability is met in this pilot study, then a larger study on the effectiveness of the Mightier™ app as a supplemental intervention for adult active-duty service members with a number of psychiatric diagnoses should be conducted.

No. 76

Impacts of the Dobbs v. Jackson Women's Health Organization Supreme Court Decision on Military Resident Psychiatry Physicians

Poster Presenter: Arne Eliasson, M.D.

Co-Authors: Jennifer Hein, M.D., Vanessa Green

SUMMARY:

The June 24th 2022 Supreme Court ruling which overturned a *Roe v. Wade* decision that occurred 49 years ago, represented a landmark change to the American legal landscape. As a consequence, the polarizing and divisive issue of abortion was handed down to policy makers on a state level. The effects of the various policies and laws passed as a consequence of this ruling have created ripples which have impacted nearly all medical providers and treatment facilities in the nation. The range of impacts has many consequences, some obvious and some which require more careful examination. The Federal government, including the Defense Health Agency (DHA), ostensibly has made no changes to its policy. However, on June 28th, Mr. Gilbert R. Cisneros Jr., the Under Secretary of Defense for Personnel and Readiness, re-released a memorandum to all DHA personnel to remind them of their scope of practice and responsibilities with regards to women's reproductive health. In short, federal treatment facilities (FTF) may perform abortive services under three circumstances "cases of rape, incest, or where the life of the woman would be endangered if the fetus were carried to term." On a superficial level, this policy seems clearly defined, however, in the months following the Supreme Court ruling, specific patient presentations revealed dilemmas for providers on how to advise and/or treat patients in the context of the new reproductive health statutes.

A need for improved practice guidelines and the role of the federal provider in this changing landscape required legal counsel to further clarify on what federal protections exist in the context of the threat of civil litigation. A survey study was initiated, and is currently ongoing, to solicit anonymous feedback from residents and staff among the CRDAMC Psychiatry Residency Program. The survey consisted of the following questions: How do you view the *Dobbs v. Jackson Women's Health Organization* ruling? Has your practice of medicine changed? Has this ruling impacted your views of medicine as a profession? Has this ruling impacted your patients' mental health? The CRDAMC Psychiatry program aspires to be a conduit for diversity, equity and inclusion with one of its areas of emphasis being a focus women's health. As a result, an impartial assessment and discussion of the impacts of this recent ruling is essential to this goal, and can hopefully contribute to a broader discussion of the impacts, pitfalls, and potential misconceptions for the DHA as a whole. We anticipate survey completion in the next several months with complete analysis of the results by end of year.

No. 77

Polynomial Relationship Between Subthreshold Amyloid Beta Deposition and Cortical Volume Modulated by Apoe Genotype in Cognitively Normal Older Adults

Poster Presenter: Jiwon Kim

SUMMARY:

Background A growing body of evidence suggests a deteriorating effect of subthreshold amyloid-beta (A β) accumulation before the onset of clinical symptoms of Alzheimer's disease (AD). Despite the association between the A β -dependent pathway and the APOE ϵ 4 allele, the modulating impact of this allele on the associations between subthreshold A β deposition, cortical atrophy, and neuropsychological performance is unclear. This study aimed to explore the differential effect of the APOE ϵ 4 allele on the association between subthreshold A β deposits, cortical volume, and cognitive performance in cognitively healthy older adults (CN). **Methods** A total of 112 CN with subthreshold A β accumulation, consisting of 80 APOE ϵ 4 non-carrier and 32 APOE ϵ 4

carrier, were included in the study. Participants underwent structural magnetic resonance imaging, [18F] flutemetamol (FMM) PET-CT, and neuropsychological battery. Potential interactions between APOE status and A β deposition were assessed with F-tests implemented on both linear and quadratic interaction terms, adjusting for age, sex, and education years. **Results** We found a significant interaction between APOE ϵ 4 allele, subthreshold A β deposits, cognitive function for cortical volume of predefined brain regions vulnerable to early A β retention. In CN with APOE ϵ 4 carrier, regional A β retention in frontal, parietal, temporal lobe, and posterior cingulate cortex/precuneus showed a U-shaped relationship with cortical volumes of superior parietal, fusiform gyrus, and amygdala. Furthermore, cortical volumes of superior, inferior temporal lobe, and parahippocampal gyrus in APOE ϵ 4 carrier displayed a U-shaped relationship with attention and executive function scores. **Conclusions** This study is the first attempt to thoroughly examine the mechanism at play in the earliest phase of Alzheimer's disease, focusing on the influence of the APOE ϵ 4 allele on the association between subthreshold A β retention and cortical volume during the preclinical phase.

No. 78

Treating Acute Mania Reveals Underlying Frontotemporal Dementia and the Improvement of Symptoms With Loxapine

Poster Presenter: Christina Spoletti

Co-Authors: Christopher McCarthy, M.D., Jerica Gerena, D.O., Khaled Said, M.D.

SUMMARY:

Frontotemporal dementia (FTD) is the second most common form of dementia in people aged 45-64 years old [1]. FTD can further be divided into behavioral variant (bvFTD) and speech variant (svFTD); each equally affecting FTD patients [1]. Previous studies have shown a possible link between the origins of the behavioral variant dementia and bipolar disorder, suggesting that manic or hypomanic episodes may be a prodrome [2]. In this poster, we explore a case of a 66-year-old male with past psychiatric history of bipolar disorder who presented following a serious suicide attempt via overdose on

prescribed medications. Despite initial treatment with valproic acid and aripiprazole for acute mania, the patient's symptoms of mood instability and psychosis persisted. In addition to symptoms of mania the patient also displayed word-finding difficulties which progressed rapidly into fluent aphasia. Due to decline and continued manic symptoms despite multiple medication trials and titration, magnetic resonance imaging (MRI) was ordered which demonstrated greater prominence of sulci in the temporal regions bilaterally which is consistent with early changes in FTD. To target the patient's persistent symptoms of impulsivity, agitation, and mood instability, loxapine was started. The addition of loxapine yielded the greatest clinical improvement in the patient. Loxapine is a typical, dibenzoxazepine tricyclic antipsychotic with activity at the dopamine-2, 3 and 4 (D2, D3, D4) and serotonin-2A (5-HT_{2A}) receptors [3]. Loxapine additionally demonstrates antagonism of noradrenergic, histaminergic H₁, and cholinergic M₁ receptors which may influence its association with decreased aggressive behaviors, impulsive behaviors, and sedating effect which were observed effects in this patient.

No. 79

Impulsivity and Suicide Risk in a United States Marine Corps Recruit Who Sustained a Self-Inflicted Gun Shot Wound to the Face

Poster Presenter: Terrence Currie

Lead Author: Konrad Surdel

SUMMARY:

Impulsivity is a symptom that is commonly associated with several psychiatric and neurological conditions to include: Substance Use Disorders, Bipolar Disorders, Personality Disorders, Post-Traumatic Stress Disorder and Traumatic Brain Injury (TBI). Patients with significant impulsivity are more prone to physical injury, substance addiction, and suicide. In the poster presentation, we review an interesting case of a 19-year-old United States Marine Corps (USMC) recruit with a pre-service history of polysubstance abuse, PTSD, and Borderline and Histrionic personality traits, who sustained a self-inflicted gunshot wound to the face while on the shooting range at Marine Corps boot camp. The

Service Member survived after extensive oral-maxillary surgeries and was subsequently admitted to our inpatient psychiatric ward for continued treatment. During this time, a collaborative approach was adopted with extensive discussions and consultations with other specialties to include: Neurology, Oral-Maxillofacial Surgery(OMFS), Dental, Pain Management, as well as the service member's command and additional USMC Support Services (Wounded Warrior Battalion). Several meetings with the Service Member's family was also conducted to optimize eventual outpatient care. He was ultimately diagnosed with Bipolar I Disorder as well as having sustained a TBI (coup-contrecoup frontal lobe injury from the self-inflicted GSW). These additional diagnoses added to his already elevated risk of impulsivity and subsequently increased his risk of personal injury, suicide, and ability to conform to social norms which made his inpatient stay particularly challenging. This case highlights well the need for collaborative care in the setting of a patient with multiple risk factors for impulsivity and self-harm with additional medical and neurological comorbidities.

No. 80

Creating Warm Hand-Offs for Patients Who Have Experienced a Recent Suicide Attempt

Poster Presenter: Edward R. Norris, M.D.

Co-Authors: Brian Chilcote, Ashley Felker, L.P.C.

SUMMARY:

Background/Significance: Published literature notes that the postdischarge suicide rate was approximately 100 times the global suicide rate during the first 3 months after discharge. According to recent CDC statistics, 45,979 lives were lost to suicide in 2020. Suicide was among the 10 leading causes of death in the United States in 2020 among persons aged 10–64 years, and the second leading cause of death among children and adolescents aged 10–14 and adults aged 25–34 years. Internally, Psychiatric emergency room visits at LVHN rose 20% in 2021, and demand for outpatient behavioral health care has been extraordinary (and nationally up by 6%.) Given these staggering statistics, LVHN is committed now more than ever to the Zero Suicide initiative, which aims to reduce deaths by suicide

through the implementation of a framework comprised of seven elements. The element of Transition suggests individuals transition through care with warm hand-offs and supportive contacts as a means of preventing future suicide attempts. **Case:** LVHN's Behavioral Health Inpatient Unit partnered with Northampton County in May of 2022 to create the area's first Warm Hand-Off procedure for adult patients who have experienced a recent suicide attempt. Through coordinated efforts with the LVH-Muhlenberg Behavioral Health Inpatient Unit and Northampton County, this procedure was implemented in May 2022 and offered to this group of patients residing in Northampton County. Upon discharge from the Behavioral Health unit, the patients are offered the services of a designated Northampton County caseworker at no cost to the patient, who will then ensure coordination and access to care including locating recommended services and navigating the referral process, assistance with understand insurance and how to access services through it, linkage to peer and community supports in Northampton County, and periodic check-ins from time of referral until three months following the patient's discharge. Over the course of several weeks, this caseworker maintains consistent communication with the patient to explain services, connect them to chosen resources, and work to prevent further hospitalizations related to suicide attempts. In the coming months, LVHN plans to implement this same initiative with Monroe and Lehigh county adults and adolescents as well in hopes of expanding this services to all area counties served. **Discussion/Conclusion:** Since program implementation in May of 2022, the LVH-Muhlenberg Inpatient Unit has had a total of 7 referrals made to the county caseworker. Data has shown that four of the seven patients stayed engaged for two or more phone calls with the caseworker. Five patients did not require crisis services during engagement in the program. Two patients did require crisis services during engagement in the program period.

No. 81

Fentanyl Sneaks Into Social Media: High Risk Adolescent Substance Use in the Online Era

Poster Presenter: Jose P. Vito, M.D.

Co-Authors: Ryan Badolato, Katrina B. Kostr

SUMMARY:

Objective: Rates of illicit prescription pill use are increasingly high among young people, and overdoses are among the leading causes of preventable death. The authors aimed to review recent literature on use of controlled substances, such as opioids and benzodiazepines, among teenagers and young adults. Specifically, the authors examined whether social media use was related to substance use in teenagers and young adults. The authors sought to determine the frequency and severity of substance use in relation to social media usage in recent years, including during the COVID-19 pandemic. Resources were also reviewed for education and treatment of substance use to combat this ongoing crisis. Methods: A literature search was conducted using the databases of Medline/PubMed and Google Scholar to identify papers describing use of controlled substances among teenagers and young adults. The authors identified studies and reviewed articles published in English between 2018 - 2022 (inclusive), searching keywords including "fentanyl," "opioids," "benzodiazepines," "stimulants," "substance abuse," and "social media." Results: The initial search resulted in hundreds of papers that included at least one of the keywords. After careful review, the authors focused on a subset of data that included adolescent and young adult populations, including evidence of drug access via internet and social media platforms. While there are multiple examples of substance use and overdose-associated deaths in adolescent populations, data are limited about the prevalence of fentanyl-induced overdose from substances obtained by youth through social media. Federal data included the striking statistic that, while overall substance use by teenagers has decreased over the past decade, the rate of fentanyl-associated deaths has more than doubled in the past three years. Conclusions: With the pandemic-associated isolation syndemic, and the abundance of social media platforms at the fingertips of adolescents and young adults, the opioid crisis continues now as fentanyl, a synthetic opioid drug, surreptitiously leads to lethal overdoses. More research, and more awareness, is needed to educate our youth, caretakers, teachers and providers about the life-threatening consequences

associated with substance use, including in the form of pills obtained via social media.

Poster Session 3**No. 1****A Study of Cannabis Use and Cognition in Patients With Schizophrenia in the Inpatient Setting**

Poster Presenter: Joe Angel Espinoza Jr., M.D.

Co-Authors: Yasmin Mohamoud, Emily Wu, M.D., Ph.D., Aliyah Conley

SUMMARY:

Cannabis is the most commonly used illicit drug in psychotic patients. Cannabis, and specifically delta-9-THC and its synthetic derivatives like those found in Kush/Spice, can exacerbate psychotic symptoms in schizophrenia. However, the impact of cannabis on neurocognition in schizophrenia is less clear. To date, the relationship between cannabis and cognitive performance in schizophrenia is controversial, as some studies found associations between cannabis use and improved cognition in psychosis, while others reported an association between persistent cannabis use and neuropsychological decline. The study protocol was approved by the University of Texas Health Science Center Institutional Review Board. A sample of patients from acute inpatient setting with a diagnosis of Schizophrenia based on DSM V concurrent with cannabis use disorder will be included in this study. MOCA test will be given on the day of discharge. Cannabis use will be quantified through Kreek-McHugh-Schluger-Kellogg scale (KMSK scale) (Kellogg SH et al, 2003) and Cannabis Abuse Screening Test (CAST) (Legleye S et al, 2007) will be used to quantify lifetime consumption, and use severity, respectively. Pearson correlations will be used to analyze the relationship between drug use at different amounts and MOCA test results. Our study recruited 27 patients with diagnosis of schizophrenia admitted at Harris County Psychiatric center (Houston, TX). We found there was not a significant difference of overall MOCA scores between different groups of cannabis users ($P > 0.05$), as well as there was no significant difference of subcategories of the MOCA score between different groups of cannabis users ($P > 0.05$). A Pearson's correlation coefficient was measured to determine the correlation between

CAST scores and MoCA scores in each cognitive domain. The results of this study there was not a significant correlation between MoCA scores in each cognitive domain and CAST scores ($P > 0.05$). Cannabis use has become a widespread problem worldwide. There is a high prevalence of cannabis use in schizophrenia which may compound the aforementioned effect of cannabis on cognition in patients with schizophrenia. Our results found despite severe cannabis use, there was no evident change in MOCA scores compared to those with moderate or mild as well as those who do not use cannabis. However, there are several limitations of this study, including: small sample size, homogenous population, and lack of thorough neurocognitive testing. Future research in this area is required to better quantify the possibility of a relationship between cannabis use and its effect on cognitive function in patients with schizophrenia.

No. 2

Opioid Use Disorder Treatment in the Pregnant Patient

Poster Presenter: Manonmani Murugappan, D.O.

SUMMARY:

Mrs. W, a 34 year old Caucasian female G4P1021 with a past psychiatric history of opioid use disorder (OUD) receiving medication assisted treatment (MAT) presented to the addiction medicine clinic for second opinion regarding alternative treatment options. This patient was receiving Subutex (buprenorphine) to treat her opioid use disorder, however after learning she was pregnant, her obstetrician recommended she switch to suboxone (buprenorphine and naloxone). Pt was hesitant to switch medications given her long standing remission on Subutex, thus was seeking an additional opinion. Pt was also anxious about her current pregnancy, which was unfortunately complicated by suspected fetal atrial septal defect. Historically, suboxone was not recommended for the pregnant patient because there were concerns that fetal exposure to naloxone may lead to neonatal withdrawal symptoms. However, in recent years, there have been more studies evaluating suboxone use in pregnant patients. The benefit of using suboxone is that the naloxone component deters the patient from

utilizing an IV route for administration which could lead to fatal complications. Recent studies are now showing that pregnant patients can safely use suboxone. Pregnant patients utilizing suboxone did not experience significantly different pregnancy outcomes than those who were treated with Subutex. Since suboxone now appears safe in pregnancy, patients will no longer need to be transitioned to another opioid agonist. This revelation initiates a new treatment option for pregnant patients to consider. For this patient, she communicated that she felt empowered to be able to participate in her treatment plan and continue her Subutex treatment.

No. 3

Challenges in Recognizing and Treating Prolonged Zolpidem Withdrawal: A Case Report

Poster Presenter: Swetha Ramamurthy, M.D.

Co-Authors: Namita Saraf, Abhisek Khandai

SUMMARY:

Ms. M, a 32-year-old African American woman with a past psychiatric history of opioid use disorder and a past medical history of unspecified seizure disorder presents to the Emergency Department with altered mental status. The patient had abruptly discontinued multiple medications, including lorazepam, hydrocodone/acetaminophen, and tramadol, several days prior to admission. Her family later confirmed that she had been using prescribed medications incorrectly, including zolpidem at increasingly high doses for at least a year. She was admitted to the inpatient medical service for persistent nausea and vomiting, confusion, and seizure-like events. Psychiatry was consulted for altered mental status. The original differential included serotonin syndrome, opioid and benzodiazepine withdrawal. After admission, the patient worsened, with increased seizure-like events, preceded by tachycardia, and increased paranoid delusions and hallucinations. As the patient continued to decline daily even after not being on serotonergic medications, there was less concern for serotonin syndrome. Additionally, the patient was decompensating even with the diazepam taper used for potential benzodiazepine withdrawal treatment. The progressive worsening, multiple days from last

drug usage, of the patient's mental status also decreased the likelihood of an opioid withdrawal diagnosis. The next potential diagnosis was GABA-ergic withdrawal due to zolpidem overuse. She had been started on a diazepam taper, but her symptoms continued to worsen even after 5 days, which is typically peak severity of zolpidem withdrawal symptoms. The benzodiazepine taper was then switched to clonazepam. Clonazepam is suggested to have a better outcome for benzodiazepine GABA-ergic withdrawal, while diazepam is better for alcohol withdrawal. There were significant challenges differentiating between GABA-ergic withdrawal from zolpidem, delirium from high total doses of benzodiazepines used for withdrawal treatment, post-ictal state if she was having true seizures, or side effects from significant and unknown polypharmacy. Her symptoms began to improve after seven days with multiple adjustments to her treatment plan as her clinical picture evolved. There is minimal literature on recognizing symptoms in the early and prolonged time course, complications, and treatment of zolpidem withdrawal. In this case, we provide a comprehensive overview of the importance of collateral material for critical patient information, allowing an extended time course for disease resolution, and interventions for GABA-ergic withdrawal due to zolpidem overuse.

No. 4
Characterizing Treatment Barriers and Opportunities at the Nexus of Opioid Use Disorder and Incarceration: A Qualitative Study

Poster Presenter: Morgan Alexander, M.D.

Co-Authors: Christine Ciaramitaro, M.D., Danielle Gainer, M.D., Sydney Silverstein, Ph.D.

SUMMARY:

Background: Criminalization of illicit opioid use has resulted in high rates of incarceration among people suffering from opioid use disorders (OUD) and many patients diagnosed with OUD will or have experienced prolonged periods of incarceration. In 2020, 26.9% of all prison commitments in Ohio, where this study is set, were attributable to drug-related offenses and drug overdose is the leading cause of death within 2-

weeks of prison release. Though a wide variety of substance use may occur in jails and prisons, treatment opportunities such as medications for OUD (MOUD) and recovery programming can also be made available to incarcerated individuals before and after rejoining their communities. Using mixed-method interviews, our study characterizes the needs and perspectives of this resilient and poorly understood patient population, and identifies barriers to treatment, risks for relapse, and important prognostic factors useful in navigating OUD recovery during the transition from carceral to community settings.

Methods: Mixed-method interviews were conducted with a sample of 20 adults in the Dayton, OH Metro Area who self-reported illicit opioid use and experienced incarceration within 6 months of study participation. No participants were incarcerated at the time of data collection. Interviews contained questions related to opioid use, psychiatric history, and incarceration experiences; demographic information was also collected. An IRB-approved transcription service was used to record collected data, which was then coded for thematic analysis using Taguette, a qualitative analysis software.

Findings: Our findings reveal that many patients with OUD report interest in pursuing or maintaining sobriety, utilizing MOUD, and engaging with recovering programming when leaving jail or prison but lack access to treatment or encounter a multitude of logistical or structural barriers upon release that impair their ability to do so. Participants describe achieving their longest periods of sobriety during periods of incarceration, despite reported access to illicit opioids while incarcerated.

Discussion: We posit that carceral settings represent a prevalent and potentially powerful - but frequently missed or underutilized - opportunity for rehabilitation, reduction in recidivism, and sustained recovery related to OUDs. Study findings offer an improved understanding about the beliefs, needs, and lived experiences of people who engage with the opioid use disorder-justice nexus and mental health professionals will

gain imperative insights in the development of treatment strategies. </p>

No. 5

Evaluation of Patient Assistance Programs and Eligibility Criteria Offered for Long-Acting Antipsychotics Used in Patients With Schizophrenia

Poster Presenter: Alyssa Cruz

Lead Author: Daniel G. Noe, M.B.A.

Co-Author: Mousa Botros, M.D.

SUMMARY:

Background and Aims: Schizophrenia is a life-long psychiatric condition, which often requires a lifetime of medication compliance. Nonadherence to prescribed drug treatments has been recognized as a problem worldwide. Long-Acting Injectable (LAI) antipsychotic formulations generally offer once-monthly or bi-weekly injections, reducing adherence demands and risk of relapse. Despite their effectiveness in reducing these demands for compliance, many LAI's are prohibitively expensive, especially for those without insurance or lack of coverage. Our goal is to examine the availability of patient assistance programs (PAPs) for presently approved LAI antipsychotics, as well as to analyze the gaps in coverage which presently exist. **Methods:** A literature review was performed examining the available information on LAI antipsychotics including compliance rates and PAP availability. Manufacturers offering a PAP were contacted regarding their respective inclusion and exclusion criteria. Likewise, we reviewed additionally available financial assistance programs offered to patients on LAI's. **Results:** To date ten LAI formulations have been approved for the treatment of schizophrenia. Of those, 70% (8/10) offer a PAP which covers the full cost for uninsured US residents, including: Abilify Maintena, Abilify Aristada, Invega Sustenna, Invega Trinza, Invega Haysfer, Risperdal Consta and Haldol Decanoate. With LAI's such as Zyprexa Relprevv, Prolixin and Perseris being the exceptions. Coverage gaps exist for those with insurance and without the ability to cover copayments and those who do not meet the appropriate US residential and poverty criterion for the PAPs. **Conclusions:** While these

PAP's cover the entirety of the cost of most of the available medications for those without insurance, they only aid a small subset of the population of patients suffering from schizophrenia. Efforts will need to be made to decrease the gap between costs of treatment and available financial assistance programs, especially for those experiencing financial difficulty who have some form of medical insurance and high copayments.

No. 6

Non-Hyperammonemic Valproic Acid Induced Encephalopathy

Poster Presenter: Abbigail Lee-Rodgers, D.O.

SUMMARY:

Valproic acid (VA) is an anticonvulsant medication commonly used in the management of psychiatric conditions. There are many adverse effects associated with medication use including tremor, metabolic disease, and hepatotoxicity [3]. Among the most dangerous, is valproic acid induced encephalopathy (VIE) which may present with nausea, emesis, lethargy, seizure, or coma [2]. One cause of VIE is L-carnitine deficiency and rarely, the disorder may occur without comorbid hyperammonemia [1], complicating and often delaying recognition and diagnosis. Considering that the consequences of VIE are potentially life threatening, physicians must be vigilant and maintain a low threshold for diagnosis and intervention. Despite increasing information and literature regarding VIE in the setting of hyperammonemia, little is known about non-hyperammonemic VIE. Here we describe the case of a 57-year-old male, with a history of schizoaffective disorder and treatment with VA 500 mg twice daily and paliperidone 9 mg daily. Of note, at the time of presentation, the patient had been receiving VA for 17 days. Labs revealed hyponatremia (124) and metabolic acidosis. Liver profile and ammonia levels within normal limits. Initial psychiatric examination findings included orientation to self only, distractibility, psychomotor retardation, and slowed, tangential thought process. He was diagnosed with hypoactive delirium secondary to hyponatremia. His VA was continued, and he was prescribed Haldol 1 mg nightly. Following normalization of sodium levels,

the patient remained encephalopathic. The patient was then prescribed an increasing dose of Haldol and his VA dosage was decreased by 50%, resulting in resolution of encephalopathy within 48 hours. This case aims to highlight the challenges in recognition and diagnosis of VIE in the setting of normal liver function and ammonia levels. In the case of our patient, he remained encephalopathic following resolution of metabolic abnormality. Upon decrease of his VA dosage, he improved rapidly, with resolution of encephalopathic symptoms within 48 hours. We hypothesize that his encephalopathy was due to carnitine deficiency as previous studies have shown that VA metabolism results in loss of carnitine via formation of valproylcarnitine and inhibition of the ATP dependent carnitine transporter, resulting in transition from beta oxidation to omega oxidation and formation of a toxic metabolite [4]. As with our patient, decrease or cessation of VA, and potential supplementation of L-carnitine [2], are means of treatment and often result in resolution of symptoms. In conclusion, VIE should be considered in all patients taking VA presenting with altered mentation. As the condition is potentially lethal and can occur in the setting of regular liver function and ammonia levels, it is of utmost importance that physicians remain vigilant and maintain low threshold for implementation of therapeutic measures.

No. 7

Repeat Suicides in Two Schizoaffective Patients on Clozapine

Poster Presenter: Yu Kong

Lead Author: Hojun Yoo, M.D., M.A.

SUMMARY:

Background: Clozapine is recommended for treatment-resistant schizophrenia and high-risk suicidal ideation/behaviors. The degree of impact on decreasing repeated suicidality, especially in schizoaffective disorder, is less well known. We report two patients with schizoaffective disorder with repeated suicide attempts while on clozapine.

Case #1: W is a patient with schizoaffective disorder, bipolar depressive type with a history of multiple suicide attempts who presented after stabbing himself in the neck thrice with a knife. Psychotropics

included clozapine 350mg, cariprazine, risperidone, sertraline, and benztropine. **Case #2:** F is a patient with schizoaffective disorder, bipolar type with a history of several suicide attempts via multiple methods who presented after attempted auto-enucleation of both eyes, resulting in rupture and significant luxation of his left eye, leading to the loss of its vision and movement. Home psychotropics were clozapine 200mg, lithium, trazodone, topiramate, risperidone, thiothixene, and olanzapine. **Discussion:** Patients on clozapine have a lower mortality rate compared to patients on other antipsychotics, with a pooled mortality rate ratio of 0.56, and demonstrate a 2.9-fold overall risk reduction of completed suicide. However, the risk of suicide in stabilized patients on maintenance treatment of clozapine remains over five times the general population risk. It is common for symptoms to persist, and augmentation strategies are often employed. Furthermore, data on patients with schizoaffective disorders is limited. The patients presented here reflect this data. Both patients were diagnosed with schizoaffective disorder and found clozapine to be effective, but not enough; they both attempted suicide during treatment and required augmentation with multiple adjunct medications. Nonetheless, it is worth noting patient-specific risk factors. W had increased stress due to a sudden decline in social support, though he had close and consistent follow-up with a recent increase in clozapine and serum levels within the therapeutic range. F's dosage was unchanged for months due to follow-ups with multiple psychiatrists, and no serum levels were obtained. **Conclusion:** Clozapine remains the best option for treatment-resistant schizophrenia or high-risk suicidal ideations and behaviors. However, clozapine does not completely repress suicidality and may need augmentation. Though the data is convincing, there are multiple confounding factors, such as the impact of increased monitoring, hospitalizations, or study withdrawal if suicidal risk is significant. Increased monitoring and intensity and frequency of clinical contact may enhance the effect of clozapine relative to other antipsychotics. Additionally, W and F may have been at subtherapeutic dosages, and patients can benefit from higher levels. There is a need for more research on clozapine, especially for those with schizoaffective disorder and with repeated suicide attempts.

No. 8

A Rare Case of Duloxetine-Induced Bruxism and Its Management

Poster Presenter: Anatoliy Kuznetsov, M.D.

Co-Author: Diane Bencks, M.D.

SUMMARY:

Introduction: Bruxism is defined as excessive grinding, gnashing or clenching of teeth that is involuntary and unconscious. Bruxism can happen when people are awake, known as wakeful or diurnal bruxism, and also while asleep, called nocturnal bruxism. While the cause of primary bruxism, which is not related to any other medical condition, is poorly understood, more is known about secondary bruxism. Secondary bruxism can be associated with neurological disorders or considered an adverse effect of medication. Antidepressants, especially selective serotonin reuptake inhibitors (SSRIs), have been associated with inducing bruxism. It has been hypothesized that the mechanism for SSRI-induced bruxism may involve excessive serotonergic action on the mesocortical neurons arising from the ventral tegmental area. This action leads to a dopaminergic deficit, which causes a specific form of akathisia and akathisia-like movement of the jaw muscles, thereby leading to bruxism. While much has been written about SSRI-induced bruxism, there is very limited literature regarding the use of serotonin-norepinephrine reuptake inhibitors (SNRIs) leading to this complication. Here, we report a case of duloxetine-induced bruxism in a patient with major depressive disorder and chronic pain which was successfully treated with buspirone. **Case**

Presentation: Our patient is a 32-year-old Hispanic female with a past psychiatric history of major depressive disorder and a past medical history of chronic back pain and irritable bowel syndrome who was treated with duloxetine for depressed mood, anhedonia, difficulty sleeping and suicidal ideations. The patient was admitted to the inpatient unit where her home dose of duloxetine was increased from 40 mg daily to 60 mg daily. On the 7th day of hospitalization, staff reported that the patient was making grinding sounds during the nighttime and the patient complained of jaw pain and stiffness. It was suspected that the patient's bruxism was a side

effect of duloxetine. The dental service was consulted, which yielded a negative work up to exclude all other etiologies of bruxism. A buspirone 5 mg night time dose was added for treatment of bruxism and duloxetine was divided into twice daily dosing. Two weeks post discharge, the patient reported that her bruxism was resolved. **Conclusion:** This poster presentation of a case report hopes to add to the literature and to make psychiatrists aware of the possible adverse effect of this frequently prescribed medication. Bruxism associated with antidepressant use is an underrecognized phenomenon among psychiatrists, and may be treated with the addition of buspirone, dose modification, or medication discontinuation. In our patient, buspirone was an effective treatment for duloxetine-induced bruxism.

No. 9

A Case Report of a Patient Who Required a Second Long-Acting Injectable Antipsychotic to Stabilize Him

Poster Presenter: Jason I. Koreen, M.D.

Co-Author: Raj Addepalli

SUMMARY:

There have been limited case reports of patients who necessitated simultaneous treatment with dual long-acting injectable antipsychotics. In this poster, we provide a report of a patient who needed such. RB is a 37-year-old African American male, single, unemployed, domiciled in supportive housing, with past psychiatric history of Schizophrenia and Cannabis Use Disorder, multiple prior psychiatric hospitalizations, and a forensic history, who was followed by an Assertive Community Treatment team and receiving 3-monthly Paliperidone Palmitate 819 mg (last given 3-4 weeks prior to presentation) and oral Risperidone. RB was initially brought to the hospital after disruptive behavior at his residence. In the emergency room, RB was agitated and was given emergency psychotropic medications. On initial evaluation by the psychiatric team, RB complained that his ex-girlfriend had been haunting him, coming to his residence, and sleeping with other men in the community. In the interim he had managed to return back to his residence and was physically threatening with a weapon to a female peer. He was brought

back to the emergency room and was admitted to the psychiatric inpatient unit due to decompensation of primary psychiatric illness. Risperidone was discontinued and Fluphenazine 5 mg twice daily was started. During admission, RB continued to exhibit signs of paranoia and delusional content mostly surrounding his ex-girlfriend. He was also preoccupied with discharge and his legal issues in the community. Collateral from RB's residence reported that he experienced hallucinations involving his ex-girlfriend and believed he heard her engage in immoral activities in the building prompting him to bang on other residents' doors. Following improvement of RB's symptoms, after extensive meeting with his Assertive Community Treatment team it was decided that it would be in RB's best interest to convert oral Fluphenazine to Fluphenazine Decanoate 12.5 mg intramuscular due to his history of poor adherence to oral medications. RB also received his dose of 3-month Paliperidone Palmitate 819 mg a few days prior to discharge. In this poster, we provide an example of a patient who in spite of receiving a long-acting injectable antipsychotic required a second concurrent one to stabilize him. Literature review indicates there is a 20% prevalence of combination antipsychotic therapy with little guidance on how to proceed after failure to respond to monotherapy. There is very little literature on how to proceed in patients who are on very long duration LAI given three monthly and who have breakthrough symptoms. Currently treatment guidelines do not support antipsychotic polypharmacy regardless of the formulation of the regimen or address two or more LAIs for treatment of Schizophrenia. Our case offers an alternative on how to manage patients with breakthrough symptoms and simultaneously address issues of treatment non-adherence in the community.

No. 10

“Compulsive Versus Provocative Swallowers”: Two Cases Demonstrating Different Etiologies for Ingestion of Foreign Bodies

Poster Presenter: Jason I. Koreen, M.D.

Co-Author: Raj Addepalli

SUMMARY:

In this poster, we discuss the cases of two different presentations of foreign body ingestion. The first is a case of a KD, a 26-year-old African American man, with a history of Bipolar Disorder with psychotic features, Impulse Control Disorder, and Cluster B Personality Disorders, history of greater than 20 psychiatric hospitalizations, history of at least 24 documented suicide attempts/self-injurious gestures via ingestion of foreign bodies or bleach, on Paliperidone Palmitate injection monthly, history of surgery due to complications from swallowing, who was evaluated in the setting of a recent ingestion. One day prior to presenting to the hospital, the patient had swallowed a plastic utensil while at a different hospital, and eloped while being escorted for a diagnostic x-ray. Shortly after presentation for this admission, the patient underwent an exploratory laparotomy for foreign body removal. Upon evaluation, KD presented as calm, cooperative, and without acute distress. He reported that he wanted to go home to see his wife and kids, and denied urges to self-harm. Patient reported that he swallowed the utensil because he was frustrated about not being discharged quickly enough. In regards to his history of impulsively swallowing objects, he stated, “I can’t control it when it comes” and described the feelings as sudden and fleeting desires that tended to occur in the setting of desperation, hopelessness, and worthlessness. The patient was cleared by the psychiatric team as he was determined to be at his baseline and not acutely at increased risk to self. The second case is of FD, a 46-year-old Hispanic man, with a history of Schizoaffective Disorder and Polysubstance Use Disorder, multiple psychiatric admissions, and an extensive legal history, who was brought to the hospital for an evaluation after ingesting four AA batteries while in prison. Upon evaluation, FD reported worsening auditory hallucinations and suicidal ideations for the past few days in the setting of an upcoming court date and being told that he would be transferred from the psychiatric area of the prison to another area. The patient did not appear internally preoccupied or to be responding to internal stimuli, displayed no signs of acute psychiatric illness, and was cleared. The gastroenterology team recommended esophagogastroduodenoscopy for retrieval of the

batteries, but the patient refused and elected for spontaneous passage through the stool. Soon after, FD left the unit with the prison officers in stable condition. This case was suggestive of conscious simulation for secondary gain, as the patient's likely intention was to swallow the foreign bodies so he could necessitate medical and/or psychiatric care, delay his court date, avoid more prison time, and avoid being moved to a different area of the prison. In this poster, we discuss 2 possible etiologies for ingestion of foreign objects and the differences in their presentation.

No. 11
Implementing Structural Competency in Addiction Psychiatry Education

Poster Presenter: Donald Egan, M.D., M.P.H.

Co-Author: Stephanie Joseph

SUMMARY:

Background: Recently, medical schools have adopted cultural competency as part of undergraduate medical curricula, especially regarding complex issues such as substance use (1). While medical schools have been successful at incorporating cultural competency into curricula, there is room to expand training through education on structural competency, which examines upstream effects of healthcare and illness (2,3). This report explores the integration of structural competency in addiction psychiatry undergraduate medical education and the need for further opportunities to advance training for students. **Methods:** A 90-minute educational session was developed as part of UT Southwestern's "Frontiers in Medicine" course. The session comprised of a presentation on structural competency and a clinical vignette. Students were invited to complete a survey on the presentation and results were collected in Redcap. For each question, the students had the opportunity to answer: strongly agree, agree, neutral, disagree, or strongly disagree. **Results:** Results were collected from 20 fourth-year medical students at UT Southwestern after the first seminar of the course. 60% of responders strongly agreed that the information presented was new and relevant to their profession, while 35% agreed that the information was new and relevant to their profession. 5% felt neutral that the information was

new and relevant to their profession and no participants disagreed or strongly disagreed that the information was new and relevant to their profession. When asked if after the presentation the respondents felt better prepared to engage with patients and families about addiction treatment options, 40% strongly agreed, 50% agreed, and 10% were neutral. No respondents disagreed or strongly disagreed that they felt better prepared to engage patients and their families about addiction treatment options. 60% and 35% of responders answered that they strongly agreed and agreed, respectively, when asked if the presentation motivated them to pursue further learning on structural competency, while the remaining 5% of respondents were neutral about further learning. When asked if the responders would recommend the seminar to fellow students, 75% strongly agreed, 20% agreed, and 5% were neutral. **Conclusion:** Structural competency training in medical school curricula was shown to increase perceived comfort in addressing complex issues revolving around addiction treatment. Moreover, the findings from this initiative demonstrate that structural competency is appreciated to be new and relevant to future professions by medical students. The results from this study highlight the need for continued structural competency training in psychiatric undergraduate medical education to foster more informed physicians pertaining to substance use treatment.

No. 12
Application of an ECT Database for Quality Improvement and Delivery: Phase One Findings from the ECT-CORA Initiative at UT Southwestern

Poster Presenter: Donald Egan, M.D., M.P.H.

Co-Author: Joshua Hubregsen, M.D.

SUMMARY:

Background: Electroconvulsive therapy (ECT) is a neuromodulation technique that has garnered renewed interest in the treatment of severe mental disorders that are unresponsive to pharmacotherapies (1,2). Controversy still exists about the safety of this well-established and generally accepted clinical practice (3). Clinicians at UT Southwestern set out to address these concerns. In early 2021, an IRB-approved ECT-patient registry

was created for a chart-review study to guide local best practices, quality improvement, and informed consent. This first phase of the ECT Clinical Outcomes Results Assessment (ECT-CORA) project served as a proof of concept for an ECT measurement-based care study in a high-volume academic center and how similar models may be incorporated into other ECT practice settings. **Methods:** All patients discharged from the UT Southwestern clinical acute ECT service between March 22, 2021 – December 31, 2021 were included in the study. Individuals who met criteria for ECT completed the following scales as part of the ECT workup: MoCA with MIS and m-ACE before 1st treatment, PHQ-9, QIDS-SR and CHRT-7 before every treatment, and m-ACE weekly. Additional demographic data came from pre-ECT medical clearance note. Scales were included in the patients' charts in Epic and collected into a main Microsoft excel spreadsheet after being de-identified. **Results:** Data was collected from 75 patients. The total number of treatments was 1,268. Most patients were women (59%) and right-handed (49%) with an average education level of 14.8 years and a slightly higher median of 16 years. The racial makeup of the group consistent of a majority white population (86%) followed by Hispanic/Latino (7%) and Black and Asian (both 3%). Initial diagnoses for the patients were mostly major depressive disorder (MDD) without psychosis (66%) and Bipolar depression (18%). However, other diagnoses were treated such as MDD with psychosis (8%) and catatonia (5%), as well as schizophrenia and schizoaffective disorder (both 1%). Additional findings demonstrate 49% of patients had previously received ECT, 24% previously received a ketamine-based treatment, and 27% previously received TMS. **Discussion:** The data in this presentation serves as an example of a registry that has successfully been created for all patients receiving acute ECT in a large academic center and encouragement for others to adopt similar methods to track data from ECT. The reporting architecture and data analysis mechanisms have been created to capture high-quality, ongoing, valid chart-review data and offers clinicians the opportunity to access pertinent information to address patient concerns. Additionally, the data allows the practitioner to better educate patients on treatment expectations, thereby maximizing patient compliance and satisfaction. This information will be

used to help clinical best-practices, guide quality improvement, and may enhance outcomes through informed consent.

No. 13

A Peculiar Case of the Effectivity of Scheduled ECT Therapy and Behavioral Plan Adjustments in Multiple TBI and Methamphetamine Use

Poster Presenter: Luis A. Velez, M.D.

Co-Authors: Mario Fahed, M.D., Seena Ounsinegad, M.D.

SUMMARY:

Background: Traumatic Brain Injury (TBI) is considered one of the leading causes of mortality worldwide, with an estimated 3.5 million cases annually in the United States (El Hayek, et.al). Due to diffuse axonal injury, response inhibition and executive dysfunction are common sequelae of TBI (Jolly, et al). However, academic literature understudies the combination of TBI with neurochemical disruptors such as Methamphetamine (El Hayek, et al.). Methamphetamine research demonstrates an abnormality in executive function and general cognitive deficits such as social cognition and impulsivity (Srienc, et al). In this case, we describe a patient with comorbidity of amphetamine use and TBI, leading to a complicated hospital course due to the complexity of pathophysiology at a biochemical and cellular level. Case History: The patient is a 30-year-old who presented with significant psychiatric comorbidity from neurobehavioral sequelae of multiple traumatic brain injuries (TBIs), complicated by an extensive history of prior methamphetamine use. His first TBI was in 2015 when heavy machinery dropped on his unprotected head, and his second TBI was in 2018 from a motor vehicle accident in which he crashed into a tree. He developed symptoms of catatonia, abulia, selective mutism, and inability to eat or engage in treatment. He has undergone multiple psychiatric hospitalizations with trials of antipsychotics, antidepressants, benzodiazepines, and cognition enhancers. After several instances of nonadherence in the outpatient setting, he was trialed on electroconvulsive therapy (ECT) in August 2021 and has received over 100 treatments in the past year. His catatonia has

improved significantly with multiple weekly ECT treatments, and several maintenance medications, and the abulia is moderately responsive to a structured behavioral plan in combination with ECT in this fifth and current admission. However, past attempts to wean ECT frequency have resulted in clinical deterioration which included worsening of catatonia and abulia, sometimes separately, necessitating the resumption of a higher frequency of treatments, which is an obstacle to his prognosis. **Conclusion:** This patient has demonstrated an extensive trial of ECT treatments after several traumatic TBI episodes. ECT treatment's effectiveness in neutralizing abulia symptoms was documented extensively throughout the hospital course. Unfortunately, weaning the frequency of ECT leads the patient to exacerbate his abulia symptoms. Attempts at pharmacotherapy trials were ineffective until augmentation with scheduled ECT and behavioral plans were implemented. The patient continues to improve as the active treatment plan stated above continues. **Disclosure:** The patient's family was notified of the possibility of publishing the information presented above. The family agreed verbally and signed a digital consent form allowing sensitive information regarding the patient to be released to be used for academic purposes.

No. 14

Investigation Into Differences of Clinical Presentation of New Onset Psychotic Symptoms in Patients Infected With Covid-19

Poster Presenter: Jeevitha Anthony

SUMMARY:

Background: There is growing evidence that COVID-19 infection may induce new onset psychosis in patients with no prior psychiatric history. However, there is a lack of research on the differences of initial presentation of new onset psychotic symptoms in patients infected with COVID-19 as compared to non-infected individuals with no prior psychiatric history. **Objective:** We aim to highlight the differences in clinical presentation and treatment management of new onset psychosis between patients infected with COVID-19 as compared to non-infected individuals with no prior psychiatric history. **Method:** A search was done on PubMed,

BJPsych, BMC Psychiatry, BMJ Case Reports, JAMA, and Psychiatric Times. Data was analyzed via systemic review of case reports including 57 unique cases on new onset psychosis in COVID-19 patients and compared to a study on first episode psychosis in 462 patients. Effects of age of onset of psychotic symptoms from a study on 104 patients was used to analyze the differences in presentation. Additionally, 8 unique case reports were used to draw conclusions. **Results:** There are notable differences in the presentation of new onset psychotic symptoms between healthy, non-infected individuals as compared to individuals infected with COVID-19. In healthy individuals, symptoms of new onset psychosis vary depending on the age of onset; early onset (<18 years) and late onset (>18 years). Compared to, new onset psychosis in infected individuals is mostly dependent on the severity of infection. Healthy, patients with early onset psychosis, exhibit both positive and negative symptoms and greater levels of cognitive impairment. Early onset infected patients presented with paranoia and acute mania in addition to auditory hallucinations. Healthy, patients with late onset psychosis present with less severe negative symptoms and less severe deficits in learning. Acute symptoms in both groups were managed with antipsychotics. In healthy individuals, symptoms tended to persist after stabilization, necessitating long term pharmacological intervention. In infected patients, the need for long term treatment was dependent on how long the symptoms persisted. **Conclusion:** Both healthy and infected individuals presented with psychotic symptoms such as delusions and hallucinations. Age plays a significant role in symptom presentation. Healthy younger patients tend to present with both positive and negative symptoms, whereas older patients, present with less severe negative symptoms. Infected patients less than 18 years of age, presented with mania in addition to delusions and hallucinations, whereas almost all patients older than 18 presented with delusions and delirium. Both groups were treated with antipsychotics, however, psychotic symptoms do not resolve once COVID-19 infection resolves. The psychotic symptoms tend to persist post COVID-19 infection highlighting the need for long term psychiatric follow up in these patients.

No. 15

A Riddle Wrapped in a Mystery Inside an Enigma: Sleuthing a Trail of Manic Delirium With Catatonic Features

Poster Presenter: Nathan Carroll, D.O.

SUMMARY:

Abstract: Mrs. H is a woman in her mid 40's with eight children, a history of migraines, and no known psychiatric history. She presented, via family, to the ED with generalized weakness, headaches, confusion, two days of sleeplessness, nondescript auditory hallucinations, and dehydration. In the ED, she started displaying increasingly manic behaviors becoming distraught, shouting, "I'm giving birth!" and "The world is going to end!" Vitals revealed elevated blood pressure (161/73), lab work was unremarkable, & MRI displayed mild migrainous changes. On exam, she was labile, disorganized, pressured, & intrusive. Echolalia, mood lability, and psychomotor agitation was observed. Her family was a calming presence for the patient and reported this as a stark departure from baseline, noting that she is high-functioning, has no family history of mental illness and no recent stressors. Collaboration between psychiatry, neurology, and the family helped build a broad differential, including manic delirium, bipolar mania, autoimmune encephalitis, & acute confusional migraine. Autoimmune, neurological, & medical disorders were ultimately ruled out. The patient's echolalia, a potential feature of catatonia, was consistently present, and after scoring high on the Bush-Francis Catatonia Rating Scale and responding well to high-dose diazepam, our suspicions were confirmed. This, along with her symptoms of delirium, helped us to arrive at a diagnosis of manic delirium. Targeting the catatonia, we started the patient on diazepam 10mg TID. Over six days of treatment with diazepam, the patient's mood lability and agitation decreased and she was discharged with outpatient follow up. **Conclusion:** Catatonia is estimated to occur in more than 10% of patients with acute psychiatric illness but can also have systemic & neurological etiologies(1). Delirious mania can feature disorientation, AMS, excitement, grandiosity, lability, delusions, insomnia, and catatonia. In fact, some consider delirious mania to be a subtype of excited catatonia(2). A literature review shed light on the etiology of the symptoms

seen with catatonia. Brain and brainstem dysfunction incorporating GABA, NMDA, and Dopamine receptors is thought to be related to catatonia, and care must be taken to distinguish it from akathisia(3). The excited catatonia subtype features severe psychomotor agitation and autonomic dysfunction and can be thought of as on the same spectrum as NMS(3). High-dose diazepam is thought to help catatonia via positive allosteric modulation of GABA-A, helping to fix orbitofrontal GABA-ergic function(3). Initial treatment with benzodiazepines, minimizes the use of antipsychotics, to reduce risk of worsening catatonia/malignant catatonia(4). A vital component of this case was collaboration between neurology, medicine, psychiatry, & family buy-in. This approach improved family buy-in and hesitancy to label this as a psychiatric illness and facilitated a successful intervention.

No. 16

There Are Aliens Amongst Us: A Case Report of a Family With Shared Delusions

Poster Presenter: Alexandra Alvarado

Co-Authors: Omobolanle Alli-Balogun, Ravipal Singh Ghatoura, Akshita Lalendran, M.D., Alexandra Alvarado

SUMMARY:

Folie en famille or Shared psychotic disorder is defined as "transference of delusional ideas from a primary affected individual to one or more secondary individuals in a close relationship(3), usually members of the same family(1). First described as folie communiquée in 1860 by Baillarger and later as folie à deux by Lasegue and Farlet in 1877, it has remained, over the years, an uncommon psychiatric disorder. Here we report the case of a family of three – mother, son, and daughter who suffered from this scarcely reported syndrome. The primary patient, who was diagnosed with schizophrenia, identified as the inducer, and her two adult children, living in social isolation(2) in an inner city residential building. All three family members, upon evaluation, were found to be experiencing persecutory, bizarre delusions. The family was separated upon admission to receive treatment in three different psychiatric inpatient units. Separation, along with pharmacologic treatment and

different therapy modalities, ameliorated the delusion and increased functionality to all members of the family. This case report elucidates clinical features, nosological considerations and the treatment strategies implemented to achieve resolution of the syndrome.

No. 17

Refractory Psychosis: Patient Started on Clozaril and ECT During Hospitalization: a Case Report

Poster Presenter: Rene Compean, M.D.

Co-Authors: Prathila Nair, Ghulam Sajjad Khan, M.D.

SUMMARY:

There is minimal literature on patients being on Clozaril and completing ECT. We report the case on a 55-year-old female who was admitted involuntary due to worsening of mania and psychosis. Patient once admitted continued to be manic, psychotic, and required IM medications on several occasions, patient also had multiple medication adjustments, however they had minimal affect into patient's mania and psychosis. Patient was then started on Clozaril for the first time in her life. Patient however continued to be psychotic, and underwent 7 ECT treatments with a tremendous response while also being on Clozaril. Patient had Clozaril up titrated to 400MG PO QHS, however after patient had significant improvement with ECT, she was eventually discharged on Clozaril 200 MG PO QHS.

No. 18

Association Between Cognitive Changes and Psychotic-Like Experiences

Poster Presenter: Can Misel Kilciksiz, M.D.

Co-Authors: Deanna Barch, Ph.D., Nicole Karcher, Ph.D., M.A.

SUMMARY:

Background: Psychosis spectrum symptoms include impairments in multiple neuropsychiatric domains including functioning, behavior, thought, speech, affect, and cognition. Growing evidence shows that cognitive deficits are present in subclinical phases of psychosis at early ages even before such cognitive challenges become more remarkable in first episode psychosis and in more chronic phases of psychosis¹. Psychotic-like experiences (PLE) refers to subclinical

symptoms including delusion-like thoughts and perceptual abnormalities in the general population. PLE is a common presentation among general child and adolescent population. Most previous studies in the literature examining associations with PLE and cognition have found fluid cognition impairments although only two of these studies are longitudinal. Investigation of longitudinal changes in cognition with PLE may aid in helping clinicians to detect vulnerable populations in the general population prior to the development of diagnosable symptoms.

Aim: We aim to examine the longitudinal associations between changes in cognitive performance and PLE over middle childhood and early adolescence. **Methods:** We use Adolescent Brain Cognitive Development Study (ABCD) data³, a multi-site study measuring cognition, PLEs, other biomarkers (i.e., imaging) in children starting with the baseline data in 9-10-year-olds with follow-up visits occur yearly for mental health and every two years for cognitive and imaging assessments. Data was collected from 21 research sites across the US between 2016-2021 and includes 4 waves of data: baseline (N=11 878), 1-year follow-up (N=11 235), and 2-year follow-up (N=6 571), and 3-year follow-up (N=6251). We use R statistical analysis software release 4.1.2 for all analyses. **Results:** Preliminary findings with the baseline ABCD sample in our lab showed those impairments in several cognitive domains (IQ, working memory, processing speed) are associated with PLEs². We also showed that a sample with persistent PLE, particularly those that are distressing, show cognitive deficits compared to transient and non-distressing groups. **Conclusions:** Literature and our preliminary findings show that cognitive deficits are associated with psychosis even at subclinical phases such as PLE. We propose investigating the associations between changes in cognition and PLE with cognitive screening tools (i.e. computerized cognitive batteries) and self-rated PLE questionnaires may complement existing approaches (i.e. imaging, genetics, EEG, family history) in early detection of psychosis and other psychopathologies. Furthermore, this may help to understand which possible cognitive domains can be targeted for early intervention in psychosis and other psychopathologies. In the future, PLE may also serve as a clinical focus for screening and treatment, as evidenced by these experiences causing distress and

impairment in the absence of formally diagnosed clinical psychopathologies.

No. 19

“These Are Not Meth Mites, This Is Different”: A Case Report of Delusional Parasitosis With History and Concurrent Substance Abuse

Poster Presenter: Jerica Gerena, D.O.

Lead Author: Dustin Wong

Co-Author: Manuel Garcia Russo

SUMMARY:

Delusional parasitosis (DP), delusional infestation, or Ekbom syndrome is characterized by the fixed, false belief of a cutaneous infection [1]. Patients may vary in the particular organisms they are infected with which may include worms, parasites, flies, and spiders. DP is further divided into primary delusional and secondary delusional parasitosis. The former occurs when the illness cannot be explained by any other organic cause, while the latter occurs when DP is associated with a primary diagnosis such as schizophrenia, depression, stroke, diabetes, or substance use. There are extensive reports of primary delusional parasitosis but a lack of documentation in patients with delusional parasitosis with prior and/or current substance use disorder, particularly with DP that occurs independently from substance-use habits. In addition, current recommendations suggest the use of olanzapine, risperidone, and pimozide, but few documented cases with successful treatment using haloperidol. This case report aims to portray a 51 year old male with polysubstance abuse and history of cutaneous sensations of formication (as a result of methamphetamine abuse) who presented to the hospital with new onset delusional parasitosis. While admitted to a psychiatric unit he was treated with Haloperidol and Seroquel with significant reduction in symptoms though without complete resolution at the time of discharge.

No. 20

WITHDRAWN

No. 21

Exploring the Role of Naltrexone in a Case of Severe Borderline Personality Disorder

Poster Presenter: Nakisa Kiai

Co-Author: Mohammed Molla, M.D., M.B.B.S.

SUMMARY:

Background: Borderline Personality Disorder is a psychiatric disorder which affects 1-2% of adult population [3]. Thus far, the guidelines have primarily recommended psychotherapy as a first line treatment over pharmacotherapy. However, there is a need for exploration of alternative drug treatments, especially in severe cases. Case Description: This is a case of an 18-year-old Caucasian male, with numerous, recurrent psychiatric hospitalizations, multiple involuntary holds and repeated, severe self-injurious behaviors. This individual's psychiatric history dates back to childhood, with diagnoses of disruptive mood dysregulation disorder, ADHD. In the two weeks preceding his first inpatient psychiatric hospitalization in an adult unit; the patient had over 13 documented visits to various emergency departments due to complaints of foreign body ingestions and self-mutilating wounds requiring medical attention. As a result of this increase in recurrent self-injurious behaviors, patient was trialed on Naltrexone 50mg PO daily and subsequently stabilized. The patient continued to present with emergency department visits, however with significantly decreased frequency. Ultimately, he self-discontinued this medication in the outpatient setting. Discussion: The neurobiology of borderline personality remains largely unclear. Neuropeptides such as opioids have been proposed to have a role in regulating interpersonal behaviors and coping with interpersonal stress [1]. The patient would endorse feelings of "feel good" resulting from self harm, providing further discussion into the pathogenic role of the endogenous opioid system and dopaminergic reward system. While there are theorized mechanisms of repeated self harm related to an unconscious attempt to stimulate the endogenous opioid system and the dopaminergic reward system, there is still limited evidence to support the use of opioid antagonists in treatment of this disorder. In a limited number of studies, there has been some interest in implementing Naltrexone. Treatment with

opioid antagonists may be a helpful treatment in borderline personality disorder and its associated symptoms and comorbidities, however with limited results in this particular case.

No. 22

Investigation of Anxiety, Depression, and Adjustment Disorder in Mothers of Children With a Seizure Disorder in Georgian Population

Poster Presenter: Mariam Alavidze

Co-Author: Eka Chkonia

SUMMARY:

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No. 23

Race, Culture, and Diversity in Psychotherapy Training: A Resource for Supervision

Poster Presenter: E. Grace Cho, M.D.

Co-Authors: William Alexander Butler, M.D., Weei Loallen, M.D., Seamus Michael Bhatt-Mackin, M.D.

SUMMARY:

Background: Initiatives for addressing topics on race, culture, and diversity (RC&D) are standard across major psychiatry training programs in the United States. A curriculum that integrates cultural understanding within the biopsychosocial approach is a common Accreditation Council for Graduate Medical Education (ACGME) requirement, and leaders within psychiatry programs have responded. However, there does not currently exist a robust resource specific to the practice of psychotherapy supervision. Response: The Psychotherapy Caucus of the American Psychiatric Association created the Training Advancement Initiative (TAI), which formed the RC&D committee in response to this and other persistent systemic challenges. This group began as a journal club to enhance knowledge of relevant topics. These discussions led to the development of a workgroup whose first project is an annotated bibliography of the existing literature on psychotherapy supervision as it relates to concepts of RC&D within residency education. This poster highlights those findings and aims to share them among other national program leaders to solicit feedback and further refinement. Outcomes: Educational takeaways include

summarizing key findings from the literature to increase awareness, foundational knowledge, theoretical frameworks, and practical skills to support deeper, broader, more skillful, and more consistently available cultural humility within psychotherapy supervision. Next Steps: This project aims to develop a virtual curriculum that psychotherapy training programs can utilize to build cultural understanding and confidence in navigating interpersonal differences.

No. 24

Implementing Effective Communication Skills Training for Psychiatrists: A Primer and Methodology

Poster Presenter: Abidemi Onabadejo, M.D.

Co-Authors: Ankur Sah Swarnakar, M.D., Madeline Elaine Lodeiro, M.D.

SUMMARY:

Effective communication is an indispensable tool for any physician to master, especially for a psychiatrist. Several studies have shown the importance of effective physician communication on patient outcomes and patients' experience of their care. In the age of telemedicine, effective communication skills are even more important in maintaining our relationships with patients who are seen primarily virtually. This also factors into the other numerous forms of virtual communication that physicians are tasked with at this time. Unfortunately, many physicians do not have the opportunity to receive formal didactics during their training on areas of communication that they will need to employ on a daily basis. We aimed to address this need in our residency program by designing and implementing a 4-lecture seminar on some of the key areas of effective communication. The 4 lectures are each designed to be given in 60-minute sessions as a complement to other core didactic material. This course could also be utilized as a grand rounds style presentation for a multidisciplinary health care group. Each lecture module contains the didactic information on that topic, a teaching guide for that lecture including questions and guided role-playing activities, and the list of additional resources for further independent study. Residents in our program now receive specific teaching in areas of active

listening, managing barriers to effective communication, breaking bad news, and giving and receiving meaningful feedback through use of this new curriculum. By using these new teaching modules for our PGY1 residents, we are able to lay the foundation for many other nuanced communication techniques to come as they progress in training. In this poster presentation, we will address several areas of communication that are vital for psychiatrists of all levels of practice. We will describe their importance to physician competence and to patient care and satisfaction, and discuss the specific role they play in telemedicine management of patients. Finally, we will share methods from our curriculum model for attendees to utilize at their home institutions for educating physicians and physicians in training in effective communication skills. Learning Objective 1: Identify key areas of communication skills that are essential for all physicians, especially psychiatrists. Learning Objective 2: Understand the importance of formal didactics in communication skills for physicians and how this can impact patient care. Learning Objective 3: Utilize information presented in our new curriculum module to complement your existing educational models for physicians of all levels in your institution. Learning Objective 4: Examine the specific importance of effective communication skills in telemedicine utilization.

No. 25

Catamenial Mood Episode Exacerbation in Bipolar I Disorder

Poster Presenter: Jordan A. Shull, M.D.

Co-Authors: Pooja Chaudhary, M.D., M.P.H., Teresa Pigott, M.D.

SUMMARY:

Background: Catamenial psychosis and mania are mostly reported as case studies in the medical literature.^{1,2} Patients present with symptoms such as aggression, delusions, hallucinations, or manic features with circa-menstrual periodicity.^{3,4} Even though the association between onset of menstruation and exacerbation of psychiatric symptoms has been well-established in the literature, the underlying mechanism is unclear.⁵ One hypothesis suggests progesterone's GABAergic

neurosteroid derivatives play a role.⁶ A lack of familiarity with the clinical presentation and biological underpinnings may lead to suboptimal diagnosis and treatment of these conditions. **Case:** A 42-year-old female with a past psychiatric history of bipolar I disorder who underwent a cesarean section 6 weeks prior to presentation was admitted to a psychiatric hospital after making homicidal threats. She was manic with psychotic features given her rapid speech, flight of ideas, grandiose and paranoid delusions, mood lability, distractibility, and impulsivity. Laboratory tests were clinically unremarkable. Olanzapine 10mg/day was started and increased to 20mg/day by day 2. Melatonin 10mg and temazepam 15mg nightly were started to regulate her circadian rhythm. Temazepam was further increased to 30mg on day 6. Due to lack of effect, olanzapine was changed to risperidone 3mg/day on day 9 which was increased to 4mg/day. As the patient's symptoms had nearly remitted, risperidone was changed to paliperidone 9mg/day before the initiation series of monthly intramuscular paliperidone was given on days 19 and 22. Temazepam was decreased before being discontinued on day 21. On day 21 the patient rapidly decompensated, returning to her previous manic and psychotic state, a stark contrast to the day before. She reported she had started her menses the day prior and experienced worsening sleep. She noted a history of manic symptoms around her menses since she was 13 years old. Temazepam 15mg nightly was restarted to reestablish her circadian rhythm. Her mania and psychosis resolved the next day, just as abruptly as she had decompensated. Temazepam was decreased to 7.5mg nightly on day 25. She remained stable with complete remission of her symptoms until she was discharged on day 31. **Discussion:** She reported a history of manic symptoms that coincided with her menses, a phenomenon witnessed during her hospitalization. After almost complete remission of symptoms, she rapidly decompensated upon the start of her menses. Her mood episodes preceded by states of rapid reduction of estradiol and progesterone, such as the luteal phase and postpartum period, reflect a sensitivity to fluctuations of these hormones and their respective GABAergic neurosteroid metabolites. This was mitigated with temazepam, which shares a similar

mechanism as allopregnalone as a positive allosteric modulator at the GABA_A receptor.⁷ This case highlights the interrelation between catamenial hormonal fluctuations and mood pathology.

No. 26

A Case of Metabolic Syndrome Induced by Olanzapine and Transitioned to Paliperidone During the Covid-19 Pandemic

Poster Presenter: Amanda Lynn Campbell, M.D.

Co-Authors: Chris Gauthier, D.O., Maaz Siddiqui, M.D.

SUMMARY:

Patient is a 23-year-old female with psychiatric history of bipolar disorder and autism spectrum disorder, and past medical history of obesity who was hospitalized due to aggressive behavior towards her family. The patient was initially stabilized on olanzapine, however hospitalization was prolonged for six months due to placement difficulties. The patient's hospitalization was complicated by COVID-19 infection in month 2, prompting temporary discharge and readmit to COVID-19 positive behavioral health unit. During this transition, bloodwork was obtained demonstrating elevated hemoglobin A1c, low HDL, and elevated triglycerides, however these results were missed during transition of care. Bloodwork was repeated 4 months later during the month of discharge, and she was found to have increasingly elevated hemoglobin A1c, triglycerides, and fasting glucose. The patient was initiated on metformin and was transitioned from olanzapine to paliperidone due to metabolic syndrome caused by olanzapine. She was then discharged two weeks later. Per chart review, her latest outpatient hemoglobin A1c and glucose are now within normal limits, and triglycerides are decreased. In this case, a prolonged hospitalization with complication of COVID-19 caused multiple transfers and transition of care, which led to overlooked test results, delayed treatment, and allowed for further progression of metabolic syndrome. This case additionally demonstrates the importance of monitoring and management of metabolic side effects from second generation antipsychotics, even on the inpatient unit, and allows for opportunity to discuss risk for metabolic syndrome in different antipsychotics, as well as

provides further evidence of paliperidone's utility in patients with metabolic syndrome.

No. 27

New Onset of Bipolar Disorder Post Covid-19 Infection

Poster Presenter: Miles D. Holmes

Co-Authors: Robert Sickler, Daniel Liaou, M.D.

SUMMARY:

Background: Bidirectional associations between COVID-19 and psychiatric disorder have been observed, with COVID-19 patients having approximately twice the chance of developing a first-time mental illness. To date, however, only a limited number of cases of new-onset manic symptoms in patients with COVID-19 have been reported, and the precise nature of the association between the two diseases remains unclear. Herein, we present such a case of acute mania in a patient with no previous psychiatric history consistent with new-onset bipolar I disorder in the setting of COVID-19 infection. **Case Report:** A previously healthy 39-year-old male with no past psychiatric history presented to an inpatient psychiatric facility after expressing bizarre behaviors, grandiose thoughts that he is God, and accelerating his car to 100 miles an hour before crashing it. He was hyper-religious on presentation. After thorough history taking, patient was noted to have COVID-19 infection 2 weeks prior to presentation. He was reported to be completely normal before COVID-19 infection. He denied receiving any steroid treatment or chloroquine at the hospital while receiving treatment for his COVID-19. Since a week before the presentation to inpatient psychiatric hospital, he has been hyper religious, not sleeping for almost a week. He did not have any past medical history and denied any substance use problems. CMP, CBC, Acetaminophen levels, Salicylate levels, alcohol levels were all negative, UA had trace ketones, UDS positive for benzodiazepines secondary to getting emergency meds, CT Scan chest, spine, head showed no abnormalities. He was started on Risperidone 2 mg PO at bedtime which was effective for his symptoms. He was then discharged from the inpatient hospital, but he stopped taking meds after discharge and was readmitted within 4 days with increased psychotic symptoms: self-talking, walking

naked in public. He destroyed all property in and flooded his apartment, thought people were devils, had not been sleeping since last discharge. He was started on Risperidone 1 mg PO in the morning and at bedtime. His mentation cleared in the next 3 days and was transitioned to Invega sustenna and discharged with next dose of 117 mg the following month. Longitudinally, he was diagnosed with Bipolar disorder and has been doing well with no further inpatient psychiatric admissions. **Discussion:** COVID-19 presents as many neuropsychiatric symptoms including delirium, psychosis, anxiety, depression, catatonia. Iqbal et al published a case series of 15 cases presenting as hypomanic or manic symptoms. Possible etiologies of COVID-19's neuropsychiatric consequences include the neurotrophic effects of the virus, the host's immune response, psychosocial stress, and treatment side effects. **Conclusion:** Clinicians need to be aware that a patient can present with an acute manic episode post recent COVID-19 infection. Future research is necessary to understand the pathogenesis better.

No. 28

Identification of Factors Associated With Rapid Readmission to a Psychiatric Inpatient Unit

Poster Presenter: Peter Wrzesinski

Lead Author: Connor Swinford

Co-Authors: Long Nguyen, Natalie Wu, Pamela McPherson

SUMMARY:

Title: Identification of Factors Associated with Rapid Readmission to a Psychiatric Inpatient Unit Authors: Connor Swinford, M.D., Long Nguyen, M.D, Peter Wrzesinski, M.D., Natalie Wu, M.D, Pamela McPherson, MD, FAPA Background: Readmission rate is a standard indicator of the quality of care of a psychiatric hospitalization. Rapid readmission is defined as an admission \leq 30 days after the discharge date., The national rapid readmission rate in 2014 was 8%1. This quality improvement (QI) project will determine the readmission rate at a free standing, 87 bed behavioral health hospital serving , and to determine modifiable factors with a goal of reducing readmissions and improving patient outcomes. . Methods: This retrospective chart review will include 10% of all patients discharged from January 1 - May

31, 2022. 116 of the 1160 charts gathered were randomly collected via a random set generator for review. After applying our inclusion and exclusion criteria, 13 patients met criteria for rapid readmission.. Results: The rapid readmission rate after being discharged from LBH was 11%. Patients were mostly male (54%), African American (62%), had comorbid substance abuse (54%), and were admitted on an Emergency Certificate (77%). 15% of patients had an established intellectual disability diagnosis.Average LOS was 8.38 days. 2 of 13 received LAI's. Patients were discharged to home (77%), to shelter (8%), and rehab (15%).. 38% of patients had disability income, 38% had no income, and 23% had income from social security income. 46% of patients had Medicaid, 46% had Medicare, and 8% had both Medicaid and Medicare. Discharge date rates of the week starting on Sunday were 0%, 8%, 0%, 15%, 15%, 31%, and 15%, respectively. 0 patients were given family therapy. Social determinants of health (SDH)data was not collected at admission.s. Discussion: The purpose of this QI project was to identify modifiable readmission factors to inform a protocol to reduce rapid readmissions. Two limitations were small sample size and limited ability to track patients once discharged. Increased rates of rapid readmission were observed on Friday discharges. incomplete social determinants of health also contributed to increased rates of readmission. Conclusion: When looking at rates of rapid readmissions, Friday discharges are the most prominent modifiable factor identified. Incomplete SDH documentation likely contributed to rapid readmissions, and bears further study.

No. 29

College Pipeline Programs During Covid-19: Filling a Need for Social Support When Grit Alone Was Not Enough

Poster Presenter: Steven Munoz, B.A.

Co-Authors: Humberto Baquerizo, Ed.D., Sebastian Acevedo, M.P.H., Muhammad Zeshan, M.D.

SUMMARY:

Introduction: During the 2020-2021 academic year, nearly all colleges and universities held classes virtually. Many students found it difficult to create or maintain social relationships and consistent

academic schedules. Pipeline programs served as a haven for many students, particularly those from marginalized backgrounds. Pipeline programs offered many resources; created a safe, open space for discussion on how COVID-19 impacted one's life, academic challenges, and life experience, enabling students to surmount the hurdles imposed by the pandemic. These programs also fostered students' perseverance and passion for a long-term goal (grit) through an array of academic workshops, teamwork, and mentorship opportunities. Therefore, students devoting time to more significant cognitive endeavors, guided via pipeline programs, cultivated a culture of social support necessary to overcome the pandemic's toll on mental wellness. **Methods:** A cross sectional survey was created to investigate how academic enrichment programs could bolster participant grit and resilience despite virtual learning during COVID-19. The survey included items on student coping mechanisms, major stressors, and how the pandemic impacted their life. The Duckworth Grit-S questionnaire was included and consisted of two subsets: consistencies of Interest and Perseverance of Effort. The research team hypothesized that students with the highest levels of grit experienced less stressors and would require less social support. Participants included 94 full-time college students from a pre-medical pipeline program. **Results:** The mean grit score amongst participants was 3.83 (SD \pm 0.47). A significant number of respondents indicated that emotional or mental difficulties negatively impacted their academic performance during the pandemic (71.3%, $p < .001$). Over 80% of respondents reported feeling heightened stress or anxiety, 61.7% feelings of loneliness or isolation and 58.5% experienced financial hardship. Respondents were most likely to indicate phone calls (61.7%), digital social gatherings (57.4%), and virtual face time (55.3%), as activities to promote well-being. Higher grit scores were not significantly correlated with a lower reported number of stressors ($R^2 = .015$). **Discussion:** High levels of grit have been linked to resiliency and improved outcomes prior to COVID-19. However, even high grit respondents did not report lower numbers of stressors and experienced the same impacts on academic performance due to emotional and mental challenges. Our findings suggest that students associated well-being during the COVID-19

pandemic with social interaction. Students self-reported using phone calls, digital social gatherings, and virtual face time as being necessary to promote their well-being. The virtual pipeline programs with an emphasis on student connectivity have the potential to increase the level of social support and therefore well-being that students experienced.

No. 30

Cannabis Use Disorder, Suicide Attempt/Self-Harm Among Adolescent Inpatient Hospitalizations: A National Inpatient Study Across the United States

Poster Presenter: Adeolu Olufunso Oladunjoye, M.D., M.P.H.

Co-Authors: Elijah Li, Kammarauche Aneni, M.B.B.S., M.H.S., Edore Onigu-Otite, M.D.

SUMMARY:

Introduction: Suicide is the second leading cause of death in adolescents in the US. Substance use has been shown to increase the risk of suicide, with most studies predominantly conducted in the adult population. Cannabis is the most commonly used illegal substance in the US and worldwide. However, there is a scarcity of research looking specifically at cannabis and its association with suicide in adolescents. This study investigates this relationship to enhance patient education, particularly for this vulnerable population. **Methods:** We used the Nationwide Inpatient Sample (NIS) from January 1, 2016 through December 31, 2019, to identify adolescent hospitalizations with a diagnosis of cannabis use disorder (CUD) and suicide attempt or self-harm. We compared demographic characteristics of hospitalizations with CUD with and without suicide attempts or self-harm. Univariate and multivariate analyses were conducted to determine the association between CUD and suicide attempts or self-harm among adolescent inpatient hospitalizations. **Results:** A total of 807,105 adolescent hospitalizations were analyzed from 2016 to 2019. Adolescent hospitalizations with CUD had a prevalence of about 6.9%. Adolescents in the CUD group were more likely to be older (17 years vs. 15 years), more likely to be females (52% vs. 48%), more likely to be diagnosed with depression (44% vs. 17%), anxiety (32% vs. 13%), an eating disorder (1.9% vs. 1.2%), and were more likely to endorse suicidal

ideation (29% vs. 9%) and suicide attempts (2.8% vs. 0.9%) [$p < 0.001$]. After adjusting for other variables such as sex, race, hospital bed size, insurance type, hospital region, All Patients Refined Diagnosis Related Groups severity of illness (APR DRG), discharge disposition, and disease comorbidities, including depression, anxiety, and eating disorders using multivariate analysis, there remained an association between CUD and suicide attempt/self-harm in the adolescent hospitalizations (OR = 1.73, 95% CI 1.61-1.86), $p = 0.002$) **Conclusions:** Despite concerns about adverse effects on brain development, cannabis use has become more prevalent in recent years among adolescents, partly due to low-risk perception. However, in a nationally representative sample of hospitalized adolescents, this study found that adolescents with CUD are more likely to engage in self-harming behaviors and attempt suicide. Suicide remains a significant public health concern in adolescents and identifying high-risk adolescents, including during hospitalizations, should be a key aspect of prevention.

No. 31

Exacerbation of Autism Spectrum Symptoms Following Covid 19 Infection: A Case Report

Poster Presenter: Gabriella Meyerson, D.O.

Co-Authors: Anuja Mehta, M.D., Shirin Hasan, M.D.

SUMMARY:

L is a 6-year old Hispanic girl with a past psychiatric history of autism spectrum disorder (ASD) and intellectual disability who presented to the outpatient clinic for an initial evaluation due to aggressive behavior (particularly when her routine was interrupted), hyperactivity, decreased sleep, increased repetitive behaviors, and increased pickiness with food. These symptoms began following a mild case of COVID-19, and persisted for 4 months leading up to the appointment. Her mother stated these symptoms are the most severe the patient has ever displayed. Per mother, patient was previously functioning well and was able to engage in applied behavioral analysis therapy, physical therapy, occupational therapy, and speech therapy. Patient's symptoms did not respond to brief trials of clonidine, melatonin, or guanfacine; her mother chose to discontinue each medication after a

couple of days due to reported side effects. Could ASD individuals be predisposed to neuropsychiatric symptoms from COVID-19? There is growing evidence to support an association with ASD, dysregulated neuroinflammation, and permeability of the blood brain barrier (BBB) (Matta et al.). This pro-inflammatory state is thought to induce formation of reactive glial cells and astrocytes; and ASD individuals were shown to have increased numbers of these cells compared to neurotypical individuals (Matta et al.). These cells influence dendritic branching, spine density, and neuronal connectivity, which in turn could contribute to behavioral and cognitive changes seen in ASD (Matta et al.). In addition, studies have shown that COVID 19 has caused CNS symptoms via multiple pathways, including neuroinflammation and direct invasion (Pantellis et al.). This neuroinflammation is mediated through many of the same pro-inflammatory cytokines and chemokines that have been shown to be elevated in ASD (Troyer et al.). Furthermore, increased permeability of the BBB may predispose ASD individuals to direct viral invasion. At this time, there is no definitive treatment for neuropsychiatric symptoms due to COVID 19 infection. Further study is required to elucidate this relationship. The revelation of immunological mechanisms implicated in ASD present exciting new therapeutic targets to mitigate the symptoms associated with ASD and potentially other psychiatric conditions associated with neuroinflammation.

No. 32

Case Series on Risk Factors for Readmission: Directions for Addressing Need?

Poster Presenter: Manisha Yedla, M.D.

Co-Authors: Brooke Harris, Ph.D., Eugenia Y. Chen, M.D., Manasi Rana, M.D.

SUMMARY:

Introduction: Approximately one third of pediatric patients who are psychiatrically hospitalized get readmitted within one year of discharge. [1] Readmissions have been noted to be disruptive, demoralizing and could create additional distress to patients and families. [2] Research has shown that the presence of suicidal ideation and self-injurious behavior after discharge is strongly associated with

readmission. [3] In addition, interpersonal family problems, emotional dysregulation and poor coping skills, have been identified as factors associated with readmissions. Earlier attention to such risk factors could decrease rates of readmissions and various therapeutic modalities, including family and dialectical behavioral therapy (DBT), have been found to be pivotal in addressing this need and prevention of repeated hospitalizations. Objective: Prior work has shown that predictors of repeated hospitalizations include maladaptive behaviors. Having a nurturing caregiver and supportive environment have been found to be protective factors against repeated hospitalizations. In this case series, we examined factors related to repeated hospitalizations among twenty-four adolescent patients enrolled in our intensive outpatient program during the year 2021. We hypothesize that gaps in the treatment include failure to address family dynamics and maladaptive coping skills. Methods: Data was collected from a large Northern California health system that includes 55,055 patients under age 18. Twenty-four adolescents were re-hospitalized during the year 2021 while enrolled in our intensive outpatient program (IOP). Chart review was completed to assess for factors related to repeated hospitalizations. Results: Parent-child conflict (n=23) was found to be the most frequently identified factor along with maladaptive behaviors such as self-injurious behavior (n=17) and suicidal ideation (n = 15). In addition, factors such as academic struggles (n = 14), history of abuse/trauma (n = 10), history of being bullied (=10), parent-parent conflict (n = 10), substance use (n=9), eating disorders (n=8) were also noted. Conclusion: Our analysis was consistent with the literature and our hypothesis. Within our sample, family-related stressors and maladaptive coping skills such as self-injurious behavior were found to be common factors related to repeated hospitalizations. We also identified substance use, academic struggles and trauma related stressors as important factors. Given these findings and prior studies showcasing the effectiveness of therapeutic modalities in preventing psychiatric re-hospitalizations, we propose implementing programs to address unmet needs. These include family-therapy, DBT skills groups, and trauma-focused therapy among others. Regarding future directions, we would like

to understand if academic struggles were related to disruptions in education in 2020-2021 as a result of the pandemic.

No. 33

Role of Social Media in Psychosis

Poster Presenter: Akshita Lalendran, M.D.

SUMMARY:

Social media has become a necessity for most teens, youths and adults and has become integrated into daily life. The ability to access information at an instant with your fingertips is incomparable. For instance, about 80% of psychiatric patients use the internet to find medical information especially when symptoms were first emerging.1 They utilized the internet to make sense of the changes and receive information anonymously.2 The use is typically higher in people experiencing psychosis to avoid seeking healthcare to receive education due to the stigma surrounding the diseases, which can be detrimental if professional care is delayed.3 This paper will discuss the important role of social media in psychosis and mental health. Here, we present a 20-year-old patient with no pertinent psychiatric history who walked into the emergency department with somatic complaints "I think my jaw is dislocated" affecting the patient's speech; coherent but slowed with mumbling and some impediments. The patient remained with bizarre and preservative thought content, but is goal-oriented in regards to treating his symptoms, also endorsing debilitating somatic delusions "my third eye is open" resulting in continued suicidal ideations with intent "I wanted to drown in the ocean, I drank hand sanitizer and it didn't work. I wanted to take a gun and shoot myself". The patient reported he began researching on YouTube when he initially started to experience symptoms, also reporting that he watched TikTok videos "which taught me to be mystical and get a third eye to solve the problems". He completed trials of Abilify, Olanzapine and Risperidone, ultimately requiring treatment with Clozapine to address his symptoms. This case discusses the role of social media in psychosis as well as mental health in general, and possible interventions to ultimately affect prognosis and outcome.

No. 34**Hidden in Plain Sight: Evaluating Risk and Determining Interventions of Child Trafficking in an Inpatient Psychiatric Setting**

Poster Presenter: Akshita Lalendran, M.D.

SUMMARY:

Human trafficking is a significant public health problem and human rights violation, with children making up one-third of all identified trafficked people; defined as the recruitment and movement of people aged younger than 18 for the purposes of exploitation. The effective evaluation of risk factors and interventions have increased stakes in patients with an unstable psychiatric presentation as well as navigating the multi-layered complexities of biopsychosocial factors. Here we present a 16-year-old transgender female with history of ADHD presenting to the emergency department with erratic behavior stemming from substance abuse. Initial clinical impressions were psychomotor agitation, irritability, loud outbursts, pressured speech and disorganized thought process. Treatment was initiated with Risperidone for florid psychosis as well as Oxcarbazepine and Clonazepam for mood stability. The reduction in symptom severity soon yielded the patient revealing a history and potential future problem of sex trafficking. She highlighted the coercion to perform sexual acts by strangers in exchange for drugs, lack of parental supervision in foster care, and continued to demonstrate poor insight to her recent diagnosis of multiple sexually transmitted illnesses. Collateral information obtained from her family corroborated the patient's behavior resulting in her being preyed on by older men she met online. As the patient's psychiatric presentation returned closer to baseline, the complexity of social and societal influences on safe disposition became of primary concern. This case discusses the appropriate evaluation and approach to disposition planning in patients with complex social factors impeding safe discharge and motivating good out-patient compliance.

No. 35**Innovations in Treating Pediatric Patients While Awaiting Inpatient Psychiatric Admission in the ER: A Case Report and Review of the Literature**

Poster Presenter: Alexa Kaylin Couture Bell, M.D.

Co-Authors: Zachary Brooks, D.O., Jessica Nelson, M.D., Enoch Barrios

SUMMARY:

In October 2021, the American Academy of Pediatrics declared the shortage of pediatric inpatient psychiatric beds a national emergency. While this crisis was heightened due to the COVID-19 pandemic, it highlighted an issue that had been ongoing for years - children frequently have to wait days or weeks to be admitted. These delays affect the child's ability to address their mental health needs, further strains the healthcare system, and exacerbates stress on the families. Expanded financial investment in advancing mental healthcare access for our children is necessary, but in the meantime, there are hospitals around the country that have developed innovative solutions with their current resources. Such interventions can serve as a model for other facilities to better meet the needs of these children - especially where resources may be limited. In this poster we discuss the case of a 10-year-old male who presented to the emergency department for aggressive behavior and had to wait several days for an inpatient psychiatric bed to become available. Using this case as an example, we review strategies currently being employed successfully in pediatric emergency departments in the United States. Some of these include specialized emergency department rooms, telehealth crisis intervention, increased de-escalation training among ER staff, and specialized psychiatric emergency departments. By reviewing and highlighting some of the more innovative solutions, the hope is that until adequate funding becomes available, more hospitals may consider incorporating some of these strategies to improve pediatric psychiatric emergency care.

No. 36**Assertive Community Treatment (ACT) during 3rd Year Psychiatry Clerkships: Development of a Pilot Program at VCU School of Medicine**

Poster Presenter: Jean D. Wu

Co-Author: Angela Liu

SUMMARY:

Background: Assertive community treatment (ACT) is a model of community based psychiatric care that employs a multi-disciplinary team to deliver mental health services to patients with severe mental illnesses. ACT teams differ greatly from traditional models of care, employing a more holistic approach to care, as team members assist patients with not only disease management but tasks of everyday living. However, few medical schools offer the opportunity to participate in ACT during the core psychiatry clerkship. Therefore, medical student participation in ACT teams appears to be a valuable but underutilized teaching tool to understand the biopsychosocial elements of psychiatric care. The aim of this project is to outline the design, development, implementation, and early findings of a pilot program to integrate an ACT experience in 3rd year psychiatry clerkships. Methods: Assessment began with a literature review of the use of ACT as an educational tool. We then evaluated the public mental health landscape in Virginia and identified local ACT teams. Development involved establishing a partnership with Chesterfield Mental Health Services ACT team, and establishing the structure of the program. We decided on a one-day experience where students would spend the day with the ACT team. Students would also receive an orientation document with learning objectives and pre-reading. Implementation began with presenting the proposal at the School of Medicine's Curriculum Council meeting. The program was then implemented in May 2022. Evaluation includes pre and post mixed qualitative and quantitative surveys. Results are being collected throughout the 2022-2023 academic year during each psychiatry clerkship. Results: Early qualitative findings reveal ACT to be a valuable experience. M3 students wrote: "I think it would be great if this could be expanded and offered to more students as I think it was a really invaluable experience."..."It showed a different side to medicine that is neglected in medical school since so much time is spent in the hospital."..."Psychiatry is a very humanizing field in medicine, compared to others I have encountered....ACT helped me realize that psychiatry really is about building relationships of trust and allowing that to also be of therapeutic

benefit to patients". Discussion: Psychiatry clerkships often do not provide avenues for students to analyze and evaluate the biopsychosocial factors that influence mental health. ACT teams provide a unique learning experience for students to interact with patients in their own homes, providing exposure to community psychiatry and broadening student's perception of the field. Early findings suggest medical student participation in ACT teams is an undervalued learning tool for students. We hope that this research can inspire other medical institutions to integrate an ACT experience into psychiatry clerkships, and ultimately inspire more interest in a highly needed field.

No. 37

Do Clinical Characteristics Have an Impact on Mobile Crisis Team Referrals in CPEP Discharge Cases?

Poster Presenter: Greta Fowlie

Co-Author: Daniel McGovern

SUMMARY:

Background: OMH released guidelines mandating Mobile Crisis referrals for all CPEP discharge cases, with the goal of maintaining patients safely in the community. This study examined demographic and clinical characteristics of patients discharged from Mount Sinai Beth Israel CPEP to determine if these variables influenced whether patients received Mobile Crisis Team (MCT) referrals. The purpose of this review was to help identify whether MCT resources are being allocated to where they are most needed. **Methods:** Data was taken from 588 patient charts discharged from CPEP in a 24-hour period every fourth day between Feb 26 and Jul 29, 2021. The proportion of patients discharged who received MCT referral were compared to those who did not using logistic regressions on the following variables: gender, age, domiciled status, employment status, diagnosis, substance use, suicide history, current suicidality, violence history, current dangerousness, and type of discharge appointment received (walk-in vs. specific time). **Results:** Of 558 patients, 88 received MCT referrals and 470 did not. This analysis included all 88 patients who received MCT referral and 100 patients who did not, selected using random number generator. Bivariate analyses demonstrated

that females were more likely to receive MCT referrals compared to males (60.2% vs. 36.2%, OR= 2.7, $p=0.001$), as were domiciled compared to undomiciled patients (63.6% vs. 19.6%, OR= 7.13, $p<0.001$), and employed patients and students compared to unemployed patients (83.9%, 88.9%, vs. 36.5%, OR's = 9.04, 13.9, $p<0.001$). Those diagnosed with anxiety or other disorders were more likely to receive MCT referrals compared to those with the reference category of adjustment disorder in the 5 category analysis (69.2%, 88.9% vs. 38.6%, OR's = 3.59, 12.7, $p<0.001$). In a 3 category analysis, those with a diagnosis of depression, anxiety, or other were more likely to receive MCT referral compared to the reference category of adjustment disorder (83.3% vs. 38.6%, OR = 7.95, $p<0.001$). Patients who received a follow-up appointment on discharge with a specific date/time were more likely to receive an MCT referral than those who received a walk-in follow-up appointment on discharge (78.0% vs. 32.6%, OR = 7.33, $p<0.001$). Patients presenting with current dangerousness were less likely than patients who did not present with current dangerousness (27.9% vs. 52.4%, OR = 0.35, $p=0.005$). A nonsignificant trend showed patients presenting with current suicidality were more likely to receive MCT referrals compared to those not presenting with current suicidality (55.1% vs. 42.0%, OR = 1.69, $p=0.085$) but those with a history of violence were less likely than those without one (27.3% vs. 49.4%, OR = 0.38, $p=0.051$). **Conclusion:** The results indicate that patients who received MCT referrals were on the whole less marginalized and more advantaged than those who did not, such that those people in most need were less likely to receive referrals.

No. 38

School Closures and the Inequivalent Consequences on Mental Health of Children From Lower Socioeconomic Backgrounds: A Literature Review

Poster Presenter: Arham Ahmad

SUMMARY:

Background: The impact of the unprecedented SARS-CoV-2 virus has been far-reaching into people's lives worldwide. Studies show that in late 2022, an estimate of 50% of students from kindergarten to grade 12 attended fully remote schooling, 19%

followed a combined in-person and remote modalities, and 28% attended sole in-person instruction. However, the weight of this impact has not been consistent across all socioeconomic distributions, especially for school-going children. Although many research findings outline the associations between school closures during the COVID-19 pandemic and the resulting detrimental effects on children's mental health, several studies have demonstrated a correlation between the magnitude of children's mental health impact and racial and socioeconomic demographics. **Aim:** This article aims to comprehensively review and provide a synthesis of existing literature pertaining to COVID-19-related school closures and their impacts on the mental health of underprivileged children and adolescents as compared to their middle-class and higher socioeconomic counterparts. **Methods:** During this study, we carried out a systematic literature review based on the PRISMA model on 3 databases: PubMed, Embase, and PsycINFO. Search terms included: school closures, COVID-19, children, adolescents, mental health, socioeconomic, underprivileged, and income. Papers published from 2020 to 2022 were included in this literature review and collected studies were organized thematically. **Results:** The results will be prepared by the time of the presentation of our poster. **Conclusion:** The findings of this literature review suggest that certain factions of society have been more disposed to remote learning and the mental health detriments related to school closures since the beginning of the COVID-19 pandemic. Our findings relate that African-Americans, Hispanics, and children belonging to families with lower incomes were primarily more likely to experience school closures, along with a disproportionate increase in symptoms of anxiety, stress, and depression as a result of the closures. With education facilities beginning to reopen, we suspect the effects of this will continue to linger and affected children and adolescents might show further regress in their social and learning capabilities. There is a pressing need for evidence-based public health policies to be brought into effect to mitigate these inequalities and provide continued additional educational and mental health resources to vulnerable children and adolescents.

No. 39

Calcium Gone Awry: A Case of Insidious Primary Hyperparathyroidism Induced Psychosis

Poster Presenter: Sarina Sandhu

Co-Authors: Amelia Dubovsky, Christina Lee, Alvaro J. La Rosa, M.D.

SUMMARY:

Background: Hypercalcemia has been known to be a neurotoxic agent, causing neuronal damage via various pathways, which can manifest as psychiatric ailments such as psychosis. Primary hyperparathyroidism is a disorder in which parathyroid glands defectively produce excess PTH hormone, resulting in hypercalcemia. While the literature has well described cases of hyperparathyroidism induced psychosis, there exists a lack of consensus, and an ethical question, as to whether to first treat the hyperparathyroidism medically/surgically or to attempt stabilization of the psychosis via inpatient psychiatric treatment. Here, we present a case of a patient who had a known parathyroid mass, concurrent with insidious onset of psychosis and subsequent functional decline, whom despite close involvement by her outpatient providers was lost to follow-up as her psychosis progressed. We will explore the patient's history, work-up, diagnosis, management, and discuss themes of autonomy, nonmaleficence, beneficence, and justice as it pertains to her medical, surgical, and psychiatric care. **Case History:** Ms. E was a 52-year-old woman with a five-year history of late onset, debilitating psychosis that resulted in multiple psychosocial losses including stable housing, familial support, and her career as a registered nurse. She was initially admitted to the surgical floor for severe frostbite requiring lifesaving above-knee amputations, during which time our inpatient consultation psychiatry service became involved in her care. After surgical stabilization, she was transferred to the psychiatric ICU for treatment of her ongoing psychosis that was unresponsive to antipsychotics. Given that initial laboratory analysis revealed hypercalcemia, our team further investigated her electronic health record and discovered previous imaging that showed a solitary parathyroid mass, believed to be a parathyroid adenoma. Further laboratory analysis revealed concurrent elevated PTH levels. Interdisciplinary

discussions with endocrinology and surgery colleagues raised suspicion for primary hyperparathyroidism due to a parathyroid adenoma which was confirmed with additional nuclear medicine studies. After further discussion with ethics, endocrinology, and surgery colleagues' consent was obtained from legal next of kin and a parathyroidectomy was performed. Neurobehavioral improvement lagged far behind near instantaneous correction of serum calcium and PTH, though the severity of her debilitating psychosis waned over the course of several months as improved saliency allowed her to successfully transition to outpatient care where she continued to show improvement during monthly mental health visits and maintained stable housing. **Conclusion:** Psychiatrists are uniquely positioned within medicine to advocate for patients who are marginalized, especially in cases of organic psychosis where continuous progression of psychosis can lead to increased morbidity and mortality.

No. 40

Unraveling a Case of Altered Mental Status Using a Collaborative Approach: A Case Report of Delirium and Benzodiazepine Withdrawal

Poster Presenter: James A. Fox Jr., D.O.

Co-Authors: Amanda Ries, M.D., Anna Lauchnor, M.D., Karen Richardson, M.D., Christopher Curtiss Andersen, M.D., M.S.

SUMMARY:

A previously active and independent 54-year-old female with a history of Bipolar Disorder, fibromyalgia, and a complex pharmacological history presented to the Naval Medical Center San Diego Emergency Department with acutely altered mental status and a fall onto her right elbow. Her vital signs on arrival were normal, she was nontoxic appearing, and without evidence of respiratory distress. She was afebrile, and her CBC was notable for a mild leukocytosis and thrombocytosis. Her CMP exhibited hyponatremia to the low 130s, no evidence of acidosis or anion gap abnormalities, no hypoglycemia, and no evidence for AKI. Alkaline phosphatase was noted to be mildly elevated, but no evidence of hyperbilirubinemia or elevation of liver enzymes. The patient did have a mildly elevated

proBNP of 589. However, troponin was otherwise undetectable with EKG demonstrating no evidence of ischemic changes or arrhythmias. Serum ethanol, lithium and salicylate level were all undetectable. Her TSH was stable as compared to previous values. CT of her head demonstrated no evidence of acute intracranial hemorrhage, hematoma, bony abnormality, or mass-effect. Plain radiographs of the right elbow, pelvis, and left knee did not show any evidence of displaced fracture. During the patient's physical examination with ED staff she exhibited nonsensical, loosely associated, and tangential speech. During the initial psychiatric evaluation the patient was dis-oriented, unable to provide a history, hypokinetic, hyperverbal with loosely associated, nonsensical strain of thought, occasional verbigerations, and abnormal movements including occasional posturing and stereotypy that reportedly started 2 days before admission. The etiology of her mental status change was uncertain but the working differential included: infection, electrolyte derangement (with concern for hyponatremia secondary to carbamazepine-induced SIADH), polypharmacy, or a primary psychiatric disorder. The patient was admitted to the internal medicine ward with neurology and psychiatry as consulting services. Over the course of the next few days the different medical teams collaborated to try and identify and treat potential causes of her presentation. Eventually the addition of further collaboration from her outpatient prescriber led to a timely diagnosis of benzodiazepine withdrawal and a dramatic resolution of her encephalopathic presentation after the initiation of appropriate treatment. This case highlights the importance of (a) close collaboration with the primary medical team and the other medical services both within and outside of the hospital in preventing patient morbidity and mortality, (b) the crucial need for an accurate history and physical, and (c) a review of the mechanics and treatment of benzodiazepine withdrawal.

No. 41

A Case of Phentermine-Induced Psychosis: The Need for Caution for Drug-Drug Interactions

*Poster Presenter: Sethulakshmi Sreevalsam Anil
Co-Authors: Justin White, Mounica Reddy Thootkur, M.D.*

SUMMARY:

Introduction: Phentermine is a sympathomimetic amine that the U.S Food and Drug Administration has approved for short-term use in the treatment of obesity. However, there have been case reports of phentermine being associated with neuropsychiatric symptoms, and thus caution is needed to avoid drug-drug interactions when prescribing phentermine. We present a case of phentermine-induced psychosis that could have been precipitated after being co-prescribed with fluoxetine. **Method:** Miss X is a 61-year-old female with a history of major depressive disorder, generalized anxiety disorder, obesity, and rheumatoid arthritis. Her psychiatric symptoms were stable with oral fluoxetine 60 mg daily, oral aripiprazole 2mg daily, oral amitriptyline 100mg at night, and oral lorazepam 1mg daily. Miss X was prescribed oral phentermine 37.5mg daily for appetite suppression for weight loss. Subsequently, she started developing paranoid delusions against her family members, generalized anxiety, increased psychomotor activity, decreased appetite, and decreased sleep. Her symptoms continued to worsen even after discontinuing her medications on the 7th day. Miss X was eventually brought to the emergency room on the 14th day as her symptoms continued to deteriorate and she could not take care of herself. **Results:** Miss X's symptoms resolved after a dose of Intramuscular injection of 2mg of lorazepam. No signs of serotonin syndrome were present during the examination. Drug-drug interaction between phentermine and fluoxetine is suspected to be a causative factor in the precipitation of psychosis as fluoxetine can inhibit the CYP3A4 metabolism of phentermine. Her electrocardiogram also demonstrated prolonged QTc (470ms), which could have been precipitated by co-prescribing phentermine and amitriptyline. Miss X was admitted to the inpatient psychiatric unit, and oral fluoxetine 60mg daily, oral aripiprazole 2mg daily, and oral lorazepam 1mg daily were restarted. Due to QTc prolongation oral trazodone 50mg daily was started instead of amitriptyline. After her psychiatric symptoms were stable on the medication regimen, Miss X was discharged on the third day of admission to the inpatient psychiatric unit. **Conclusion:** Our case demonstrates the caution needs to be taken when prescribing phentermine not only for its

neuropsychiatric side-effects but also for drug-drug interactions.

No. 42

Exercise for Prevention and Treatment of Depression

Poster Presenter: Christina Pu, M.D.

SUMMARY:

DH is a 27-year-old male who presented to the clinic for depression and ADHD. He was admitted psychiatrically in November 2018 for depression due to stress from deployment, relationship, and adjustment to civilian environment. He has a history of being on several SSRIs, but last summer the patient wanted to be off of all his medications. The patient was managing his depression by exercising 30-40 minutes per day. For approximately 1 year, he was able to stay motivated and enjoy things without antidepressants. The patient noticed that if he does not exercise, he has more mood swings and irritability. This poster examines the evidence for exercise in the prevention and treatment of depression, and investigates the underlying mechanisms including neurobiological, clinical, psychological, and social.

No. 43

WITHDRAWN

No. 44

The Monster Within: The Case of Ovarian Teratoma and Depression in a Pediatric Patient

Poster Presenter: Isabella Kathryn Caldwell, M.D.

Co-Authors: Mariam Rahmani, M.D., Olga Lopez

SUMMARY:

Introduction: Childhood depression is relatively uncommon and has a 2.5% prevalence under the age of 12. For older adolescents, the estimated range is substantially higher from 15-25%. In the current literature, there are no case reports of ovarian teratomas and their relationship to psychiatric manifestations such as major depressive disorder or generalized anxiety disorder. The use of the term teratoma began in the 1800s and has origins from the Greek word *teras* (monster). Ovarian teratoma is the most common ovarian germ cell tumor seen in

biological females in their 20's and 30's and is generally less common in pediatric populations. Although some case reports suggest a link between these tumors and anti-NMDA encephalitis, less is known about their relationship to mood disorders. This report highlights a case of childhood-onset depression that resolved with the removal of a mature cystic teratoma. Case Report: The patient is a 16-year-old biological female, identifying as nonbinary (preferred pronouns they/them), who presented to an emergency room with a three-day history of new-onset abdominal pain. During initial evaluation the patient reported thoughts of self-harm and was placed under the state's involuntary commitment. CT abdomen pelvis with contrast revealed a large mass arising from the left ovary. The patient underwent laparoscopic-assisted left-ovarian-sparing cystectomy and the pathology report indicated a final diagnosis of mature cystic teratoma. After 2 days in the hospital, the patient was medically stable for transfer to an inpatient psychiatric facility. At the psychiatric hospital, the patient reported struggling with symptoms of depression since they were 7 years old. They had never received inpatient or outpatient psychiatric care. The patient had two prior overdose attempts: the first being in November of 2020 and the second a few weeks prior to hospitalization. The patient denied reporting these attempts, which was later confirmed by conversation with the patient's family. Psychiatric review of systems was negative for psychosis, mania, anxiety, history of trauma, history of eating disorder, or substance use disorders. During the three-day admission, they started fluoxetine which was titrated to 10 mg PO daily to target depressed mood. Since removal of the tumor, the patient reported complete remission of mood symptoms and suicidal ideation. Discussion: This case raises awareness of medical contributors to depression and the need for further study of the role autoantibodies play in mood disorders. One proposed mechanism we identified builds upon the established mechanism of ovarian teratomas and psychosis. If ovarian teratomas can lead to the development of autoantibodies against G-protein coupled receptors (GPCRs), then it is possible that autoantibodies could also lead to the destruction of 5-HT1a serotonergic receptors. This could result in

patients presenting with symptoms consistent with major depressive disorder.

No. 45

A Rare Constellation of Findings: Unilateral Auditory Hallucinations Secondary to Central Pontine Myelinolysis Induced-by Binge Drinking Alcohol

Poster Presenter: Robert DeBurlò

Lead Author: Robert DeBurlò

Co-Author: Megan Shedd, M.D.

SUMMARY:

Ms. P, a 33-year-old female with severe alcohol use disorder, binge-type presented to the psychiatric emergency service with auditory verbal hallucinations and delusional beliefs for following a relapse on alcohol three months prior. She reported drinking four pints of alcohol (42 units) per day during her prior bingeing episodes. Upon admission to the psychiatric hospital, Ms. P reported abstinence from alcohol for at least two months, which was corroborated by collateral from her family. Initially, the patient was treated with lorazepam for suspected alcohol withdrawal, however this theory was dismissed when her psychosis persisted and given the absence of other withdrawal features, such as tremor, diaphoresis, vital sign abnormalities, or disorientation. She did not have memory deficits and scored a 30 on the Montreal Cognitive Assessment. The psychiatric team considered a differential diagnosis of alcohol-induced psychotic disorder versus first episode of a schizophrenia disorder, and she was initiated on antipsychotic treatment. After Ms. P was observed with an ear plug in her left ear and notified the team that she was concerned a transmitter had been implanted in her left molar (broadcasting the voices), it was clarified that Ms. P was experiencing constant auditory verbal hallucinations lateralized only to the left ear. Audiology exam indicated normal hearing in both ears. She underwent an MRI of her brain, which revealed non-enhancing, hyperintense lesion on T2-weighted imaging with symmetric “bat wing” morphology classically consistent with central pontine myelinolysis. Despite multiple emergency department presentations for alcohol intoxication, there was no documented history of hyponatremia

or hypertonic sodium administration. The patient’s unilateral hallucinations attenuated and her delusions resolved with olanzapine and lorazepam treatment. In summary, this poster presents the rare combination of findings of unilateral auditory hallucinations in a patient with a central pontine myelinolysis (CPM) secondary to binge-drinking alcohol. While there have been rare case reports correlating CPM with psychosis (2), to our knowledge this is the first description of unilateral auditory verbal hallucinations arising from a central pontine white matter lesion. While central pontine myelinolysis is mostly commonly caused by iatrogenic rapid correction of chronic hyponatremia (i.e., osmotic demyelination syndrome) (4), it was in fact first described in 1959 by Adams in several patients with alcoholism (1) and has been described in contemporary case reports associated with heavy alcohol use (5) with various neuropsychiatric sequelae including focal neurologic deficits (3). This case demonstrates the importance of maintaining a high index of suspicion for demyelinating lesions when patients with alcohol use disorder present to psychiatric services with atypical psychotic symptoms, such as focal auditory verbal hallucinations.

No. 46

Social Media and Its Role in the Assessment and Treatment of Psychiatric Patients

Poster Presenter: Haley Norris, M.D.

SUMMARY:

EM is a 38 male with no psychiatric history. He presented to the psychiatric ED on a 5150 hold for danger to others after telling family that demons were telling him to kill them. On evaluation, he was disheveled, labile, and with tangential speech. He admitted to decreased need for sleep and increased goal-directed activities (yard work and house cleaning at all hours of the day) but that these have been present “all his life.” He talked at length about demons in his home, stating he had video evidence of their presence. He was paranoid that there were “hitmen” out to get him and that they had been trying to kill him “for years.” When asked to explain why he would be under attack, he became grandiose, stating that he had “found the cure to all

the diseases” and that he knew “how to create lightning.” He then insisted that this provider look at his social media account as “all the evidence is there.” On review, this patient had no previous inpatient or outpatient psychiatric records that could be found. He had denied previous evaluations or psychiatric diagnoses. His family history was significant for schizophrenia in his brother. He reported smoking marijuana daily but had recently quit because he wanted to “be a new man.” Urine drug screen was negative. He had been unemployed for years and was living at home with his mother and stepfather who were unable to be reached for collateral during initial evaluation. As requested by the patient, this provider looked up his social media account which was public. On this account, this patient had been posting multiple times a day for the previous two months with a total of 890 posts in this time frame. His biography and most of his posts were written in all capital letters, stating that he was a “genius,” had split atoms and found the source of various diseases. A vast majority of posts on this account consisted of screenshots of internet searches regarding religious and conspiracy theories. A separate account was found from two years prior with a similar three month period of high volume posting of bizarre content. In a time where people invest a significant amount of time and energy into building their online presence, social media may be an underutilized glimpse into the lives of our patients. In this case study, a patient presented with significant psychotic and manic symptoms atypical for his age and lack of psychiatric history. This led to the initial belief that his symptoms were substance induced. However, by utilizing social media, evidence of an episodic pattern of symptoms going back over years became apparent. This allowed for more accurate diagnosis and appropriate treatment of his condition. Learning to integrate all information available is crucial to providing the best patient care. Social media has become a staple in the lives of many of our patients, perhaps it is time to include it as a staple in psychiatric care as well.

No. 47

Development of Speech Biomarkers for Differential Diagnosis of Major Depressive Disorder

Poster Presenter: Alexandra König

Co-Authors: Nicklas Linz, Ebru Baykara

SUMMARY:

Background: Today, clinical states are measured by using question-based scales related to specific symptomatic domains which may be subject to biases. Identifying objective markers of psychiatric diseases such as Major Depressive Disorder (MDD), including trans-diagnostic, behavioural-based phenotypes, is necessary for differential diagnosis, improved disease classification and treatment. With the current rise of the use of Artificial Intelligence (AI) in healthcare, personalized management of mental disorders is moving forward. Hence, technology-based behavioral sensing for instance through automatic speech analysis may prove to be effective in measuring subjective communicative functioning, making inferences about symptoms, and guiding treatment management. Methods: This project aims to detect and predict depressive tendencies via speech analysis implemented in an app which can be used by both healthcare professionals and patients. For this, 25 patients from an outpatient clinic are equipped over 6 months with a mobile app and asked on a regular base to record short phone interviews with their clinical psychologist. Standard measures of depression severity such as the Beck Depression Inventory are administered and compared to speech and languages features extracted automatically from the recorded audio files. Further, current applications of digital speech-based tools for MDD diagnosis are reviewed. Results: Data collection is still ongoing and preliminary results are presented at the annual meeting. However, the performed review shows a distinct pattern of speech features which we expect to be highly associated with MDD such as follows: a reduction in certain temporal features (i.e speech rate or speech time) and an increase in others (i.e pause time or response time). A change in the type of word used (i.e less complex and more emotionally negative) can be found. Added to this, prosodic features (i.e F0 range and average) and variability, spectral features and sources features (i.e HNR, jitter, shimmer) seem to differ. Conclusion: Our project identifies speech markers that hold promise for an objective etiological diagnosis of MDD. To validate their potential, further longitudinal and prospective studies are needed. Ultimately, the automatic speech-based analysis of depressive tendencies can be significantly faster and cheaper administered than

alternative methods and this even remotely. This study is supported by the German Central Innovation Program for SMEs (ZIM), "SMARTLIFE" network.

No. 48

Is It Dissociative Identity Disorder, Schizophrenia, Factitious Disorder or Malingering?-a Case Report

Poster Presenter: Ravipal Singh Ghatoura

Co-Authors: Jatminderpal Bhela, M.D., Catalina Trevino Saenz

SUMMARY:

Dissociative identity disorder (DID), Schizophrenia, Factitious Disorder or Malingering are typically thought of as unrelated syndromes – trauma-based dissociative disorder vs genetically based psychotic disorder vs symptoms inflicted for primary gain or secondary gain, as characterized by DSM-V. However, substantial data exists which shows overlap of psychotic symptoms among the disorders mentioned above. Awareness of these overlapping features is necessary to prevent diagnostic and treatment confusion. We present the case of a 52 year old female with past psychiatric history of Schizoaffective Disorder, who presented with a manic episode with psychotic features, but without any proof of identification. She displayed different accents and speech characteristics on evaluation, and was admitted to the inpatient unit for further management. After initial evaluation, she was treated with a mood stabilizer and an antipsychotic. A week before the planned discharge, ObGyn service was consulted for a gynecological complaint. The clinic staff recognized the patient and reported that she was previously seen under a different name and identity. The patient was confronted, but remained adamant about her current name and identity. The matter was escalated to admissions dept, and her proof of identification was discovered. The following week, patient became noncompliant with her antipsychotic medication, claiming to be allergic to it, which was also documented in her now discovered chart. She subsequently decompensated, and became predominantly and overly psychotic. The patient was now placed on an alternate, modified medication regimen and showed favorable response after 10 days. The patient would now refuse to respond to

her previously reported name. She would, however, acknowledge the previous name intermittently, stating "she is doing ok". The patient was discharged to outpatient clinic with assertive community treatment services. This was a very interesting case which demonstrated that patients with no proof of identification may initially portray an obvious disorder. However, it is important to be cognizant in that, psychotic symptoms can overlap between different disorders. For example, most commonly, DID with acute psychosis is often misdiagnosed as schizophrenia, since different identities could be interpreted as a delusion. Therefore, more research is required to identify the correct disorder. Cases like these require interdisciplinary team efforts to flush out the mistaken identity. The patient's motive behind her mistaken or fabricated identity was unable to be identified. Whether it was a delusion of her psychotic disorder, whether she developed or carried another identity, or she had ulterior motives such as to advance certain treatments was unable to be determined. This area needs to be explored further to identify more ways to differentiate between the cause of a dissociative identity so patients can be treated appropriately.

No. 49

A Review of Appetite Stimulants for Weight Restoration in Anorexia Nervosa

Poster Presenter: Rayad Hakim Barakat, M.D.

Co-Author: Catherine Lindsay Rutledge, M.D.

SUMMARY:

Anorexia nervosa carries a lifetime prevalence of 4% in females and 0.3% in males with highest incidence around 15 years of age in females with recent findings suggesting an increase in incidence in girls younger than 15 years old. Less is known about the disorder's epidemiology in the male population, though incidence rates are thought to be stable compared to females. Metabolic and endocrine disturbances associated with weight loss contribute to significant risks in the initial courses of treatment and can limit responses to pharmacological agents, although weight restoration is correlated with sustained improvement. To this end, appetite stimulants have been used as an adjunct to promote weight restoration in these patients. While

olanzapine, mirtazapine, and cyproheptadine serve as current mainstays, other second-generation antipsychotics as well as dronabinol have been considered, though data remains scarce. Even more scarce has been comparative efficacy. In this poster, we aim to provide an overview of current appetite stimulant treatments for weight restoration in patients with anorexia nervosa.

No. 50

Multidisciplinary Approach to Weight Loss in a Patient With a History of Binge Eating Disorder and Major Depressive Disorder

Poster Presenter: Alexander Beard

Co-Author: Gerald Paul Perman, M.D.

SUMMARY:

Ms. S. is a 56-year-old white employed single female with a reported past psychiatric history of major depressive disorder and bulimia nervosa and a past medical history of hypertension who presented to the resident psychotherapy clinic with chief complaint of being overweight. The patient was found to no longer meet full criteria for bulimia nervosa as her most recent episode of purging was greater than one year ago and she denied any other compensatory behaviors. Given that she continued to have approximately two episodes of binge eating per week, she met criteria for binge eating disorder. She had gained 50 pounds over the last year. The patient also met criteria for a severe depressive episode which started approximately four months before she presented. A meta-analysis conducted in 2018 showed that both pharmacotherapy and psychotherapy show efficacy for the treatment of binge eating disorder. At that point, she was taking paroxetine 60 mg daily and bupropion 300 mg daily. She was switched from paroxetine to venlafaxine. This was done due to treat her depressive episode as well as patient preference to trial a new antidepressant. She was started on weekly psychodynamic psychotherapy. She was also seen by an internal medicine trained weight loss specialist who recommended starting naltrexone to target her cravings and binge eating episodes and starting semaglutide for weight loss. Semaglutide was approved in 2021 for weight loss and has shown efficacy for this purpose in randomized controlled

trials. The weight loss specialist also provided extensive and valuable dietary, exercise, and lifestyle modification recommendations and saw the patient every three months. The combination of naltrexone and bupropion has been shown to decrease frequency of binge eating episodes. Over the first six months of treatment the patient had a decrease then cessation of her binge eating episodes, 60-pound weight loss, and significant improvement of her depressive symptoms. In this poster, we discuss the value of collaboration in the treatment of psychiatric disorders as well as the value of a multimodal approach. We also discuss pharmacologic and psychotherapeutic approaches to the treatment of eating disorders.

No. 51

Informed Consent for Psychiatric Admission in a Military Treatment Facility

Poster Presenter: Kimberly Fletcher

Co-Author: Joseph Dragonetti

SUMMARY:

When recommending inpatient psychiatric admission (IPA), clinicians must convey the associated indications, benefits, risks, and alternatives (Dalal, 2020). The military holds no exception to this requirement (Department of Defense, 2020). The American Medical Association lists informed consent for medical treatments in the basic medical code of ethics. At this military treatment facility (MTF), inpatient psychiatrists noted a pattern of patients reporting that IPA was not adequately explained to them. Similarly, knowledge gaps were noted in referring outpatient clinicians. On process review, it was observed that there was no standardized informed consent training available. This quality improvement project was designed to standardize and improve the performance of informed consent for IPA. Interprofessional training was delivered to referring clinicians in a multi-disciplinary setting via PowerPoint-guided discussion in 60 minute sessions. Training handouts included a sample conversation for obtaining informed consent and an educational sheet about IPA for patients, families, and command teams. Training attendance was tracked and post-training surveys, comparing confidence levels on a 5-point scale before and after training, were collected.

For a two month period before (control data) and after the training initiative, inpatient psychiatrists were asked the following question for each of their patients: "During your assessments were there any concerns that the patient was not completely informed of the intention or indication for them to be admitted and the associated risks, benefits, and alternatives?" 62 clinicians have been trained, encompassing 46% of all referring outpatient behavioral health clinicians and 37% of emergency department staff at the MTF. Training is ongoing, with a goal to train 75% of referring clinicians. To date, 52 surveys were completed; 33% of participants rated themselves as fully competent in obtaining informed consent prior to training. After training, 65% felt fully competent. The average pre-training confidence level was 3.6 and post-training was 4.6. Control data showed that in 100 patients, 11% screened positive for inadequate informed consent. Patient impact results will be measured with the same process as the control data from October – December 2022. Frequent staff turnover in MTFs creates a demand for consistent standardized training in informed consent for IPA. While the primary outcome, patient impact, has not yet been fully measured, it is anticipated that there will be a decrease in inadequately consented patients. This collaborative training shows promising improvements in clinician confidence levels. This outcome alone is likely to benefit the honoring of autonomy and empowerment of patients, active duty soldiers and civilians alike.

No. 52

Reproductive Justice Amongst the Seriously Mentally Ill: An Increasing Concern in the Post Roe Versus Wade Climate

Poster Presenter: Namita Arboleda, M.D.

Co-Authors: Marlee Madora, M.D., Rubiahna Vaughn, M.D., M.P.H.

SUMMARY:

Background: While it is well established that people with serious mental illness (SMI) have higher rates of unplanned pregnancies,¹ there is minimal exploration of how capacity assessments for pregnancy termination in this population are done, with even less guidance regarding patients with

acute psychiatric symptoms.² The determination of decisional capacity for pregnancy termination in inpatient psychiatric units poses a challenging ethical dilemma requiring providers to balance autonomy for patients vs. patients' ability to meaningfully participate in decision making. Capacity assessments have become even more complex since the overturning of *Roe vs. Wade*. We present the case of a patient with schizoaffective disorder who retained decisional capacity for termination of pregnancy to demonstrate the challenges that arise in an inpatient setting. **Case:** A 19-year-old female with schizoaffective disorder was admitted to inpatient psychiatry due to acute psychiatric decompensation. She was found to be 6 weeks pregnant and requested termination. Obstetrics and gynecology immediately stated that the patient lacked capacity to participate in reproductive decision making based on her psychotic symptoms alone. The psychiatrists found her to have capacity for termination despite her psychotic symptoms and advocated tirelessly on her behalf. The patient subsequently received a first trimester medical abortion while on the inpatient psychiatric unit. **Discussion:** Reproductive justice remains a crucial issue for women with SMI, especially in the context of the recent limitation of reproductive rights. It is imperative that these cases are highlighted to spread awareness and ensure proper advocacy by psychiatrists on behalf of patients. As many psychiatric patients retain decision making capacity despite their mental illness², it is necessary to perform capacity evaluations when called into question as stigmatized assumptions based on mental illness could lead to hindrance of care. While this patient received appropriate treatment, it was only after persistent outreach by her psychiatric team. This case also took place in a state with more lenient abortion laws; women with SMI could face additional barriers to access care in states with more limited reproductive rights. In addition to state-specific laws, provider bias and obstetric racism are potential barriers that have been linked to worse obstetric outcomes and further disparities in care.³ Given the potential long terms effects of reproductive injustice, we emphasize the growing threat that people with SMI face as well as the need for psychiatrists to advocate for their patients when ethical issues arise. **Conclusion:** People with SMI are increasingly subject to potential

reproductive injustice which is often multi-faceted and includes systemic racism and societal stigmatization of mental illness. It is critical that providers are aware of these injustices, and continually advocate on behalf of patients.

No. 53

The Weill Cornell Medicine Wellness Qlinic: A Case for Equitable and Trauma-Informed Mental Health Care for the LGBTQ+ Community

Poster Presenter: Constance Zhou

Co-Authors: Sarah Szwed, Jodie Nghiem, Jessica Spellun, M.D.

SUMMARY:

Weill Cornell Medicine (WCM) Wellness Qlinic is the first free, student-run mental health clinic serving the LGBTQ+ population of New York City, regardless of insurance status. Members of the LGBTQ+ community experience disproportionately high rates of mental health disorders, including increased rates of depression, anxiety, suicidality, post-traumatic stress disorder, and substance use. Basic tenets of culturally responsive care, including the use of preferred pronouns and limiting assumptions about patients' gender and sexual orientation, have been well-documented and need to be continuously integrated into the daily practice of medical professionals. However, this community is heterogeneous and encompasses many identities and experiences, and further research is needed to characterize the needs of especially vulnerable subpopulations within the LGBTQ+ community and to design specialized accessible resources and interventions. The WCM Wellness Qlinic aims to address these concerns by providing culturally responsive, LGBTQ+-specific mental health care in an affirming environment that is financially accessible for uninsured or underinsured patients, while also creating a clinical training site for mental health care providers from multiple disciplines and conducting outcomes-based clinical research. The Wellness Qlinic integrates medical students, residents, attending psychiatrists, psychologists, and social workers into an interdisciplinary care team providing individual therapy, medication management, and DBT-based group therapy to its patients in a virtual telehealth setting. Here, we will present our novel

model of providing mental health care and characterize the Wellness Qlinic patient population and their mental health needs as a unique sector of the LGBTQ+ community. Chart review data were aggregated for patients seeking care at the Weill Cornell Medicine Wellness Qlinic, all of whom identified as LGBTQ+, primarily in their 20s and 30s, 35% of whom were uninsured. Patients on average presented with moderately severe symptoms of depression and anxiety, primarily seeking psychotherapy services and medication management. Notably, 88% of patients reported experiencing or witnessing a traumatic event in their lifetime, with 20% of patients meeting diagnostic criteria for post-traumatic stress disorder (PTSD). Our findings underscore the need for ongoing work to inform equitable expansion of mental health services tailored to, and inclusive of, all members of the LGBTQ+ community.

No. 54

The Effect of Serotonin Transmission on Depressive and Insomnia Symptoms in Inflammatory Bowel Disease

Poster Presenter: Marcin Sochal

Co-Authors: Agata Binienda, Marta Ditmer, Ewa Malecka-Wojcieszko

SUMMARY:

Background. The serotonin transporter (SERT) is one of the main targets of selective serotonin reuptake inhibitors (SSRIs), which have proven efficacy in depression disorders. In addition, SERT and serotonin have an influence on the circadian rhythm, but they can also act outside the central nervous system, influencing, for example, intestine movements. SSRIs are often used in inflammatory bowel disease (IBD) patients, but only in some patients in addition to their effect on depressive symptoms improves the clinical condition. The aim of the study was to investigate the correlation between SERT, serotonin, and the results of questionnaires assessing the severity of depressive symptoms and insomnia, as well as to search for factors influencing the levels of these molecules in the IBD group. **Methods:** Seventy-nine IBD patients (49 Crohn's disease and 30 ulcerative colitis) and 40 health

controls (HC) were included in the study and completed the following questionnaires: Harvey-Bradshaw index, partial Mayo score (disease activity assessment), Athens Insomnia Scale (AIS) and Beck's Depression Inventory (BDI). Additionally, venous blood was collected. The expression of SERT and CLOCK mRNA was determined by qRT-PCR. Genes' amplification was compared to the reference gene β -actin. Relative expression was calculated using the $\Delta\Delta C_t$ method. Serum Serotonin and SERT level was determined by ELISA. Funded by the National Science Centre, Poland (2018/31/N/NZ5/03715) and the Program of the Polish Ministry of Education and Science (SKN/SP/536070/2022). **Results:** IBD patients achieved significantly higher results in the BDI and AIS questionnaires compared to HC ($p=0.001$, $p=0.024$, respectively). IBD group had higher serum levels of SERT ($p=0.004$) and serotonin ($p=0.020$), but there were no differences between these groups in the expression of SERT mRNA ($p>0.05$). The serum level of serotonin and the serum level of SERT, were higher in the group of IBD patients with exacerbation compared to remission ($p=0.028$). IBD women obtained higher SERT mRNA expression than men ($p = 0.003$). SERT mRNA positively correlated with BDI ($r=0.30$; $p=0.044$) and AIS ($r=0.333$; $p=0.024$) only in IBD women group. Serotonin and SERT did not correlate with BDI or AIS results in either group. CLOCK mRNA were positively associated with SERT mRNA ($r = 0.29$; $p = 0.009$) but not with serotonin or SERT in IBD. **Conclusion:** IBD patients present with more severe depressive and insomnia symptoms compared to healthy volunteers. SERT mRNA expression appears to be influencing these symptoms, but only in women. The effect of SERT on sleep disorders may be associated with the signaling pathways of the circadian clock, which requires further research.

No. 55

Late Onset Mania Post Coronavirus Disease 2019 (Covid-19) Infection in a 74-Year-Old Woman: A Case Report

Poster Presenter: Justin Vu

Co-Authors: Rossano Bangasan, Seyed Alireza Hosseini, M.D.

SUMMARY:

Late onset mania has remained relatively understudied despite the increasing number of cases associated with growth in life expectancy. Onset of manic episode in elderly is rare and frequently associated with secondary organic etiologies, either medical or neurological. There are multiple reports of neuropsychiatric symptoms following coronavirus disease 2019 (COVID-19) infection in the recently published literature. However, the mechanisms by which COVID-19 infection can cause neuropsychiatric symptoms is not fully understood. We present the case of a 74-year-old African-American woman with no past psychiatric history and no family history of psychiatric illness who began to show behavioral symptoms following a COVID-19 infection. Patient's behavioral change gradually became worsen, associated with paranoid ideations, grandiose delusions, and frequent anger outbursts. She was taken to emergency room several times on an involuntary basis, with subsequent neurological work-up that did not indicate underlying neurological organic pathology. Patient significantly deteriorated in the following months and ultimately required psychiatric hospitalization after she presented with symptoms suggestive of a manic episode, associated with psychotic features. Neurological evaluations and laboratory investigations did not reveal any neurological underlying cause or potential contributing organic factor. Patient was diagnosed as Bipolar I disorder with psychotic features and managed with Olanzapine with notable improvement in symptoms. The diagnosis of late-onset bipolar disorder is challenging, considering the number of confounding factors and requirements for a meticulous assessment for all the potential secondary etiologies. Moreover, neuropsychiatric consequences of COVID-19 infection have not been well studied and further research is necessary to identify individuals at risk and their prognosis.

No. 56

Geriatric Attention-Deficit/Hyperactivity Disorder and Comorbid Bipolar 1 Disorder

Poster Presenter: Joshua Woods

Co-Authors: Nakisa Kiai, Rossano Bangasan

SUMMARY:

Abstract Background: Attention-deficit/hyperactivity disorder (ADHD) is commonly considered a disorder of childhood and adolescence. The majority of patients with ADHD typically experience the extinction of their symptoms with age through the development of coping mechanisms and as their cognitive burden decreases in later life. The prevalence of ADHD in elderly patients is difficult to estimate due to very limited incidence, however few case reports exist. Additionally, those who suffer from bipolar disorder and comorbid ADHD are associated with greater illness burden and complexity. **Case Presentation:** We present a 67-year-old female patient with a longstanding history of bipolar I disorder that appeared treatment resistant in her elderly years despite previous successful remissions of mania. In her later years, she complained of difficulties with memory and concentration. In addition, she presented with psychomotor changes, frequently expressing frustration at dropping items she is holding and feeling “clumsy” and inattentive. The patient consistently scored within normal range on Mini-Mental State Examinations and brain Magnetic Resonance Imaging (MRI) were normal. After initiating methylphenidate 5 mg twice daily, the patient’s symptoms significantly improved for the duration of her outpatient treatment. **Discussion:** This case report describes a rare case of ADHD in a geriatric patient occurring with comorbid bipolar 1 disorder. We describe the subtle signs and symptoms to monitor when attempting to differentiate a bipolar disorder with or without comorbid ADHD in an elderly patient. Problems with cognition are common in the elderly, but in this population- signs of minor to major neurocognitive disorder must be carefully differentiated from ADHD. We advise clinicians treating geriatric patients to consider ADHD in patients who do not meet the diagnostic criteria for a neurocognitive disorder but still present with decreased working memory, difficulties with concentration, and lapses in attention.

No. 57**Effect of Perceived Stigma on Depression in the Geriatric Population**

Poster Presenter: Amir Elsamadisi

Co-Author: Wasib Malik

SUMMARY:

While many factors such as socioeconomic status and medical comorbidities can affect depression, stigma is one of the factors that has limited studies in correspondence to depression. Particularly, self-stigma against depression is a negative outlook on this disorder which may be based on experiences and cultural backgrounds. Stigma associated with mental illness continues to be a significant obstacle in seeking treatment and deterring individuals who need services from getting help. Depression, one of the most common mental illnesses in the geriatric population, has been found to be associated with stigma. However, to date, little is known about self-stigma in the depressed elderly population despite its importance and consequences. Assessing perception and awareness is vital in seeking help for mental health resources and this can be hindered by the self-stigma present in the elderly. Moreover, much of this perception can receive intervention at the outpatient level which can aid in screening and management of geriatric depression. This study aims to examine the impact of internalized stigma revolving around mental health among older adults with depression. Subjects were surveyed with questionnaires from a family medicine outpatient clinic. Self-stigma was assessed using Depression stigma Scale (DSS)-Personal subscale and symptoms of depression were assessed using the Geriatric Depression Scale (GDS). The average GDS score was 5.3, indicating mild depression, and average DDS was 14, which indicates that the individual does have stigma against mental health. In addition, 7% of participants believed that they were depressed and 35% believed that a similar age peer was depressed. Persons who reported higher stigmatization via the DDS also scored higher on the GDS. This study shows the correlation of self-stigma and the depression in the geriatric population. With this in mind, we can tailor psychoeducation and awareness to this at risk population to optimize treatment and care.

No. 58**Psilocybin Potential as Global Cost-Effective Treatment**

Poster Presenter: Jackson Brunner

Co-Authors: Kevin Butler, Brent R. Carr, M.D.

SUMMARY:

Introduction: Although used for over 1000 years in some cultures, psychedelic-assisted treatment (PAT) has begun to re-emerge with the advent of functional brain scanning and research in brain connectivity. Modern psychedelic research, specifically relating to psilocybin, is expanding despite the substance's stigma in Western culture. It holds promise as a potential treatment strategy affording robust efficacy yet low cost. **Objectives:** Explore current psychedelic utilization across the globe. Note any global stigma variations surrounding psilocybin. Cite any cost considerations or barriers to care. **Methods:** A literature review was performed using PubMed, Cochrane, Scopus, and ScienceDirect with the following search constructs: "global psilocybin cost", "global psilocybin use", "psilocybin prevalence global", "psilocybin cost effectiveness", "psilocybin use prevalence", "magic mushrooms cost", "psilocybin stigma", and "magic mushrooms stigma". **Results:** Prevalence: Estimates of exact prevalence of psilocybin use (either microdosing or full dose) varied by study design and population. Very few ED visits were found to be related to psilocybin administration annually, and rates of hallucinogen use disorder were found to be substantially lower than those of other substance use disorders. Stigma: Multiple articles noted that stigma associated with psilocybin use remains ubiquitous, even among medical providers. An important theme was the hesitance of BIPOC individuals to participate in PAT due to the history of systemic racism in drug policy enforcement. Cost considerations: Authors commented on the relatively infrequent dosing schedule compared to current oral psychotropic medication and the low cost of microdosing (theoretically comparable to PAT). Barriers included the high cost of research due to current FDA scheduling or similar international classification and the use of costly therapist services during psychedelic administration. **Conclusions:** Despite its potential for low cost and efficacious treatment of psychiatric illnesses ranging from depression to substance use disorders, psilocybin research has to date relied on survey data or anecdotal evidence with very few randomized controlled trials due to strict government research

regulation. International perception of psychedelics is mixed, but should ongoing rigorous neuroscientific and translational research validate its efficacy, it may offer a globally affordable treatment alternative.

No. 59

Difficult Designation: Oppositional Defiant Disorder Through a Dynamic Nominalist Lens

Poster Presenter: Judy Chen, M.D.

Co-Authors: Andrew Winokur, M.D., Ph.D., Richard Zhang, M.D., M.A.

SUMMARY:

From its inception as a standardized diagnosis in the DSM-III in 1980, oppositional defiant disorder (ODD) has undergone multiple nosological revisions and incurred controversy over the precise nature of its diagnostic utility. From the APA's earliest delineation of ODD from conduct disorder to the DSM-5's recategorization of ODD into three distinct symptom clusters, ODD has, like many psychiatric diagnoses, undergone transformations of its diagnostic criteria within several decades. Yet, ODD is widely seen as more stigmatizing than some other childhood diagnoses such as ADHD. An ODD label can relatively limit access to medications, therapies, and supportive services when compared with less stigmatizing diagnoses like ADHD, leading to comparatively less optimal outcomes. Likely partly due to unconscious biases, ODD has also been found to be more frequently diagnosed in American youth of color than in white American youth. This presentation applies philosopher Ian Hacking's framework of dynamic nominalism to highlight the mutually perpetuating relationship between evolving societal expectations for youth behavior and the diagnosing of ODD. This presentation emphasizes ODD not as a permanent, universal entity that waited until the mid-twentieth century to be discovered and articulated, but rather as a classification that was constructed and has evolved as corresponding social norms and medicalization culture have evolved. Ultimately, this presentation utilizes ODD as a case example to promote judiciousness at large in giving clinical diagnoses; awareness of the general roles played by medical organizations, media, and other institutions in preserving or popularizing psychiatric descriptors;

and appreciation of the multiplicity of ways in which the same behavioral and affective phenomena can be conceptualized.

No. 60

Posterior Reversible Encephalopathy Syndrome Presenting as Delirium With Psychosis/Agitation

Poster Presenter: Tai West, M.D.

Co-Authors: Jason Christopher, D.O., J.D., Adriana M. Fitzsimmons, M.D.

SUMMARY:

Ms. M., a 23-year-old G3P0020 with no past psychiatric history and no past medical history apart from two miscarriages, presented to the emergency department at 29 weeks 1 day of gestation following a witnessed seizure, with hypertension (BP 161/99) and hyponatremia (serum sodium 134 mmol/L). In the ED, she received labetalol and magnesium sulfate and was admitted to the OB/GYN service, which recommended an emergent cesarean section due to eclampsia and fetal malpresentation. The c-section was performed without complications, but on post-operative day 1, a rapid response was called when the patient became agitated, aggressive, and demanded to leave the hospital against medical advice. According to her nurse, the patient was verbally abusive toward her husband, began screaming obscenities, pulled out her IVs, and pushed a nurse and her own mother out of the way in an attempt to elope. The psychiatric consult service evaluated the patient, who stated she had no memory of delivering a baby, and found that she lacked capacity to refuse medical treatment. She required intramuscular Haloperidol, Diphenhydramine, and Lorazepam, was placed in restraints, transferred to the ICU, and sedated with Dexmedetomidine. Nephrology was consulted for suspected hypervolemic hyponatremia, and placed the patient on fluid restriction. Neurology also assessed the patient, who underwent a CT scan of the head without contrast showing "subtle areas of decreased attenuation...in the occipital lobes bilaterally" consistent with Posterior Reversible Encephalopathy Syndrome (PRES). The patient's psychiatric diagnosis at the time of ICU admission was delirium with psychosis/agitation secondary to her underlying medical conditions. Postpartum

psychosis was on the differential diagnosis, but was felt to be less likely given the patient's acute mental status change in the setting of her underlying condition, and in light of her lack of psychiatric history, which her husband and mother confirmed. Patient's delirium and psychotic behavior resolved after appropriate treatment of her underlying medical conditions. This case highlights the crucial importance of interdisciplinary collaboration for accurate diagnosis and prompt treatment of PRES syndrome, whose symptoms can include headaches, visual changes, seizures, delirium, agitation, and psychosis. The case also speaks to the importance of differentiating primary postpartum psychosis from delirium, as the consequences of misdiagnosing delirium as postpartum psychosis can lead to delays in treating a delirious patient's underlying medical condition, as well as premature or inappropriate transfer of a delirious patient to a psychiatric facility when (as in this case), continued medical treatment is both necessary and time-critical. In this poster, we discuss the challenges and importance of differentiating psychosis from delirium in postpartum patients with or without a previous psychiatric history.

No. 61

Who Gets Sent to Psychiatric Oncology? A 9-Year-Study on the Development of an Ambulatory Psychiatric Oncology Program at a Community Hospital

Poster Presenter: Kai Ying Lin

Co-Authors: Majd Soudan, Antolin Trinidad

SUMMARY:

Background: As the role of community hospitals and community clinics in the delivery of cancer care increases, so does the demand for access to psychiatric oncology in the community. The majority of community physicians providing cancer care find psychiatric services to be beneficial, despite often encountering significant difficulty with referrals. To promote the effective delivery of psychiatric care in patients receiving community-based cancer care, we describe our own experience of developing a psycho-oncology program embedded in a community hospital-based cancer center to help other hospitals and cancer centers understand the unique dynamics

of such programs. **Methods:** The process of starting a psycho-oncology program *ab initio* at the Norwalk Hospital Whittingham Cancer Center in Norwalk, CT, is described in this study. Patient demographics and data including gender, cancer type, cancer stage, DSM diagnosis, presence of prior psychiatric history, and medication prescribed at initial psychiatric visit were gathered from initial evaluations since the inception of the clinic in December 2014 to July 2022. **Results:** 311 patients were directly referred by oncologists to a psychiatrist working in the clinic. Data could not be obtained for 8 patients, so 303 patients were included in the study. Referrals were mediated by an LMFT who coordinated appointments as well as provided supportive psychotherapy. The gender of patients consisted of 79% females and 21% males. Cancer types included breast (48%), lung (11%), colorectal (9%), lymphoma (5%), and other (28%). Psychiatric diagnoses at initial evaluation included MDD (27%), unspecified or other specified depressive disorder (28%), GAD or other anxiety disorder (56%), and adjustment disorder (12%). Medications initially prescribed were antidepressants only (54%), benzodiazepines only (5%), antidepressants and benzodiazepines (18%), other (11%), and no medications (12%). Cancer stage had no bearing on likelihood of psychotropic medication prescribing, $p>0.05$. **Conclusion:** The psychiatric diagnoses and medications prescribed in our clinic were similar to that at larger academic settings; depression, anxiety, and adjustment disorders accounted for the majority of diagnoses, and antidepressants and benzodiazepines accounted for the majority of prescriptions. This suggests that the psychological distress associated with cancer translates across disparate settings and can be diagnosed and managed using similar approaches. The increased ratio of female to male patients likely reflects the increasing survival rate of breast cancer allowing for a greater window of time for psychiatric referral, and a higher perceived stigma in using mental health services amongst men. Given the lack of correlation between cancer stage and whether psychotropic medication was prescribed, future research could investigate the threshold of emotional distress versus the likelihood of psychotropic prescriptions in cancer patients.

No. 62

Nutrition and Mental Health: Exploring the Relationship Between Diet and Mental Health in the U.S. Military

Poster Presenter: Thomas Finstein, D.O.

Co-Authors: Michael Holcomb, D.O., Jeremy Richards, M.D., Samuel Fesenmeier, D.O.

SUMMARY:

Nutrition and Mental Health: Exploring the relationship between diet and mental health in the U.S. Military Problem:

There is a lack of research and literature describing the relationship between diet and nutrition as it relates to mental health among United States (U.S.) Military Service Members. **Background:** Military service is known to place individuals under exceptionally unique physical and mental challenges. Mission requirements may subject service members to irregular sleeping patterns, recurrent mental fatigue, and finite opportunities for diet and nutrition, especially when located in a field environment or deployment.

Several trials have been conducted over the past decade to address or improve diet options and to educate members of the military about optimal nutrition, but minimal research has been conducted to assess for the success of these interventions. We wish to investigate the concept of diet and nutrition and their relationship to mental health among U.S. Service Members. **Research Question:** What is the relationship between diet and mental health for U.S. Military Service Members? **Methods:** We conducted a preliminary scoping review of the available literature regarding the relationship between diet and nutrition and mental health within the population of U.S. Service Members by searching PUBMED and Google Scholar using the following search parameters: military AND mental health OR depression OR suicide AND diet OR nutrition OR omega-3. We plan to complete a systematic review expanding on the initial results. **Results:** Limited studies within military populations suggest that diets rich in omega-3 fatty acids may decrease psychological stress and rates of depression. (1). Moreover, high blood omega-3 levels were correlated with lower rates of suicide. (2) Higher levels of fruit and vegetable intake and lower rates of 'sugary drink' consumption were correlated with lower rates of anxiety and depression. (3) Optimal

nutrition is likely to reduce psychological distress by way of decreasing obesity. (4) **Discussion:** Numerous studies related to nutrition in the general population suggest that adherence to a diet rich in Omega-3 Fatty Acids improves mental health and decreases rates of depression. More specifically, the 'Mediterranean Diet' has the most extensive evidence to this end. (5) The limited data relating to diet and mental health among U.S. Military Service Members appears to support this pattern as well. Diet and nutrition is an important area of intervention with the potential to decrease psychological distress and to improve mental health among U.S. Service Members. We suggest additional research exploring diets rich in Omega-3 Fatty Acids and their relationship with mental health and U.S. Service Members. The U.S. military services may consider promoting diet higher in Omega-3 Fatty Acids to improve mental health if studies continue to support this conclusion.

No. 63

Association Between Cognitive Changes and Psychotic-Like Experiences

Poster Presenter: Jack W. Davis II, D.O.

SUMMARY:

Attention deficit hyper activity disorder (ADHD) is a developmental disorder that is often diagnosed in childhood. It is characterized by hyperactivity and inattention which negatively impact a person's ability to function in social or occupational settings. Individuals may enlist in the military even with a past medical history of ADHD, though the full impact of the disorder on the functionality of soldiers at different stages of their career has not been fully explored. It is of particular interest how the process of going through a role transition, such as the one from being enlisted to being promoted to an NCO, has an impact on the soldier's functionality. In this poster we will conduct a review of the current literature on the topic and discuss areas of further research. We will also discuss potential indications for commanders to refer their soldiers for evaluation and treatment.

No. 64

Loneliness' Effect on Mental Health in the Military: Scoping Review and Discussion

Poster Presenter: Zachary Robert Arnold, M.D.

Co-Authors: Joshua Hamilton, M.D., Christine Wolfe, M.D.

SUMMARY:

Intro: Loneliness and social isolation have been associated with greater severity of symptoms and prolonged recovery times in mental illness (1,2). Active duty military service members face a higher risk than the general population for mental illness, particularly suicidality(3,4,5). Military service has the potential to both exacerbate and protect against loneliness (4,5). Service members undergo regular permanent changes of station, temporary duty assignments, and deployments, all of which separate service members from their support systems (4,5). Service members spend large amounts of time with their unit, which can be protective when a service member feels integrated, but problematic for those who don't (4,5). Differences in military experiences may also play a role (4,5). This scoping review will examine literature that has quantified a relationship between loneliness and mental illness in the active duty military and veteran populations . Methods: We conducted a scoping review following PRISMA-P (6) and Khan et al (7) by searching PubMed for articles including sailor, soldier, military, veterans, army, navy, air force, navy, naval, coast guard, or marines, and loneliness, social isolation, social deprivation, or social connection, and mental disorders, mental illness, psychiatric illness, anxiety, depression, or suicide. The inclusion criteria were articles that quantitatively and directly measured the relationship between loneliness on mental health conditions in the military and veteran population. Exclusion criteria included articles using non-U.S. military service members and/or veteran samples and non-quantitative/empirical data (e.g., case reports, review articles, and commentaries). Results: Search criteria found 551 articles. Apply the screening criteria 31 articles were included in this study. 21 articles examined relationship in the veteran population and 10 in the active military population. For types of mental disorders and loneliness; 3 for anxiety, 4 for depression, 13 for suicidality, and 11 for PTSD. How loneliness was measured in the

articles varied. However, loneliness was a consistent risk factor and often a predictor of more severe for PTSD, depression, anxiety, and suicidality. Conclusions: Loneliness has a deleterious effect on multiple mental health disorders in the military. There is limited research in the active-duty population that quantitatively measures this relationship. Further research may better elucidate how different interventions can improve loneliness in the military population. The views expressed in this presentation are those of the authors and do not necessarily reflect the official policy of the Department of Defense, Department of Army, US Army Medical Department, or the US Government

No. 65
Behavioral Disturbance in a Patient With Frontotemporal Dementia as a Neuropsychiatric Sequela of Neurosyphilis

Poster Presenter: Meher Irani, M.D.

SUMMARY:

Frontotemporal dementia (hereinafter FTD) is characterized by progressive atrophy of the frontal lobes, temporal lobes or both. It can present with progressive decline in executive control, motor symptoms, language difficulties and behavioral changes which may appear as disinhibition, personality change and sexual misconduct. FTD is an umbrella term that encompasses three clinical variants: Behavioral-variant frontotemporal dementia (bvFTD) presents with progressive changes in personality, emotion and executive control. Neurosyphilis is the tertiary clinical manifestation of the bacterium *Treponema Pallidum* that affects the central nervous system. Dementias have largely been attributable to syphilis, given its frequent transmissibility and inadequate treatment during early infection. We present a unique case of a 50 year old korean speaking male with history of alcohol use disorder, neurosyphilis (treated twice with IV penicillin) and cotard syndrome, depression (medication non-compliant), and COVID-19 infection (currently tested negative and was asymptomatic) who was brought in for "disorganized behavior" and suicidal ideation. Per mother, the patient had not been sleeping, was incontinent of urine and stool and was unable to perform activities of daily living

and had mentioned wanting to kill himself by jumping off the balcony. Per mother, he was "acting like a child again". Neurology and Psychiatry teams made the diagnosis of Major Neurocognitive Disorder, likely Frontotemporal Dementia, secondary to Neurosyphilis. We present this unique case to highlight the rare incidence of FTD due to delay in treatment of neurosyphilis and to highlight challenges for successful treatment of the behavioral disturbance associated with FTD.

No. 66
Rat Poison Through a Cultural Lens: A Unique Case of Warfarin Overdose in an Asian Woman With History of Untreated Depression

Poster Presenter: Meher Irani, M.D.

SUMMARY:

Post-menopausal depression and suicide are not uncommon among elderly populations of women, especially in Asian cultures. In rural areas of China, ingesting agricultural chemicals or rat poison was the most common method of suicide. The link between post menopausal depression and suicide has been attributed to varying levels of blood FSH, particularly in female depressed patients. Post menopausal depression is undiagnosed and untreated in Asian cultures due to heavy stigma and patients apprehension to share emotions due to social stigma. We present a 59 year old Chinese female with past psychiatric history of undiagnosed post menopausal depression and past medical history of hypertension, hyperlipidemia and thyroid disease who was brought to the emergency department for urinary retention for several days. She complained of abdominal pain, hematochezia, urethral bleeding, gum bleeding, diffuse bruising, and urinary retention after ingestion of rat poisoning 12 days prior to admission. During initial psychiatric assessment she admitted feeling "frustrated because I am going through menopause, I took the rat poison impulsively because I was sad". Patient's INR on admission was 16 and PTT 97.1. Urology, hematology, poison control and psychiatry worked cohesively to formulate an effective treatment plan in light of acute hepatic injury which was a limiting factor to starting psychotropic medications. We present this unique case to discuss the challenges of

treating warfarin overdose and to highlight the barriers to treating depression in Asian females due to cultural bias and associated stigma.

No. 67

Screening for Brain Fog: Is the Montreal Cognitive Assessment an Effective Screening Tool for Neurocognitive Complaints Post-Covid-19?

Poster Presenter: Sean T. Lynch, M.D.

Co-Authors: Stephen J. Ferrando, M.D., Sivan Shahar, M.D.

SUMMARY:

Background: Cognitive complaints are one of the most frequent symptoms reported in post-acute sequelae of COVID-19 (PASC). The Montreal Cognitive Assessment (MoCA) has been used to estimate prevalence of cognitive impairment in many studies of PASC, and is commonly employed as a screening test in this population, however, its validity has not been established. *Objective:* To determine the utility of the MoCA to screen for cognitive impairment in PASC. *Methods:* Sixty participants underwent neuropsychological, psychiatric, and medical assessments, as well as the Montreal Cognitive Assessment, 6-8 months after acute COVID-19 infection. *Results:* The overall sample had a mean score of 26.1 on the MoCA, with approximately one third screening below the cutoff score of 26, similar to the rate of extremely low NP test performance. MoCA score was inversely correlated with fatigue and depression measures and ethnic minority participants scored on average lower, despite similar education and estimated premorbid function. The MoCA had an accuracy of 63.3% at detecting any degree of diminished NP performance, and an accuracy of 73.3% at detecting extremely low NP performance. *Discussion/Conclusion:* The MoCA may not be accurate for detecting neither mild nor severe degrees of diminished NP test performance in PASC. Therefore, patients with persistent cognitive complaints in the setting of PASC who score in the normal range on the MoCA should be referred for formal NP assessment.

No. 68

Predictors and Correlates of Positive Urine Toxicology Reports Among Child and Adolescent Psychiatry Inpatients

Poster Presenter: Sean T. Lynch, M.D.

Co-Authors: Timothy Becker, Paige Staudenmaier, M.D., Parul Shanker, M.D.

SUMMARY:

Background & Objectives: Youth substance use is associated with significant psychological, neurological, and medical complications. Certain risk factors of substance use amongst children and adolescents have been identified in the general population, including having a psychiatric illness and history of maltreatment. Little research has been published on specifically the child and adolescent inpatient psychiatry population and substance use, as well as on the impact of the COVID-19 pandemic on substance use. *Methods:* Charts of 816 child/adolescent psychiatry inpatients with urine toxicology results were reviewed for sociodemographic and clinical information. Data ranged from June 1, 2018 – November 30, 2021. Sociodemographic and clinical differences between patients with and without substance use were explored. *Results:* Older age, having an impulsive or behavioral disorder, or a history of violence were found to be predictors of positive urine toxicology. Asian/South Asian or Hispanic race, and history of a developmental or intellectual disability were found to be negative predictors. COVID-19 did not have a significant impact on substance use. *Discussion and Conclusions:* Multiple factors may predispose children and adolescents to substance use. Though no impact of COVID-19 was found in this sample, longer-term studies are needed. *Scientific Significance:* This study identifies independent predictors of active substance use in the child and adolescent psychiatric inpatient population.

No. 69

It's Not Just Behavior: When Seizures Present as Disruptive Mood Dysregulation

Poster Presenter: Galina Ostrovsky

Co-Authors: Molly Nguyen, Krutika Chokhawala, M.D., Jahanzeb Khan, M.D.

SUMMARY:

Behavioral issues are a common concern in child and adolescent psychiatry that often warrant a full medical workup and emphasize the importance of the biopsychosocial approach when dictating management. We present a case of an 11-year-old male with a past psychiatric history of disruptive mood dysregulation disorder (DMDD), oppositional defiant disorder (ODD), attention-deficit/hyperactivity disorder (ADHD), and posttraumatic stress disorder (PTSD) who was admitted to the inpatient child psychiatric unit due to increased physical and verbal aggression towards family members. During the patient's admission, he demonstrated aggressive, defiant, and impulsive behaviors that did not respond to psychotropic drug intervention. On several occasions, he was noted to exhibit seizure-like activity, which prompted a neurological workup. Electroencephalogram (EEG) was performed and confirmed evidence of epileptiform discharges in the patient's frontal lobe. After initiating the patient on an antiepileptic drug to treat his seizures, the patient's behavior consequently significantly improved. Previous literature has revealed that neurological conditions, including seizures, can sometimes present with behavioral or mood disturbances, especially in the pediatric population. In this poster, we discuss the psychiatric manifestations that can present in epilepsy and the importance of performing a thorough medical workup along with interdisciplinary collaborative care even when the primary concern appears to be psychiatric in nature.

No. 70**Catatonic and Pregnant: A Case of First Episode Catatonia During Early Pregnancy**

Poster Presenter: Galina Ostrovsky

Co-Authors: Molly Nguyen, Krutika Chokhawala, M.D., Sara Gleason, M.D.

SUMMARY:

Catatonia is a neuropsychiatric syndrome that is commonly characterized by certain behavioral or motor disturbances, including hypokinesia, mutism, stupor, and/or intermittent hyperactivity. This complex psychomotor disorder with co-occurring pregnancy is a rare phenomenon that can present

unique challenges and limitations in treatment options due to the potential risks to the mother and fetus. Standard treatment of catatonia with benzodiazepines or electroconvulsive therapy (ECT) has been well-studied, but very little research has been done on the management of catatonia in pregnancy. We present a case of acute catatonia in a 29-year-old female in her first trimester of pregnancy with a past psychiatric history of unspecified depressive disorder and unspecified anxiety disorder. This patient was admitted to the inpatient psychiatric unit on two occasions due to catatonia during the same pregnancy and required trials of several different medication regimens in order to successfully manage her catatonic symptoms. In this poster, we discuss the challenges and limitations in managing catatonia during pregnancy and the importance of interdisciplinary collaborative care.

No. 71**Refractory Psychosis in a Patient With an Arachnoid Cyst**

Poster Presenter: Joseph Fanous

Co-Authors: Seyed Alireza Hosseini, M.D., Timothy Kiong

SUMMARY:

Background The etiology of psychotic disorder due to another medical condition varies, ranging from common intoxications and metabolic derangements to brain tumors. Arachnoid cysts are uncommon space-occupying brain tumors whose link to neuropsychiatric symptoms has not been well studied. There is limited literature exploring this association, and the role for neurosurgical intervention has remained unclear. **Case Presentation** We present the case of a 34-year-old man with two previous psychiatric hospitalizations with discharge diagnosis of bipolar I disorder, who presented with severe disinhibition, aggressive behavior, derealization, auditory and visual hallucinations, and bizarre delusions. Initial neuroimaging discovered a large arachnoid cyst impinging on the left frontal and temporal lobes. Patient was symptomatically treated with Risperidone with no significant improvement. With titration of Risperidone and addition of mood stabilizers, patient's aggressive behavior and

disinhibition gradually subsided; however, delusions and hallucinations did not appreciably improve. Due to unusual presentation and accompanying neurologic signs of headache and nausea, the arachnoid cyst was suspected as the cause of the patient's psychosis; however, neurology and neurosurgery elected not to pursue neurosurgical intervention after considering the risk and benefits. Therefore, the decision was made to continue conservative treatment with antipsychotics and mood stabilizers. **Discussion** Brain tumors involving left parietal and frontal lobes have been linked to mood and psychotic symptoms. Numerous cases have been reported with psychiatric symptoms in the presence of arachnoid cyst, of which, some were reported with significant improvement after surgical decompression. We briefly review and highlight the available literature on the subject, discuss the mechanisms by which cysts can cause neuropsychiatric symptoms, and suggest future studies investigating this association and the role for neurosurgery.

No. 72

Parietal Lobe Tumor and Obsessive-Compulsive Disorder: A Case Study

Poster Presenter: Tyler L. Seidman, D.O.

Co-Authors: Herbert Ward, Almari Ginory, D.O.

SUMMARY:

Obsessive-compulsive disorder (OCD) is a psychiatric illness that typically is thought to begin at ages 18-25 and involve mainly the cortico-striato-thalamo-cortical (CSTC) circuits. This case will highlight a novel case of a 71 year old male who developed OCD likely as the result of a brain tumor, commonly referred to as acquired OCD. This patient presented to clinic as a referral from his primary care physician for new OCD symptoms. Over the prior 6 months, he began to develop a ritual for counting and checking things in the house, for example light switches, stove knobs, and sink pipes. The goal of the counting was to ensure that appliances and possible sources of electrical fire and flooding could not occur. He would perform this ritual every time he left the house and had to be the last one to leave the house otherwise he would have to start from the beginning. At the first appointment, this ritual would usually take

around 2-3 hours to complete and he often had to wake up at 3am to ensure his counting and checking was complete before work. Initial Yale-Brown OCD score was 29 points. He had no significant psychiatric history at the time. As part of his job, he was exposed to multiple aerosolized chemical during his lifetime. He initially was started on Sertraline 25mg daily for 2 weeks then increased to 50mg daily and due to the patient developing OCD symptoms at such a late age, an MRI head with and without contrast was ordered which revealed a right posterior parietal lobe tumor 5mm in size with a moderate amount of edema. He was referred to neurosurgery and during subsequent workup, was found to have right hilar lymphadenopathy and endobrachial nodule at the ostium of the right upper lobe bronchus, later found to be stage IV pulmonary adenocarcinoma. He received stereotactic radiosurgery to the brain metastasis along with weekly carboplatin/taxol chemotherapy and 33 days of radiation treatment to the lung nodule. At the time of this report, his OCD symptoms remain largely unchanged. He has developed some new related rituals at appointments including placing ceramic plates under electronic devices to avoid heat dispersion into surrounding objects at risk for fire. Sertraline titration was paused due to ongoing treatment of cancer along with several medical complications including a pulmonary embolism and COVID. Most recent MRI post stereotactic radiosurgery revealed an existing parietal lobe tumor of 2mm. Treatment goals from a psychiatric perspective for this patient include remission of OCD symptoms via Sertraline along with adjunctive exposure response prevention psychotherapy. Past cases of acquired OCD have usually been associated with tumors or lesions in the cortical-basal ganglia-thalamic-cortical (CBGTC) axis. Thus a tumor present in the posterior parietal lobe makes for a very unusual case. As part of the ongoing case presentation, his OCD symptoms will be monitored in relation the tumor presence and treatment.

No. 73

WITHDRAWN

No. 74

Empowering the Powerchart: Decreasing the Burden of Documentation With EMR Mechanics

Poster Presenter: Jeremy Hsiang, M.D.

Co-Author: Elizabeth Crocco, M.D.

SUMMARY:

Background: Excessive time spent documenting in the electronic medical record (EMR) is well-known to be a major contributor to physician burnout (1). Poor EMR usability and interference to workflow and face-to-face patient care are primary drivers of burnout (2). There is a strong correlation between time spent using the EMR and burnout in both psychiatry residents and faculty (3). The most common complaint amongst PGY1s at our institution relates to the high load and limited time available to evaluate each patient. In response, DocuQUIPs, a quality improvement project aimed at easing the burden of documentation through organization-directed interventions, was developed to increase direct face-to-face time with patients and decrease the rate of burnout among our residents. One intervention implemented this year was having a senior resident teach interns how to use underutilized EMR mechanics based upon their own clinical experiences. We hypothesized that the intervention would result in increased confidence and skills, directly leading to a decrease in the burden of documentation. **Methods:** A step-by-step guide was created on various ways to optimize efficiency of documentation using inherent but little-known mechanics of the EMR and a video tutorial was made to accompany the guide to instruct specifically on how to perform these mechanics as well as show some common errors that may occur. These were provided to incoming PGY1s during their orientation and an hour-long session was held to reiterate instruction, answer questions, and provide personal tips regarding utilization of mechanics. A library of "smart phrases" developed from direct patient experiences that could be easily incorporated into the EMR was shared to further facilitate the streamlining of the documentation process. Brief surveys with questions focused on utilization, confidence, and face-to-face time with patient were sent out following the orientation session and after six weeks of clinical responsibilities. Each question could be answered on a 5-point Likert scale from

strongly agree to strongly disagree. **Results:** Out of 14 PGY1s, 8 completed the initial survey and 8 completed the follow-up survey. 100% of responses to the initial survey indicated that the intervention was engaging, relevant, immediately applicable to daily practice, and served to increase skills and improve confidence. 100% of responses to the follow-up survey indicated immediate application of the skills learned from the intervention and subsequently increased face-to-face time spent with patients. 87.5% of respondents report using the learned skills in other clinical scenarios. **Conclusion:** This brief intervention led to increased levels of confidence and decreased perception of the burden of documentation. We aim to make this a standard intervention of DocuQUIPs to expedite the documentation process and mitigate physician burnout.

No. 75

Neuropsychiatric Outcomes in Young Adults and Adults With Phenylketonuria: Utility of Self-Report Screening Tools

Poster Presenter: Evgenia Royter

Co-Authors: Samantha Murad, Radhika Rani, Mitzie Grant

SUMMARY:

Purpose: Literature shows increased prevalence of neuropsychiatric symptoms for individuals with Phenylketonuria (PKU). PKU is a chronic medical condition resulting from inborn error of metabolism. Routine screening of neuropsychiatric functioning in young adults and adults (YA/A) with PKU is recommended, but there is no consensus on assessment tools and many have limited access to mental health professionals. This retrospective study was initiated to assess the feasibility and efficacy of using brief, publicly available self-report scales during metabolic clinic visits to screen neuropsychiatric problems in YA/A with PKU. **Methods:** Study was IRB approved and included review of medical records for approximately 80 patients receiving care in a PKU/metabolic hospital-based clinic. Data collection included demographic variables, blood Phe levels, and PKU treatment status, along with scores from Patient Health Questionnaire (PHQ) PHQ-9 depression scale

(max score=27), GAD-7 anxiety scale (max score=21), PHQ-15 somatic scale, and the Adult ADHD Self-Report Scale (ASRS): ASRS Total (max=72), ASRS Inattentive score (IA; max=36) & ASRS Hyperactivity/Impulsivity score (H/I; max=72). SPSS was used for statistical analyses. **Results:** Data was analyzed for 44 individuals with PKU: Mean age = 28.95±8.63; 30% female, 70% male; mean Phe levels = 12.10±5.421 (normal range is <2 mg/dL and recommended treatment range is ≤6 mg/dL). Mean scores on self-report tools were as follows: PHQ9 = 5.70±5.92; GAD-7 = 5.41±5.94; PHQ-15 = 5.06±4.10; ASRS Total = 24.49±16.01, ASRS IA score = 13.54±8.55, ASRS H/I score = 10.90±8.14. Age correlated significantly with GAD-7 (r=0.328, p=0.03), and scores from GAD-7 identified 27% of individuals with symptoms of mild anxiety and 14% with moderate and severe anxiety. Scores from PHQ-9 identified 20% with mild depression and 25% with moderate, moderately severe or severe depression. Age also correlated significantly with ASRS IA (r=0.380, p=0.01), and Phe levels were significantly correlated with ASRS Total (r=0.367, p=0.02), ASRS H/I (r=0.427, p=0.008), and PHQ-15 (r=0.427, p=0.01). **Conclusion:** A high prevalence of anxiety, depression and problems with attention, including symptoms of impulsivity/hyperactivity, as well as the more often reported problems of inattention, was identified in this cohort of young adults/adults with PKU. Metabolic control (Phe) was strongly associated with attention and physical symptoms. Results from these readily available, public screening tools are consistent with current PKU literature. The data illustrates the need for early screening and intervention to facilitate better patient outcomes and support the use of such brief screening tools by healthcare providers during routine medical visits. Routine screening with such tools by medical or mental health providers can also assist with assessing for change over time and monitoring response to interventions.

No. 76

Seeing Clearer: Current Trends of Diabetic Retinopathy Screening in New York State Psychiatric Centers

Poster Presenter: Adam Bernstein, M.D.

Co-Authors: Nancy Kerner, M.D., Aparna Udyawar, M.D.

SUMMARY:

Background: Antipsychotics are a crucial mainstay of treatment for severe mental illnesses that help millions of people worldwide. Antipsychotics carry a high risk of the patient developing metabolic syndrome, potentially leading to diabetes mellitus (DM). Untreated DM can cause diabetic retinopathy, which can lead to blindness. Understanding the adherence patterns and rates of annual diabetic retinopathy screening in patients are vital to the betterment and global health of patients. The aim of this study was to use public data and extrapolate current trends to evaluate the implementation status of annual diabetic retinopathy screening comparing rates at urban versus rural facilities. **Methods:** New York State tracks various performance statistics through its Vital Signs Dashboard. This Dashboard captures all Medicaid individuals in programs licensed under New York State's Office of Mental Health (NYS OMH). For the purpose of this study, only NYS OMH Psychiatric Centers were examined. **Results:** Overall, NYS OMH facilities had an adherence rate of 47%. Adherence status amongst Psychiatric Centers were examined closer, comparing the urban/rural divide. Further, distribution of adherence status was examined among the five New York City boroughs. Whereas the rural facilities had an adherence rate of 36%, the urban facilities within the five New York City boroughs had an adherence rate of 29%. **Conclusion:** Diabetic control of patients is critical as it is a red flag for systemic small vessel disease that can potentially lead to end-organ damage (e.g., diabetic retinopathy), which significantly increases mortality and decreases a patient's quality of life. This study presented the issues of implementing diabetic retinopathy screening in NYS OMH facilities. Unexpectedly, NYC Psychiatric Centers in urban settings with the most access to transportation and fewest blockades to social determinants of health had an 18% lower adherence rate than NYS OMH facilities overall and was 7% lower than rural NYS OMH facilities. This is an urgent deficiency that must be addressed. Further studies should aim to examine the exact differences between urban and rural NYS OMH Psychiatric Centers in order to not only equilibrate the adherence rates but raise them to ensure greater quality health care for patients under

the NYS OMH umbrella. This can then be replicated in each state to improve the quality of medical care within state psychiatric facilities.

No. 77

Interpersonal Ambivalence and Its Relationship With Social Support, Attachment, Self-Regard, and Ratings of Psychopathology and Psychosocial Functioning

Poster Presenter: Naomi Dhawan, D.O.

Co-Authors: Greg Haggerty, Ph.D., Jimmy Metellus, M.D., Winnie Tsai, D.O.

SUMMARY:

Background: Interpersonal ambivalence (IA) is the mixed feelings regarding connecting to others. The concept of IA is the core feature of fearful-avoidant attachment style, which was first discussed by Bartholomew (1990) and encompasses individuals who have a poor model of themselves as being unworthy of connection with others and also a model of others as being unable or unwilling to provide support or connection. The Inventory of Interpersonal Ambivalence (IIA-6) is a self-report measure that captures this dynamic while other attachment measures assess attachment globally. We investigated the IIA-6 construct validity by comparing it to measures of attachment, malignant self-regard, perceived social support, and a measure of psychopathology and psychological symptomatology. We expected that IIA-6 would be positively correlated to both attachment anxiety and avoidance, malignant self-regard, and the SPECTRA's general psychopathology index, and negatively related to perceived social support and the SPECTRA's psychosocial functioning. Methods: 184 patients in a private outpatient cardiology clinic completed a packet of self-reports. In this study we investigate interpersonal factors that relate to adherence. Participants completed Inventory of Interpersonal Ambivalence (IIA-6), Malignant Self-Regard Questionnaire-Short Form (MSRQ-S), Experiences in Close Relationship-Short Form (ECF-S), the Multidimensional Scale of Perceived Social Support (MSPSS), and the SPECTRA: Indices of Psychopathology. Results: The IIA-6 showed good internal reliability (Cronbach alpha = .86) and

principal component analysis showed that it was essentially unifactorial (eigenvalue of 3.60 accounting for 60% of the variance). Results show that IA is positively correlated with both attachment dimensions, SPECTRA's general psychopathology index, and malignant self-regard. IA was negatively correlated with perceived social support of friends, family, significant other and overall perceived social support, as well as SPECTRA's psychosocial functioning scale. Conclusion: The IIA-6 demonstrated good reliability and showed good construct validity. We would expect that people who have a fearful-avoidant attachment style would perceive less support from others as they have a poor model of others. We also expected that people who score high on this measure would have poorer psychosocial functioning and demonstrate more psychopathology. We would also expect that this measure of IA (or fearful avoidant attachment style) would positively correlate with a measure of malignant self-regard. People who score high on malignant self-regard demonstrate a punitive self-view where they are prone to depression, shame, guilt, feelings of inadequacy. For this reason, we feel it makes sense that the IIA-6 and malignant self-regard are positively correlated as there is some commonality with the person's view of self as poor in relation to others.

No. 78

Hypoxia as an Inductor of Insomnia and Depression Symptoms Among Osa Through Hif-1Alpha: Bdnf Signaling Pathway

Poster Presenter: Agata Gabryelska

Co-Authors: Szymon Turkiewicz, Marta Ditmer, Marcin Sochal

SUMMARY:

Background. Obstructive sleep apnea (OSA) is characterized by recurrent pauses in breathing during sleep leading to nocturnal desaturations, sleep fragmentation, and further excessive daytime sleepiness. Therefore, OSA patients are at high risk of suffering from complications from psychiatric disorders. It has been observed that the brain-derived neurotrophic factor (BDNF) signaling pathway is involved in the development of depression and insomnia. This pathway can be

activated by the hypoxia-inducible factor 1 (HIF-1), which activity depends on its alpha oxygen sensitive subunit. The study aimed to evaluate HIF-1alpha, mature BDNF, and proBDNF levels among OSA and healthy individuals, their circadian changes, and their association with insomnia and depression symptoms. **Methods.** Sixty individuals underwent polysomnography (PSG) examination and based on the apnea-hypopnea index (AHI), were divided into 2 groups: OSA patients (AHI \geq 30; n=30) and healthy controls (AHI<5; n=30). Participants filled out questionnaires: Beck Depression Inventory (BDI) and Athens Insomnia Scale (AIS). Peripheral blood was collected in the evening before and in the morning after PSG. Protein concentrations of HIF-1alpha, BDNF, and proBDNF were measured using ELISA. Further OSA group was divided into subgroups based on the standard cut-off points: without (AIS (-)) and with (AIS (+)) insomnia symptoms (AIS>5) and without (BDI (-)) and with (BDI (+)) depression symptoms BDI (BDI>19). The study was funded by the Ministry of Education and Science (Poland) grant no. 0067/DIA/2018/47 and SKN/SP/496681/2021, and National Science Centre (Poland) grant no. 2018/31/N/NZ5/03931. **Results.** No differences between morning and evening BDNF and proBDNF levels were present, while an increase in morning HIF-1alpha (p=0.003) was observed. Morning proBDNF protein concentration positively correlated with HIF-1alpha protein level both in the evening (r=0.521, p=0.003) and in the morning (r=-0.421, p=0.020). Additionally, HIF-1alpha, BDNF, and proBDNF protein levels in the morning correlated with the mean desaturation level (respectively r=0.312, r=-0.436, and r=-0.323, all p<0.05). BDNF and proBDNF levels were higher in the AIS (+) group in the evening (both p<0.001) but not in the morning. However, the BDI (+) group had lower morning BDNF and proBDNF concentrations (p=0.047 and p=0.003, respectively) than the BDI (-). An increased level of the morning compared to the evening BDNF and proBDNF protein concentrations were achieved in the AIS (-) group (p=0.033 and p=0.035, respectively). **Conclusions.** The results suggest that hypoxia can as an inductor of insomnia and depression symptoms through activation of the HIF-1 - BDNF signaling pathway among OSA patients. Furthermore, diurnal changes in BDNF and proBDNF protein levels in OSA patients with exacerbated

insomnia symptoms indicate possible involvement of this signaling pathway in psychiatric complications in OSA patients.

No. 79

Hypoxia as a Possible Mechanism of Circadian Clock Dysregulation Among Obstructive Sleep Apnea Patients

Poster Presenter: Agata Gabryelska

Co-Authors: Filip Franciszek Karuga, Piotr Kaczmarek, Dominik Strzelecki

SUMMARY:

Background. Obstructive sleep apnea (OSA) is characterized by intermittent hypoxia causing nocturnal desaturations. The key regulator of oxygen metabolism is the hypoxia-inducible factor (HIF), with the alpha subunit being oxygen-sensitive. The circadian clock is composed of a set of genes, which function as activators – CLOCK and BMAL 1, and repressors PER1 and CRY1. Due to similarities in their structure, a bidirectional activation-repression relationship between them has been observed. The study aimed to evaluate HIF-1alpha, circadian clock protein levels among OSA and healthy individuals, their diurnal changes, and their association between each other and with polysomnography (PSG) variables. **Methods.** Forty individuals underwent PSG and based on the apnea-hypopnea index (AHI), were divided into 2 groups: OSA patients (AHI \geq 5; n=30) and healthy controls (AHI<5; n=10). Peripheral blood was collected in the evening before and in the morning after PSG. Protein concentrations of HIF-1alpha and chosen circadian clock proteins were measured using ELISA. **Founding:** National Science Centre (Poland) grant no. 2018/31/N/NZ5/03931. **Results.** A diurnal change in circadian clock protein levels was only observed in CRY1 – a decrease (p=0.049) from evening to morning among the OSA group, while a trend was present for PER1. An increase in circadian clock (CLOCK, PER1, and CRY1) protein levels was achieved in OSA compared to the healthy control group in both evening and morning measurements (all p<0.01), while no difference was observed in BMAL1 levels. Additionally, morning and evening PER1 and CRY1 correlated with OSA severity (r=0.336, p=0.034; r=0.418, p=0.007 and r=0.361, p=0.022 and r=0.392, p=0.012, respectively). Even

stronger correlations were observed for nonREM AHI. Out of activators, only the morning BMAL1 level was associated with AHI ($r=0.342$, $p=0.31$). Moreover, the evening level of activators (CLOCK, BMAL1) correlated with a total number of desaturation (TnD) ($r=0.399$, $p=0.022$ and $r=0.334$, $p=0.047$, respectively) and desaturation index (ODI) ($r=0.303$, $p=0.047$ and $r=0.365$, $p=0.021$, respectively) while for repressors – PER1 and CRY1 the association was observed with TnD only in the evening ($r=0.445$, $p=0.010$ and $r=0.374$, $p=0.032$, respectively) and for ODI both in the morning ($r=0.361$, $p=0.022$ and $r=0.332$, $p=0.036$, respectively) and in the evening ($r=0.392$, $p=0.011$ and $r=0.418$, $p=0.032$, respectively). Lastly, the evening CLOCK level correlated with the HIF-1 α level in the morning ($r=0.539$, $p<0.001$) and in the evening ($r=0.470$, $p=0.002$), while the evening CRY1 level was associated only with HIF-1 α protein level in the evening ($r=0.334$, $p=0.035$). **Conclusions.** OSA patients are at risk of developing changes in the circadian clock protein levels, which might be mediated through HIF-1 due to the presence of nocturnal, recurrent, and intermittent hypoxia. Further consequences of circadian clock dysregulation in OSA patients need to be examined.

The Impact of Medical Licensure Questions on Canadian Physicians With Medical Conditions: A Critical Policy Analysis

Poster Presenter: Erene Stergiopoulos, M.D., M.A.

Co-Authors: Maria Athina (Tina) Martimianakis, Ph.D., M.A., M.Ed., Juveria Zaheer, M.D., M.Sc.

SUMMARY:

Background: Medical licensure applications pose barriers to disclosure and help-seeking for physicians with medical conditions. Recent local and international guidelines recommend that licensure application questions focus on current functional impairment rather than the presence of diagnosis or past impairment. It is unclear whether Canadian licensure applications adhere to current recommendations. This study aimed to evaluate Canadian licensure applications' adherence to current recommendations, and to understand potential barriers to disclosing illness and seeking treatment based on current policy. **Methods:** We

collected medical licensure applications from the 13 medical regulatory authorities across Canada. We coded applications as "aligned" if they inquired only about current functional impairment. Using critical policy analysis, we analyzed language, framing, and implicit and explicit definitions of illness and impairment within applications, which determine the policy landscape for physician health in Canada.

Results: In Canada, 10 (76.9%) licensure applications were not aligned with current recommendations due to questions about historical rather than current impairment. Of these, 5 (38.5%) included questions about history of mental illness or addictions, irrespective of impairment. Across Canada, physician health and impairment were framed as a "fitness" and "professional conduct" issue, and frequently appeared alongside questions about criminal charges and professional lapses, creating potential stigma around health conditions, particularly mental illness and addictions. **Interpretation:** The majority of Canadian jurisdictions do not follow current recommendations for medical licensure policy, which poses potential barriers to disclosure and help-seeking for physicians, and can lead to negative impacts on both physician health and patient care.

Sunday, May 21, 2023

2023 Medical Student/Resident Poster Competition Award Ceremony (Not for CME)

SUMMARY:

The 2023 Annual Meeting medical student poster competition award ceremony. The poster competition is judged across five categories with one winner from each category - community psychiatry, clinical case studies, curriculum development, patient-oriented care and psychosocial research.

Community Psychiatry Award: Shimrani Banik from Albert Einstein College of Medicine

Clinical Case Studies: Elizabeth Monis from Campbell University/Cape Fear Valley Medical Center

Curriculum Development: Sahana Malik from the University of California San Diego

Patient-Oriented Care: Alexandra Yoon from the Children's National Hospital

Psychosocial Research: Ayanya Roy from Dell Medical School

A Unique Case Report on Myoclonus Secondary to Use of Synthetic Opioids and Synthetic Benzodiazepines

Poster Presenter: Nikita Sedani

Co-Author: Sukaina Rizvi, M.D.

SUMMARY:

As COVID-19 disrupted the drug market, the dark web became the new source to access new psychoactive substances (NPS), which have the possibility to be the new epidemic of the next generation. NPS, a type of designer drug, are categorized into four broad categories: synthetic stimulants, synthetic cannabinoids, synthetic hallucinogens, and synthetic depressants (1,2). Among the NPS, specifically, synthetic benzodiazepines and opioids have emerged in popularity. NPS are synthetically made by rearranging the molecular structure, creating endless derivatives of benzodiazepines and opioids with unknown complications. Novel synthetic opioids are derived from fentanyl and non-fentanyl compounds which are created into compounds namely U447700 or U44990. Similarly, in synthetic benzodiazepines the repositioning of classic benzodiazepine structure increases the affinity for GABA-A receptor resulting in fatal complications. We herein present a unique case report that highlights a drug of concern that could be a future public health risk. This case report presents a patient who overdosed on NPS, specifically a mix of synthetic benzodiazepine and opioids, causing myoclonus as a withdrawal symptom. Due to the emerging popularity of this drug, understanding NPS withdrawal symptoms is important for physician education for proper patient management. This case report highlights the importance of more awareness on designer drugs as they are emerging as a popular drug of choice.

Poster Session 4

No. 1

Facing the Unexpected: The Importance of Identifying and Treating Postpartum PTSD to Optimize Maternal and Fetal Health

Poster Presenter: Rachel Odermatt, M.D.

Co-Author: Keelan O'Connell

SUMMARY:

Introduction: Up to 45% of women who have undergone childbirth have reported psychologically traumatic birth experiences, and up to 25% report symptoms of postpartum posttraumatic stress disorder (PP-PTSD).¹ Unfortunately, PP-PTSD is often unrecognized and under treated because its symptoms -- mood changes, tearfulness, sleeplessness, withdrawal, avoidance -- may be labeled as "normal" during the newborn period. PP-PTSD can also be challenging to treat, as new parents are likely to face frequent reminders of their traumatic experience in caring for their newborn while juggling limited time, resources, sleep and the need for their own self-care.^{2,3} Although the American College of Obstetrics and Gynecology and the United States Preventive Services Taskforce recommend that obstetric care providers screen for postpartum depression and anxiety, there are no universal screening guidelines for these conditions or any screening recommendations for PP-PTSD.⁴ The significant negative influence of unrecognized and undertreated PP-PTSD on parenting behaviors, family relationships, altered maternal-child attachment and long-term maternal and child physical and mental health⁵⁻⁸ demonstrates the importance of timely recognition of signs, symptoms and risk factors.⁹⁻¹² This poster aims to increase awareness of the prevalence and subsequent health implications of PP-PTSD and to highlight the need for specific screening tools and effective treatment modalities. Case: Mrs. C is a healthy 38 year-old Hispanic female with no past psychiatric history who presents to the behavioral health outpatient clinic 4 months after the full-term, vaginal birth of her third child. At her 6 week postpartum checkup, she scored a 12/30 on the Edinburgh Postnatal Depression Scale. Her anxiety and low mood were normalized as "typical postpartum feelings." Mrs. C returned to work as a radiologist at 4 weeks postpartum at the same hospital where she delivered. Since then, she reports difficulty concentrating, citing intrusive, distressing

memories of her birth interfering with her ability to complete her daily tasks, and troubling feelings of detachment from her husband and children. She ruminates over debilitating feelings of helplessness, abandonment and loss of control during her labor after her “epidural didn’t take” and a “surreal, out-of-body experience” during her inadequate analgesia. She takes alternate routes to see consults to avoid the L&D ward. She reports shame and guilt for “operating in survival mode day to day,” since “baby and I are physically okay.” She feels debilitated by her symptoms but isolated and unsupported by loved ones due to COVID-19 isolation precautions. She is diagnosed with PP-PTSD and in the following 9 months demonstrates significant symptomatic improvement on Prozac 40mg and weekly trauma focused-CBT.

No. 2

A Priest and a Psychiatrist Walk Into a Bar: Collaboration Between Spiritual and Psychiatric Modalities and Practitioners

Poster Presenter: Anna J. Sheen, M.D.

Co-Authors: Jennifer Hong, M.D., Gaurav Gandotra, M.D.

SUMMARY:

Introduction Psychiatric pathology has significant association with spiritual, religious, and mystical elements. While these concepts were more closely related in the historical past, the association persists even in modern psychiatry. Public perception and cultural beliefs about psychiatric symptomatology, especially psychotic or somatic symptoms, often involve beliefs including good and evil, demons, possession, and supernatural knowledge. This literature review examines the role of psychiatrists in the context of these belief systems and possible collaborations with spiritual practitioners in the treatment of patients. **Methodology** A search of Google Scholar and PubMed electronic databases was conducted using search terms including “supernatural”, “mystical”, “demonic”, “religious figure”, and “collaboration” in various permutations. We selected 9 of the 49 initial search results to perform our narrative review. **Results** The treatment of conditions with prominent psychotic features are often associated with religious or spiritual

modalities. In a survey of 236 cases of multiple personality disorder, 28.6% reported an alter personality identified as a demon. In one Swiss study, 37.5% of 343 Protestant outpatients in a psychiatric clinic believed evil spirits, “bondage,” and/or “possession” to be possible causes of psychiatric problems. A suggested approach to treatment has been proposed, in which practitioners work with their patients’ perceptions of what they see or hear in their internal worlds, their belief systems, and what they remember from their pasts. Modalities such as hypnosis can augment the patient’s own metaphors and internal constructs to allow the power of their own imagination to produce healing. Religious practices like exorcisms have been suggested in a similar fashion, in which it enhances the reconstruction process by increasing the patient’s sense of internal safety and self-esteem. Generally, the use of culture-sensitive therapeutic techniques based on the patient’s religious and mystical explanatory model can be practiced in lieu of confronting the irrational nature of the patient’s psychoses with great therapeutic effect. **Conclusion** Public discourse about psychiatry as a field frequently involves concepts of individuality, spirituality, and the mystical. Often, psychiatrists are viewed as opposing these concepts - at best as doctors treating unique characteristics as pathology and at worst, as villains seeking to repress individuality and oppress the spiritually gifted. It is undeniable that psychiatry has a history of paternalistic and authoritarian practices that has done much to erode the public’s trust. Modern psychiatry, however, should prioritize cultural sensitivity and flexibility. The use of spiritual cures or interventions can potentially be an effective adjunct to traditional psychiatric treatment.

No. 3

Psiquiatría en Español: A Pilot Course for Bilingual Spanish-Speaking Psychiatry Residents

Poster Presenter: Catherine Castro, M.D.

Co-Authors: Yokarla Veras, M.D., Deborah Cabaniss, M.D., Roberto Lewis-Fernández, M.D.

SUMMARY:

Background: Language-concordant care is crucial to enhance health care quality and outcomes for

patients with limited English proficiency (LEP).¹⁻⁶ Most (65%) of the growing LEP population in the US is Spanish-speaking.⁷⁻⁸ Despite high demand for Spanish-speaking mental health care, availability of these services has declined 18% from 2014 to 2019.⁹ To date, no residency curricula in the US provide Spanish language instruction or help bilingual Spanish-speaking trainees expand their language skills in psychiatry training.¹⁰ **Methods:** An online needs assessment was carried out among 4 bilingual Spanish-speaking 2nd year psychiatry residents at one urban academic hospital serving a large Spanish-speaking community. Course objectives, curricula and instruction were tailored by results of the needs assessment with residency education and cultural psychiatry experts. Instruction was conducted in Spanish and included faculty-led lectures, case-based discussions and mock interviews. Pre- and post-surveys assessed residents' confidence in conversational, medical and psychiatric Spanish fluency; free-text responses assessed suggestions for course topics and goals and post-course completion reactions. **Results:** All 4 residents completed the assessment. One and 3 respondents reported providing care to monolingual Spanish-speakers "sometimes" or "often", respectively. All reported "rarely" receiving direct supervision from a Spanish-speaking attending. All were interested in receiving training in psychiatric Spanish to increase confidence and skills, especially in conducting basic psychiatric assessments, psychoeducation and psychotherapy in Spanish. From 11/2021 to 6/2022, all 4 residents participated in the course, which consisted of 8 one-hour sessions on Spanish-language clinical assessment, cultural concepts of distress and psychoeducation within a cultural framework and were led by fluent faculty with expertise in the patient population. Respondents reported higher levels of confidence in fluency in conversational Spanish than in psychiatric encounters. All 4 respondents reported receiving supervision in Spanish was "important" or "very important" to their residency education. **Conclusion:** A pilot course in psychiatric Spanish for bilingual Spanish-speaking residents was created and implemented to address a gap in linguistic fluency at a psychiatry residency program serving a large LEP population. Future courses will include supervised interviewing, discussing the impact of language and culture on

psychiatric symptoms and practicing therapy modalities in Spanish. To promote language-concordant care, psychiatry residencies should increase recruitment of bilingual trainees and faculty and implement foreign language curricula and supervision that promote bilingual mastery of core psychiatry competencies. Additional research is needed on best practices for developing, evaluating and promoting language-based psychiatric curricula to serve all LEP populations.

No. 4

The Impact of "VIP" Patient Status on Medical Education and Equitable Health Care: A Resident-Led Quality Improvement Initiative

Poster Presenter: Catherine Castro, M.D.

Co-Authors: Deirdre Caffrey, M.D., Destiny Price, M.D., Kavin Fatehchand, M.D., Ph.D., Melissa Arbuckle, M.D., Ph.D.

SUMMARY:

Background: Patients are considered to have VIP status when they are given special health care privileges because of their position in society or socioeconomic strata.¹⁻⁸ Common pitfalls of VIP patient care are well-documented in the literature.¹⁻¹⁰ However, there is little published research on the prevalence of these practices in academic institutions, their impact on trainees, and their role in perpetuating bias, structural racism, and healthcare disparities. **Methods:** Second-year residents created an anonymous online survey, consisting of 22 questions about residents' experience with VIP patient care. VIP patients were defined as patients verbally designated as VIP during clinical discussions. Direct involvement in VIP care was defined as being the resident assigned to the case. Indirect exposure was defined as witnessing VIP care while in the clinical setting without direct involvement. Multiple domains were assessed including perceived impact on clinical care, patient safety, ethical and equitable care practices, and resident education and wellness. Data collected was aggregated and free text responses were assessed for common themes using content and narrative qualitative analysis. As part of a quality improvement effort, the results were shared during a seminar for residents, faculty, and hospital leaders with the

recommendation to eliminate this practice. **Results:** Twenty-four residents across all training years, representing 52% of total residents in the program, completed the survey. Seventy percent of respondents reported experiencing direct involvement in VIP patient care and 30% reported indirect exposure to VIP patient care. Among residents who reported directly caring for VIP designated patients, 70% felt they learned less psychiatry compared to standard patient care and 70% felt medical decision-making was compromised and deviated from standard of care. In addition, 70% of all respondents reported witnessing co-residents experience burn-out while caring for VIP designated patients. Free text responses included reports of VIP care appearing to worsen disparities in access to care due to limited resources being diverted toward the VIP patient. The resident presentation was well-received and resulted in the immediate decision that trainees would not participate in VIP designated care, with a broader commitment to end these practices. **Conclusions:** Most residents experienced VIP care in the psychiatry services at one urban academic hospital. The survey results suggest that residents perceive VIP patient care to: compromise key ethical principles, perpetuate bias and unintended discriminatory practices that reinforce structural racism and disparate health outcomes, and negatively impact their education and wellness. This initiative suggests that focused resident-led scholarly work can lead to hospital-wide change. More research is needed to study the prevalence and impact of VIP care as well as barriers to its elimination.

No. 5

Insurance Claims Analysis Shows Healthcare Utilization and Costs Correlate With Social Determinants of Health in an Urban Population

Poster Presenter: Shimrani L. Banik, B.S.

Co-Authors: Howard L. Forman, M.D., Allison Stark, M.D., Scott Wetzler, Ph.D., Samantha Levano, M.P.H.

SUMMARY:

Background: Approximately 80% of modifiable health outcomes are associated with social determinants of health (SDoH) (Hood 2016, Remington 2015). There has been a growing body of

evidence in the past decade indicating that patients with unmet socioeconomic needs have higher healthcare expenditures (Pruitt 2018, Shier 2013). Recently, the Centers for Medicare & Medicaid Services released guidance for states to address SDoH in order to improve health outcomes and lower costs. This post hoc analysis compared the healthcare costs and utilization between patients who screened positive and negative for SDoH.

Methods: Patient-level data were collected from a retrospective, cross-sectional study and extracted from the electronic health record of a large urban health system. The health system adapted a standardized 10-item social needs screening tool from a widely used, validated instrument, the Health Leads screening toolkit (Fiori 2020). The screen addressed housing insecurity and quality, food insecurity, utilities, health transportation, medications, child or elderly care, legal services, family stress and safety (Fiori 2021). Adult patients (age 21-65) enrolled with a major Medicaid managed care plan and screened for SDoH between April 2018 and December 2019 were included in the analysis. This study interrelated the results of the first SDoH screener administered per unique patient with insurance claims for both medical and mental health in the 12 months following the date of screening.

Results: In this analysis, we examined data from 4,025 patients who had accepted the SDoH screener, including 1,116 (27.7%) who screened positive for at least one social need and 2,909 (72.3%) who screened negative for any social needs. The average annual cost per member who screened positive for at least one SDoH was \$8,591. The total annual cost was \$4,859 per member who screened negative. While the gross cost was much higher among those who screened positive, the breakdown of healthcare spending was comparable for the two groups: 34.5% for inpatient care, 24.0% for outpatient care, 3.4% for ER services, and 38.3% for additional services. Patients who screened positive had 6.2 PCP visits, while those who screened negative had 4.7 PCP visits. Patients who screened positive had 7.8 medical specialty visits and 3.7 mental health specialty visits, while patients who screened negative had 4.9 medical specialty visits and 1.7 mental health specialty visits. Those who screened positive averaged 3.2 ER visits and those who screened negative averaged 2.0 ER visits. **Conclusion:** Patients

who screened positive for at least one SDoH had almost double the cost and number of visits than patients who screened negative for any SDoH, which is consistent with the paradigm that unmet SDoH correlate with higher healthcare expenditures and utilization. The results from this study suggest that addressing SDoH might lead to better health outcomes and optimized utilization.

No. 6

“I Do Not Trust Any Sign Language Interpreters”: Practical Barriers in Treating a Deaf-Mute Patient With Schizophrenia

Poster Presenter: Ruth Corazon Llerena, M.D.

Co-Author: Ryan Lubarsky

SUMMARY:

Deaf-Mute patients with psychiatric illness are part of a community that require an assessment congruent with their unique cultural and linguistic features (1). This case concerns a 56-year-old Jamaican man, brought to the US as a teenager, mute and pre-lingually deaf secondary to meningitis in childhood, with a history of Schizophrenia, poor medication adherence, multiple psychiatric admissions, followed by an “Assertive Community Treatment” Team who provide psychiatric services to the patient in the community (2), with a past medical history of chronic abdominal pain. He was brought to the Emergency Room after unprovoked aggression towards a female tenant at his supportive housing. The patient endorsed auditory hallucinations and persecutory delusions of strangers targeting him because “they think I’m gay”. Reports of pre-lingually deaf individuals “hearing voices” has been consistent across studies (3). Some explanations of this phenomenon can be attributed to auditory experiences, such as residual hearing, and non-auditory experiences, such as sensing vibrations, perceptions of being signed into one’s mind, or delusions of being able to hear (4). Our patient related auditory hallucinations with his persistent abdominal pain. During his hospital course, the patient was non-compliant with prescribed Paliperidone 6 mg/day and was reluctant to use the ASL video interpreter service due to his paranoid delusions. Another major challenge was the inability of the ASL interpreter to fully comprehend the

patient’s ASL signs, which required the assistance of a second interpreter known as a “certified deaf interpreter”. This second interpreter is a deaf ASL user trained to gather the intended message from the patient’s gestural communication or non-fluent ASL and translate his statements into grammatically correct ASL to be signed back to a certified ASL interpreter, who then interpreted the modified statement into English (1). The use of a second interpreter is seldom done but was essential in our case. After dose titration to Paliperidone 9 mg/day, he showed clinical improvement and was discharged once receiving Paliperidone palmitate 234 mg Intramuscular with a second dose of 156 mg intramuscular the following week to be given in the community. To assess improvement of psychosis in a pre-lingual deaf patient, clinicians need to be aware of possible confounders such as the sensorial experience of hallucinations (1), a patient’s baseline dysfluency (disruption of the ongoing flow of speech due to environmental factors) (5), and keep in mind that written communication can be syntactically and grammatically incorrect due to ASL’s translatability (2). Additionally, our patient’s persistent paranoia towards the ASL interpreters hindered assessment of progress. It is important that the clinician recognizes these barriers to communication when treating a deaf patient to accurately distinguish psychosis from language deprivation.

No. 7

Schizo-Obsessive Disorder: Does Oil Mix With Water?

Poster Presenter: Mohamad Souheil El Zein, M.D.

Co-Author: Sharat P. Iyer, M.D.

SUMMARY:

Mr. O., a 59-year-old man with a past psychiatric history of schizophrenia and borderline personality disorder, with multiple prior suicide attempts and psychiatric hospitalizations, presented to the psychiatry consultation service endorsing suicidal ideations with intent and plan to jump in front of a train. The patient had drunk 6 liters of water prior to this admission, in response to ego-syntonic command auditory hallucinations. He was admitted to the inpatient medical service for severe hyponatremia, treated successfully with fluid

restriction, and subsequently admitted to the psychiatry inpatient service for continued active suicidality. Exploration of the patient's suicidality lead to the uncovering of a vicious cycle of symptomatology centered around the patient's ego-dystonic intrusive thoughts of incest towards his daughter that seemed to have generated strong feelings of guilt and compulsive suicidal behavior. The patient was treated psychiatrically with a combination of an antipsychotic medication and a selective serotonin reuptake inhibitor, and was discharged successfully from the psychiatric inpatient unit. In this poster, we shed light on the dichotomy of concurrent ego-syntonic psychosis and ego-dystonic intrusive thoughts, that were portrayed in this curious case that we believe falls under a distinct clinical entity called schizo-obsessive disorder. Schizo-obsessive disorder has been suggested to classify patients who show both schizophrenia and obsessive compulsive disorder (OCD) diagnoses. It is not defined in the DSM-V-TR and remains poorly studied, but we provide a review of the available literature to date. We also highlight some challenges that face clinicians in diagnosing key aspects of this clinical entity, identifying the need for more research to further understand the pathophysiology of this dual clinical entity and its effect on prognosis, clinical progression and treatment.

No. 8

Waxing and Waning Psychosis With Catatonia: An Unusual Presentation of First Episode Psychosis

Poster Presenter: Mohamad Souheil El Zein, M.D.

Co-Author: Razieh Adabimohazab, M.D.

SUMMARY:

Miss L., a 24-year-old-woman with no past psychiatric history, was brought to the psychiatric emergency department by her family with the chief complaint of strange behavior and inability to sleep or eat for the previous 3 days. Upon evaluation, she was deemed acutely psychotic and was subsequently admitted to the psychiatric inpatient unit for stabilization. Throughout her admission, the patient displayed curious psychotic and catatonic symptoms that waxed and waned with little to no psychopharmacological intervention. Furthermore, the patient's inability to recall the events leading to

her hospitalization and reported delusions centered around sexual assault opened the door for new differential diagnoses to emerge to the surface, like substance intoxication or dissociative amnesia secondary to sexual trauma. We also considered several differential diagnoses that included partial epilepsy, delirium and anti-NMDA encephalitis. A thorough workup was done to rule out these conditions. In the end, a diagnosis of a first break of schizophrenia spectrum disorder was made. In this poster, we discuss this patient's curious presentation, highlighting the importance of clinical judgment in recognizing unusual presentations of first episode psychosis and establishing an appropriate workup to rule out possible diagnoses that can explain the presented symptoms.

No. 9

Utilizing Novel Care Coordination Strategies to Manage a Rare Case of Non-Suicidal Self-Mutilation in a Patient With Schizophrenia

Poster Presenter: Ashna Khanna, D.O.

Co-Author: Davin Agustines, D.O.

SUMMARY:

Engaging patients in mental health care can be especially challenging in large urban mental health care systems. This often results in repeated psychiatric hospitalizations and worsening medical co-morbidities. In Los Angeles, a concerted effort has been made to innovate new mental health treatment modalities to help patients with severe mental illness. One novel approach is called Full-Service Partnership (FSP). This program involves an intensive outpatient case management team that finds and works with patients with severe mental illness to engage them in treatment and help to decrease psychiatric and medical co-morbidities [1]. We will detail one such case of Mr. R, a 42-year-old man with schizophrenia who was brought in by his FSP team after he developed a rare case of non-suicidal self-mutilation (NSSM). His psychiatric history was complicated by substance abuse and chronic homelessness. When the outreach FSP team first encountered Mr. R, he had wrapped his left second digit in a rubber band, cutting off circulation. The result was the development of dry gangrene; the digit later autoamputated. The FSP team convinced

him to go to the hospital, where he received wound care and psychiatric treatment. While he demonstrated some improvements in the linearity of thinking and cognitive processing, he did not gain insight into the permanent damage he was inflicting. Shortly after discharge, Mr. R was brought in by his FSP team again after he tied rubber bands around his distal left third digit, resulting in dry gangrene. After intensive intervention by his FSP team and psychiatric team, Mr. R developed some awareness of the importance of remaining involved in psychiatric treatment. Although he did not develop any understanding of the functional damage he was inflicting upon his hands, he did not engage further in NSSM. Broadly, NSSM encompasses any direct act of destruction aimed at one's tissue without suicidal intent [2]. It can be sub-classified into three categories: major (eye enucleation, genital mutilation, limb amputation), stereotypic (head banging, finger biting), and superficial (cutting, burning) [2]. Of the three categories, major NSSM tends to occur as a single sporadic episode [2]. As seen in Mr. R, repeated autoamputation of digits is highly uncommon, with only one previously documented case identified through a PubMed search [3]. While the motivation to perform NSSM varies across patients, the most significant risk factors include past self-injurious behavior, religious delusions, delusions of reference, and auditory command hallucinations [4, 5]. Fortunately, the FSP team successfully motivated Mr. R to engage in ongoing mental health and medical treatment, and he has not committed any further in NSSM to date. This case emphasizes the challenges in caring for patients with severe psychiatric illness and the importance of utilizing novel collaborative approaches to help patients.

No. 10

First-Episode Psychosis and Waldenström Macroglobulinemia: A Case Report

Poster Presenter: Daniel J. McNeil, B.S.

Co-Authors: Sylvia Wajswol, D.O., Suzanne Holroyd, M.D.

SUMMARY:

Waldenström Macroglobulinemia (WM) is a lymphoproliferative disorder of B-cells.¹ Termed a

lymphoplasmacytic lymphoma, the abnormal production of lymphocytes and plasma cells cause hypersecretion of IgM antibodies.² While most commonly a dysplasia of the bone marrow, malignant cells can invade the central nervous system, a phenomenon known as Bing-Neel (BN) syndrome.³ It is established that psychiatric manifestations, such as first-episode psychosis, may be a presenting symptom of hematologic⁴ and oncologic disease processes, including WM/BN.^{5,6} Additionally, hypotheses about the role inflammation plays in psychosis is an evolving research area; individuals experiencing a first-episode psychosis have shown to display clinically significant inflammatory markers.⁷ Yet, to our knowledge, no published literature exists on the psychiatric perspective or management of WM/BN. Our case, Mr. L., is a 65-year-old male living in Appalachia admitted to a state psychiatric hospital with persecutory delusions in the context of a 70-pound weight loss in three months. He had no prior psychiatric history, and he reported significant recent stressors, including an extramarital affair and divorce. Mr. L.'s delusions pertained to a "hit and run," where he felt that he was being followed by drones and police after hitting the side mirror of another car and driving away. He believed that his water supply was poisoned, his barn was full of people monitoring his behavior, and the wiring around the community had been changed to listen to his conversations. On admission, his protein was elevated at 10.6 g/dl, and in conjunction with ongoing syncopal episodes, hematology/oncology was consulted. An M-spike of 2.7 g/dl was found on serum protein electrophoresis, and a bone marrow biopsy showed involvement by a low-grade B-cell lymphoma with plasmacytic differentiation. Mr. L. was diagnosed with WM, and he is currently being treated with zanubrutinib, a tyrosine kinase inhibitor. Psychiatrically, throughout his two-month hospitalization, olanzapine was prescribed for Mr. L.'s psychotic symptoms, and it was titrated up from 2.5 mg to 15mg. For control of depressive symptomatology, 37.5 mg venlafaxine and 15 mg mirtazapine were prescribed. Venlafaxine was increased to 225 mg. Mr. L.'s mood had significantly improved, and paranoia had resolved completely by the time of discharge. Outcomes suggest psychiatric and hematologic/oncologic treatment may be

needed for symptom control, with the nature of this novel case pointing to a potential immune dysregulation manifestation of psychosis in WM/BN.⁸ Further experimental research, however, is necessary to understand possible etiologies behind psychiatric presentations in comorbid systemic disease. Future directions regarding interdisciplinary collaboration will be discussed.

No. 11

First Do No Harm: A Case of Exquisite Sensitivity to Neuroleptics in a Young Active Duty Service Member With First Episode Psychosis

Poster Presenter: Morgan Schmidt, M.D.

Co-Authors: Laura Marrone, M.D., Nicole L. Hadler, M.D.

SUMMARY:

Here we present the case of a 20-year-old Hispanic male who initially presented to the inpatient psychiatric unit with first episode psychosis, who was unable to tolerate several antipsychotics due to sensitivity to dopamine antagonism. He was initiated on oral aripiprazole 5mg daily for treatment of a primary psychotic disorder. After 3 days of treatment, he developed acute dystonia with oculogyric crisis, and aripiprazole was subsequently discontinued. He was referred to a comprehensive, multidisciplinary First Episode Psychosis outpatient treatment program where he declined medications. He was later rehospitalized due to psychosis and lack of attendance to activities of daily living (ADLs). During hospitalization, he declined oral medications and was treated initially with intramuscular haloperidol and developed acute dystonia with torticollis. Haloperidol was discontinued and he was initiated on olanzapine in combination with a brief course of benztropine. After discharge, he was transitioned from olanzapine to oral haloperidol with a slow titration due to metabolic risk. After one week on haloperidol 5mg nightly, he developed Neuroleptic Malignant Syndrome and required medical hospitalization. After a brief period off neuroleptics, he was started on cariprazine, which was eventually titrated to 3mg daily with good effect. CYP genotyping was obtained due to his inability to tolerate several antipsychotics, which showed the patient was a poor metabolizer of CYP3A5 and an

intermediate metabolizer of CYP2C19, but otherwise did not provide an explanation for the observed adverse drug reactions. In this poster, we will discuss the challenges in treating a patient with such severe sensitivity to side effects of neuroleptics, the clinical decision making underlying the antipsychotics trialed, and the current utility of pharmacogenetic testing in such patients.

No. 12

Clinical Complexities in Treating Schizophrenia and Movement Disorders

Poster Presenter: Arley Giraldo

Co-Authors: Mary-Anne Hennen, Banu Karadag

SUMMARY:

Dopamine is known to be a central player in the pathophysiology of various disease processes, including schizophrenia and Parkinson's disease (PD)[i]. Prevalence of psychotic disorders among those with PD is increased[iii]. This neurotransmitter has many clinical implications because of its diverse action via four major dopaminergic CNS pathways involved in movement, cognition, pleasure-reward circuits and endocrine function. In this case report, we highlight derangements in multiple dopamine pathways and approaches to management. BP is a 54-year-old male with a history of intellectual disability and schizoaffective disorder with multiple prior hospitalizations and recent discharge from a long-term state hospital 2 months prior, who presented to the emergency department from his boarding home with worsening tremors, depressed mood, and suicidal thoughts secondary to command auditory hallucinations, despite compliance with his outpatient medication including monthly long acting injectable paliperidone 156 mg. Patient also experienced progressively worsening bilateral hand tremor for years, which worsened over the past 2 weeks. Despite titration of medications, he remained severely disorganized, hallucinating and suicidal with a plan and intent despite multiple treatment trials including ziprasidone 40mg twice daily. Additionally, he required de-escalation and nearly round-the-clock PRN antipsychotic medications for agitation due to concerns for safety. The day of starting escitalopram 5mg daily for persisting depression, he was noted by staff to be non-verbal, extremely tremulous, restless,

visibly diaphoretic and was found with hyperreflexia, with minimally-reactive mydriasis, upward Babinski sign bilaterally, and cogwheel rigidity. Due to rapid worsening of symptoms, rapid response was called and the patient to be transferred to medical floors. Dopamine is believed to play opposing roles in different pathways—elevations in dopamine within the mesocortical and mesolimbic pathways for the psychosis and loss of dopaminergic activity within the nigrostriatal pathway leads to gross motor dysfunction seen in Parkinsonian symptoms[i, ii]. Specifically, parkinsonian symptoms are associated with higher levels of D2 blockade[iv]. While novel CT imaging that traces dopamine transporter activation is helpful in diagnosing drug-induced Parkinsonism, its benefit for individuals with underlying PD is unclear. Though these patients are at risk of developing drug-induced parkinsonism at a higher rate and more quickly than those with no underlying movement disorder[v]. Treatment options for patients suffering from psychotic disorders who have comorbid PD is limited. While medications such as clozapine and quetiapine are well-tolerated and effective antipsychotic medications in these patients, the only FDA-approved treatment for psychotic symptoms in those suffering with PD is the atypical antipsychotic pimavenserin, which itself is difficult to access.

No. 13
Using Machine Learning to Predict Opioid Use Disorder in the 2019 Treatment Episode Data Set (TEDs-a)

Poster Presenter: Shaan Kamal

Lead Author: Prakhar Bansal

SUMMARY:

The Treatment Episode Data Set: Admissions (TEDS-A) is a national dataset of annual admissions to substance use treatment facilities across 34 different states. The dataset, containing information on 1,864,367 admissions in 2019, includes data for patients that were admitted to a substance use treatment facility including their diagnosis, thorough substance use history (ie age of first use, substances used, method of use, etc), geographic location of residence, living arrangements, employment status, and financial situation. Within the dataset, 21.6% of

admissions carried a primary diagnosis of opioid dependence. Machine learning can allow for large datasets to be processed and analyzed to create models that can discern underlying patterns and make predictions on unseen data. In this work, we create Random Forest models in the Scikit-learn package that are trained on TEDS-A data to predict if individual admissions had a diagnosis of opioid dependence or not. In order to preprocess the data, we first removed any admissions data that had incomplete or missing data for any survey question. This resulted in 695 admissions with complete data for all survey questions. We then removed all survey questions regarding substance use (ie if an individual had used other substances, what route they use to administer substances, etc), leaving only demographic information in the dataset. We then used a nested cross validation approach with 10 inner and 10 outer folds and no hyperparameter optimization to predict if an individual admission carried a diagnosis of opioid dependence or not. Our models had greater than 80% accuracy, specificity, and sensitivity when making these predictions. Although these results are preliminary and further model refinement is ongoing, they suggest that large scale demographic data can potentially be used to identify opioid dependence in patients that are being seen in substance use treatment facilities. Such models could be used to aid clinicians in diagnosis, identify better resource allocation for specific patient/geographic populations, and potentially identify non-obvious indications for the evaluation of opioid dependence in patients.

No. 14
False-Positive Fentanyl Testing With Antipsychotics: A Case Report

Poster Presenter: Sungsu Lee, M.D., Ph.D.

Co-Authors: Christine Ly, M.D., Ph.D., Janice C. Lau, M.D., Jennifer Cheung

SUMMARY:

Introduction: Illicit opioid use poses significant health challenges worldwide. Of specific concern is the increase in the use of fentanyl, a synthetic opioid, as well as its increasing presence as a contaminant in other illicit substances. This is in the context that up to 40% of patients with

schizophrenia or other psychotic disorders are estimated to have a co-morbid substance use disorder. Urine drug screens, including for fentanyl, are often used to screen for ongoing substance use. However, with these screening assays, there is potential for cross reactivity with certain medications, which could result in a false positive result. A false positive result may be of significant consequence to patients, such as dismissals from substance abuse treatment or pain management programs. Case: We present the case of a 29-year-old patient with a history of schizoaffective disorder who was admitted to an inpatient psychiatric unit for worsening auditory hallucinations and suicidal ideation. Her medication regimen included clozapine, venlafaxine, trazodone, and prazosin. Of note, her clozapine dose was increased prior to her admission to the hospital. Her urine drug screen on admission, performed by immunoassay, was negative except for fentanyl, which she vehemently denied using, and her prior urine drug screens a year prior had been negative. Confirmatory testing by mass spectrometry at an outside lab was negative for fentanyl, consistent with the patient's denial. Discussion: Our case is the first in our knowledge to demonstrate this potential for a false positive result specifically with clozapine. There is limited data regarding potential for fentanyl immunoassay cross-reactivity with different antipsychotics. It has been reported that both oral and intramuscular forms of risperidone can cause a false-positive result on a fentanyl immunoassay. It has also been reported that ziprasidone may also cause a false positive fentanyl result. The exact mechanism of this is not fully understood. It is speculated that the shared piperidine between fentanyl and risperidone may be responsible for the cross-reactivity. It is important to note that the antibodies used in immunoassay may have cross-reactivity to a variety of other compounds besides fentanyl. Manufacturer testing in the SEFRIA immunoassay kit reveals the potential for cross-reactivity with many psychiatric medications, including fluoxetine, haloperidol, paliperidone, and chlorpromazine. Conclusion: These results demonstrate both the limitations of urine fentanyl screens, as well as the need for consideration of confirmatory testing if a positive result would alter clinical decisions for a patient.

No. 15

A Rare Case of Cannabis Withdrawal Precipitating First Manic Episode

Poster Presenter: Preetam Nallu Reddy, M.D.

Co-Authors: Parameshwaran Ramakrishnan, Jane Kang, Charles Jenson

SUMMARY:

Mr. T, a 21-year-old Caucasian male with a history of chronic heavy marijuana use and nicotine use, presented for psychiatric inpatient admission with recent onset of manic symptoms. The patient presented with symptoms of distractibility, impulsivity, grandiosity, racing thoughts, psychomotor agitation, decreased need for sleep, and talkativeness for greater than one week, with noted loss of functioning. The patient's UDS was negative on admission, and medical causes of symptoms were ruled out, thus indicating a diagnosis of Bipolar 1 Disorder for the patient. The patient and his family denied any similar symptoms from the patient in the past, indicating that these were first break manic symptoms. Of note, the patient stated that he suddenly stopped using marijuana a few days prior to psychiatric hospitalization. This led to the emergence of cannabis withdrawal symptoms, with nausea as the primary symptom, shortly prior to the emergence of manic symptoms. The patient was initially treated with the combination of Depakote, Abilify, and Cogentin, with his symptoms improving over the course of two weeks. However, the patient developed new onset visual hallucinations, delirium, and blurred vision, which led to the discontinuation of these medications, and the initiation of Oxcarbazepine and Risperidone, on which the patient's mood stabilized, prior to discharge. The patient's delirium symptoms, visual hallucinations, and blurred vision also dissipated with the change in the medication regimen, raising suspicion that these symptoms were side effects of his previous medications. The patient has continued with psychiatric care at our outpatient clinic, and has done well on Risperidone and an optimized dosing of Oxcarbazepine. It is interesting to note the timing of this patient's new onset manic episode, shortly after he stopped using marijuana and experienced cannabis withdrawal symptoms. Based on our literature review, there have been several cases of first break psychosis and depression following

cannabis withdrawal. However, it appears that post-cannabis withdrawal manic symptoms are a rare finding. In this poster, we compare our case findings with other similar cases, and highlight the need for future studies on cannabis withdrawal, in order to further investigate a potential causal association between cannabis withdrawal and bipolar disorder.

No. 16

Perceived Stigma and Discrimination in the Emergency Department Amongst Those With Opioid Use Disorder: A Qualitative Study

Poster Presenter: Christine Ciaramitaro, M.D.

Co-Authors: Morgan Alexander, M.D., Danielle Gainer, M.D., Sydney Silverstein, Ph.D.

SUMMARY:

Background:The opioid overdose epidemic continues to be a significant and growing problem across the United States, particularly in areas such as Montgomery County, Ohio, the setting of this research. In 2017, Montgomery County had the highest per-capita overdose rate in Ohio, during a year that Ohio had the second-highest per-capita overdose rate in the USA. Hospitalizations for non-fatal overdose or other drug-use related issues are also on the rise; research has shown that people with opioid use disorder frequently utilize emergency departments, with SAMHSA estimating 1,626 visits per 100,000 population to be related to drug use. However, research has also shown that people with SUD often experience stigma/discrimination in hospital settings by healthcare workers. In light of the high rates of overdose, this research aims to characterize the experiences of people with OUD in hospital emergency departments in order to understand how stigma and discrimination impact engagement with care. **Methods:** Mixed-method interviews consisting of a structured survey and open-ended, qualitative interview were conducted with a sample of 20 adults living in the Dayton, OH, metropolitan area. To be eligible for the study, participants had to be 18 years of age, self-report illicit opioid use in the past six months and self-report past six months either a) experience of non-fatal overdose or b) incarceration experience. Interviews were transcribed in their entirety, and qualitative data was coded using a

qualitative analysis software, *Taugette*, and then analyzed thematically by the study team. **Findings:** These interviews revealed a common theme of negative experiences in emergency department settings. Major themes that were elicited include disrespect from providers, stigma due to substance use, dismissive attitudes of health care workers, lack of resources provided, and fear of legal ramifications. Multiple participants stated that they would rather detox at home after receiving naloxone for an overdose, rather than in an emergency room where they are treated poorly. **Discussion:** Perceived stigma and poor quality of care can become an overwhelming barrier to care, leading people to leave against medical advice, not receive adequate medical care, or miss the chance for additional support/referrals. These negative perceptions of the health care system can also prevent people from seeking medical care in the future, potentially increasing morbidity and mortality. Better understanding of patients' perceptions on emergency room care and specific barriers to seeking treatment is the first step to making health care more accessible and beneficial for those belonging to this vulnerable population.

No. 17

Non-Stimulant Therapy for ADHD Is Associated With Prescription Stimulant Misuse During Adolescence

Poster Presenter: Kennedy Werner, B.S.

Co-Authors: Timothy Wilens, M.D., Sean Esteban McCabe, Ph.D., Vita McCabe, John Schulenberg

SUMMARY:

Introduction: There is a need for more research on the associations between non-stimulant therapy for ADHD and prescription stimulant misuse. The aim of this analysis was to assess whether non-stimulant therapy for attention-deficit/hyperactivity disorder (ADHD) is associated with prescription stimulant misuse during adolescence. **Methods:** Data were from sixteen annual surveys (2005-2020) of nationally representative samples of US 10th and 12th grade students (N=150,395) surveyed via self-administered questionnaires. The sample represents a population that was 51.0% female, 55.0% White, 11.6% African American, 15.6% Hispanic, and 17.8%

other race/ethnicity. Design-based logistic regression analyses tested the associations between age of onset and duration of stimulant medication therapy for ADHD and stimulant misuse, controlling for potential confounders. We used population controls (i.e., non-ADHD and non-medicated ADHD youth) and youth who initiated stimulant therapy for ADHD at ≤ 9 years old for longer duration (≥ 6 years) as reference groups to compare to those who received non-stimulants only. Prior work has shown that youth who are treated early with stimulant medication for ADHD for longer duration tend to have the lowest risk of substance use and misuse during adolescence relative to other stimulant treated subgroups. **Results:** An estimated 11.5% of youth received stimulant or non-stimulant therapy for ADHD during their lifetime, including 3.3% of those who received non-stimulants only. More than one in ten of all youth reported past-year prescription stimulant misuse (10.4%). Youth who initiated only non-stimulant therapy for ADHD had significantly greater odds of past-year prescription stimulant misuse than population controls (AOR = 1.90; 95% CI = 1.67 - 2.17). There were no differences in the odds of prescription stimulant misuse among individuals on non-stimulant therapy for ADHD and those who initiated stimulant therapy at ≤ 9 years old for longer duration (≥ 6 years) (AOR = 1.21; 95% CI = 0.91 - 1.62). **Conclusions:** The non-stimulant therapy for ADHD group permitted youth with stimulant therapy for ADHD to be compared to a medication treated ADHD group without a history of prescription stimulants as well as population controls. While an association between non-stimulant therapy and prescription stimulant misuse was found, it is possible that prescription stimulant misuse occurred before non-stimulant therapy was initiated as we could not determine true causality. ADHD and its potential psychosocial effects (being bullied) or comorbidities (conduct disorder) could be contributing to prescription stimulant misuse. Future work is needed that accounts for these factors as well as ADHD severity, ADHD phenotype, non-stimulant therapy onset/duration, and specific non-stimulant medication. Clinicians are encouraged to monitor youth prescribed non-stimulant therapy for ADHD for potential prescription stimulant misuse during adolescence.

No. 18

Is Antidepressant Use Associated With Emotional Blunting? A Scoping Review

Poster Presenter: Mujeeb Uddin Shad, M.D., M.S.

Lead Author: Muhammad Youshay Jawad

SUMMARY:

Introduction: Despite frequent recognition of emotional blunting in the published literature either as a primary symptom of depression or as an adverse effect of antidepressants, there is no systematic research on this topic to our knowledge. We undertook this scoping review to assess the prevalence, clinical features, and the underlying reasons and management of emotional blunting, outlining the phenomenological and clinical gaps in research. **Method:** A systematic search was done until December 15th, 2021, to include all original studies (i.e., interventional trials, cohort & cross-sectional studies, case reports, and case series). All reviewed data were delineated to answer the pertinent clinical, phenomenological, and management questions related to the phenomenon of emotional blunting. **Results:** A total of 25 original studies were included in our scoping review. Emotional blunting was described as a persistent diminution of positive and negative feelings in depressed patients, who could subjectively differentiate it from their acute symptoms. However, the literature lacked the distinction between emotional blunting as a primary symptom of depression or an adverse effect of antidepressants. Common strategies to manage antidepressant-induced emotional blunting included dose reduction or switching to a non-serotonergic antidepressant. **Conclusion:** Emotional blunting was a significant patient-reported concern with antidepressants. Future research should clarify phenomenological and neurobiological constructs underlying emotional blunting to improve diagnostic and management skills.

No. 19

A New Challenge for Midazolam: Treatment of Catatonia

Poster Presenter: Connor Booker, M.D.

Co-Authors: Jacob Cross, M.D., Katrina Burns

SUMMARY:

Background Catatonia is a neuropsychiatric behavioral syndrome characterized by symptoms ranging from immobility or stupor to hyperactivity or agitation (1). It occurs in the context of underlying psychiatric, neurologic, or general medical conditions and is treated with benzodiazepines or electroconvulsive therapy. Due to national shortages of intravenous (IV) and intramuscular (IM) lorazepam, the gold-standard treatment for catatonia, physicians must seek out other efficacious treatment modalities for this medical emergency. We describe a case of catatonia and its successful treatment with IM midazolam and highlight the need for further investigation into this approach given lack of established guidelines. **Case Summary** A 20-year-old African-American female with no significant past medical or psychiatric history presented with bizarre behavior in the context of several days of substance use. Medical and toxicology workup was unremarkable except for cannabis on her urine drug screen. Her hospital course included psychotic behavior and agitation requiring restraints in addition to olanzapine, midazolam, and oral lorazepam. Several days into her admission, she began to demonstrate symptoms of catatonia. Her Bush-Francis score was 19, scoring for mutism, staring, immobility, posturing, negativism, and withdrawal. The latter of which prevented her from being able to tolerate oral medications, so she was given midazolam 4mg IM. Repeat Bush-Francis 30 minutes afterwards was 4, scoring for posturing, echopraxia, and negativism. She eventually transitioned to scheduled oral lorazepam and haloperidol, which effectively treated her catatonia and psychosis. **Discussion** There are benefits as well as limitations when using midazolam as an alternative agent. Research demonstrates that midazolam is the fastest-acting of all benzodiazepines, with a half-life of 2-6 hours (4). It is metabolized by the liver and is a 3A4 substrate, increasing the risk of drug-drug interactions. Other limitations include significantly delayed elimination of midazolam in those with cirrhosis or renal impairment (2,6). Despite the availability and affordability of midazolam, there are only a few case reports that have shown similar results for injectable midazolam to quickly diagnose catatonia and improve its symptoms (3, 5). In the setting of high

Bush-Francis scores and lack of established guidelines, we used midazolam to diagnostically evaluate and treat the patient, and then transitioned her to oral lorazepam. **Implications** - During a national shortage of parenteral lorazepam, the gold standard treatment for catatonia, we suggest a rapid-acting, affordable, accessible alternative treatment - IM midazolam proved an effective alternative to IV or IM lorazepam to assess for likelihood of a catatonia diagnosis and predict response to benzodiazepines - Future directions should include best practice guidelines for alternative management for catatonia other than lorazepam

No. 20

Aripiprazole: Examining the Clinical Implications of D2 Affinity

Poster Presenter: Adiba Anam

Co-Authors: Sean T. Lynch, M.D., Chloe Soukas, M.D., Nafiz Mosharraf, M.D., Dmitriy Gekhman

SUMMARY:

Background: Aripiprazole has high binding affinity for the dopamine D2 receptor, which is thought to be responsible for the antipsychotic effect, though Aripiprazole is not the most potent of the 2nd generation antipsychotics. Theoretically, Aripiprazole could displace or outcompete more potent antipsychotics, prompting decreased antipsychotic effect. We describe a case of Aripiprazole potentially worsening psychiatric symptoms by blocking Paliperidone. **Case:** Ms. A is a 43-year-old woman with schizophrenia, multiple inpatient hospitalizations, and a history of court-ordered treatment. She historically has had good response to oral and long-acting formulations of Risperidone and Paliperidone. Ms. A requested a medication change and was transitioned to Aripiprazole Lauroxil injection with plan for bimonthly administrations. Approximately one month after receiving her Aripiprazole Lauroxil injection, Ms. A presented to our CPEP due to symptoms of psychosis and was admitted to our inpatient unit. She was re-started on oral Paliperidone, titrated up to her previously effective dose, and was transitioned to Paliperidone Palmitate LAI. In contrast to prior admissions, she did not respond well to Paliperidone and displayed continued and worsened psychosis. **Discussion:** Prior

studies have examined how adding Aripiprazole to another, more potent D2 antagonist can cause a relapse in psychotic symptoms, however few studies have investigated the inverse relationship or mechanism. Those that have proposed mechanisms typically refer to Aripiprazole's partial agonist activity as the causative factor, rather than an impediment to antipsychotic binding which we have described. Prescribers should be aware of this potential interaction and carefully consider initiating long-acting injectable forms of Aripiprazole to avoid this phenomenon.

No. 21

Using Information Technology to Enhance Measurement-Based Care Practices in Emergency Psychiatric Services

Poster Presenter: Nastacia Chavannes, M.D.

Co-Author: Ahmad Hassan, M.D.

SUMMARY:

Background: In recent years, the healthcare landscape has shifted towards prioritizing quality of care over quantity. There is a growing emphasis on measurement-based care as an objective assessment of patient outcomes and care quality. Measurement-based care entails administering symptom rating scales in a systematic manner and using the results to guide clinical decision making at the individual patient level. Outpatient care settings are increasingly incorporating measurement-based care practices to assess progress and inform treatment planning. This review looks at how technology can be used to overcome common barriers to implementing MBC practices in emergency psychiatric services. **Methods:** A Pubmed search was conducted using search terms "measurement-based care and emergency mental health," "measurement-based care and emergency psychiatry," and "measurement-based care and emergency department," which yielded no relevant results. Search was expanded to identify common barriers to implementation of MBC practices and use of technology. **Results:** **Increased time was commonly reported as a significant barrier by both patients and clinicians. Collecting, entering, and analyzing measures are time-consuming and can interfere with the provider and patient's limited**

time together. When filling out forms, patients were also concerned about confidentiality. Studies showed that using information technology, such as handheld devices, for administering and interpreting assessments increased efficiency and reduced duplication of work. In a publicly funded community mental health center study, patients (N=200) stated that handheld devices provided privacy and were easier to use than paper forms. Data collected can be seamlessly integrated with an EHR, allowing for rapid extraction, analysis, and ultimately high-level tracking of care in a population of patients. An automated process to support documentation, combined with a feedback system, was shown to improve clinician engagement with measurement-based care. Conclusion: With more evidence and policies incorporating measurement-based care, institutions should consider the benefits of technological advances as part of their implementation strategy. According to research, information technology enables the full benefits of MBC to be realized without jeopardizing patient satisfaction or practitioner workflow. The use of measurement-based care in determining level of care as well as a visual aid in communicating clinical decisions to patients receiving emergency psychiatric services are areas for potential future research. Fundamentally, there is the possibility of improving not only individual patient outcomes but also the overall quality of mental health care.

No. 22

Challenges of Diagnosis and Management of Hypoactive Delirium

Poster Presenter: Nastacia Chavannes, M.D.

Co-Author: Kevin Lee, M.D.

SUMMARY:

Background: Delirium is defined as a brief disturbance in attention and awareness that indicates a change from baseline. Presentation can be hyperactive, mostly restless and agitated, hypoactive, mostly drowsy and inert, or mixed. Available data suggests about 50% of delirium cases are hypoactive but they are frequently misdiagnosed for depression or dementia. We present the case of a 70-year-old Caucasian female hospitalized for cardiac

valve repair with a history of depression on antidepressants, whom the consultation liaison team was asked to see for depression. The patient was 3 weeks post-op in the ICU at the time. The primary team noticed a change about 3 days post-op when the patient became much more somnolent throughout the day, less engaging while awake, and appeared withdrawn. On mental status exam, the patient was somnolent but arousable. Movements were slow with a slight resting tremor. Speech was soft, low volume, with trailing off of responses. Mood was reported as depressed with blunted affect. Thought process was sluggish. Cognitively, the patient was disoriented with poor attention, concentration, and recall. Patient was diagnosed with hypoactive delirium. The primary team inquired about any additional recommendations because the patient was deemed medically stable and her post-op recovery was contingent on her participation in rehabilitation. This review explores current interventions for hypoactive delirium. Methods: **Conducted a Pubmed search using keyword "hypoactive delirium treatment."** Results: Current recommendations emphasize optimizing underlying primary medical causes. Efforts to aid in orientation, improve sensory efficacy, promote sleep, reduce pain, and promote physical therapy/mobilization were found to reduce delirium incidence by 44%, with significant reductions in falls, lengths of hospital stay, and need for institutionalization. There is no evidence that antipsychotic/antidopaminergic and pro-cholinergic agents have a positive impact on long-term outcomes. One prospective cohort study with a small sample size found that methylphenidate improved psychomotor abilities and alertness. Two case studies and a literature review linked modafinil to improved daytime alertness, oral intake, and cognition, but sample sizes were too small for statistical analysis. Notably, haloperidol was the most commonly used and clinically studied. Two studies used aripiprazole and risperidone. However, there is little evidence for antipsychotic efficacy, and the evidence that is available is generally weak or circumstantial. Conclusion: **Hypoactive delirium is a sign of serious medical pathology found to be missed 42% of the time. Compared to mixed or hyperactive states, the subtype is associated with worse outcomes, including increased mortality, less reversibility, lower quality of life, and admission to**

a long-term care facility. More research is needed to validate potential psychopharmacologic interventions.

No. 23

Droperidol and Crack Cocaine Associated Dystonic Reaction: A Case Report and Literature Review

Poster Presenter: Andrew Baccari

Co-Author: Walter Kilpatrick

SUMMARY:

Acute dystonia is a psychiatric emergency often associated with antipsychotic and antiemetic use; it is theorized that the dopaminergic modulation of these medications within the basal ganglia of the brain are implicated in dystonic reactions. Risk factors associated with acute dystonia are high-potency dopamine blocking agents, male gender, young age, cocaine use, and previous history of dystonic reactions. Compared to other medications within the antipsychotic and antiemetic classes, Droperidol rarely has been reported in case studies of acute dystonia. Furthermore, little information is available on how illicit substance use, like crack-cocaine, can modulate one's risk of developing an acute dystonic reaction, in the setting of droperidol use. BP is a 24 year old man with a history of HIV, polysubstance use disorder (crack-cocaine), ADHD, anxiety and depression, who presented due to acute onset of abdominal pain, nausea, diarrhea, and found to have acute colitis. He was provided with 5mg droperidol IV in the emergency room setting due to nausea and rapid Altered Mental Status with behavioral disturbances. Shortly after administration of IV droperidol, the patient began twisting his arms and was noted to have lip smacking, concerning an adverse reaction to droperidol. He was subsequently treated with IV benadryl with improvement. Labs were notable for Lactate of 2.9, and positive UTox of: benzodiazepines, amphetamines, and opiates. Little information is known about how a patient's reported crack-cocaine use may increase his risk of developing acute dystonia in the setting of droperidol treatment. Results: Literature Review was conducted by searching through PubMed for case reports of dystonic Reactions involving Droperidol and Cocaine within the last 5 years, published in English. Literature review revealed 1 case report involving IV

droperidol and acute dystonia. This case report described acute dystonia immediately after the administration of 2mg IV droperidol and with resolution after its discontinuation and treatment with midazolam. No recent case studies found implicating crack-cocaine and acute dystonia, however, there were 2 case reports of methylphenidate associated with acute dystonia in the pediatric population published in 2021 and 2018. Both cases were treated with an anticholinergic medication with resolution of symptoms. Our patient BP reported near daily crack-cocaine use; while droperidol is not considered a high potency antipsychotic agent, his concomitant substance use may have increased his risk of experiencing an acute dystonic reaction. Conclusion: Providers should be aware of the risk factors associated with dystonic reactions, including recent crack-cocaine use, when utilizing dopamine blocking agents.

No. 24
Biomarker Variability, Severity of CORADS and Impact of Psychotropics on Course and Outcome of Neuropsychiatric Sequelae of COVID-19 ICU Patients.

Poster Presenter: Srinivas Kandrakonda

SUMMARY:

Introduction: There is growing evidence of neuropsychiatric presentations in patients of COVID-19, but literature is scarce on laboratory, clinical and radiological markers as well as impact of psychotropic medications during the course of hospitalization in critically ill patients. **Materials and methods:** We screened 430 ICU patients admitted to our tertiary care hospitals, out of whom 67 were diagnosed positively with definitive neuropsychiatric sequelae and receive psychotropic interventions during their hospital stay. We compared their D-dimer levels, C-reactive proteins, serum ferritin levels, serum procalcitonin and Vitamin D levels and further analyzed CORADS severity score with psychiatric severity and outcome. **Results:** The mean age of the patients was 42.38 years, majority (44.8%) of them belonged to 21-34 years with slight (52.2%) male preponderance and none of them were more than 60 years. We observed a 43.3% were having organic mood disorder and 37.3% of individual had

significant history of alcohol dependence while hypertension and diabetes mellitus were noted in 34.3% and 29.9% respectively. Only D-dimer levels were found to be significant and positively associated with outcome of psychiatric disorders ($p < 0.05$), accounting for 41% of covariance on linear regression analysis. **Conclusions:** Our study has found significant association of elevated levels of D-dimer variability but not the other laboratory biomarkers among various neuropsychiatric comorbid sequelae in ICU admitted COVID 19 patients. This particular observation might have potential for serum D-dimer levels to be possibly used as an early biomarker to screen or suspect for comorbid neuropsychiatric presentations. **Key words:** COVID-19, Neuropsychiatry, Laboratory Biomarkers, CORADS Score, Outcome

No. 25
Augmentation With Methylphenidate and Paliperidone LA in Adult ADHD Comorbid With Non-Compliant Schizo-Affective Disorder

Poster Presenter: Srinivas Kandrakonda

SUMMARY:

BACKGROUND: Adults with ADHD (A-ADHD) have co-occurring psychiatric disorders, including schizophrenia, mood, impulse control, and substance use disorders. It is associated with substantial childhood functional impairment and is a predictor of disadvantages extending into adulthood. As stimulants are often thought to work antagonistically to antipsychotics via opposing actions on dopamine (DA), clinicians may be wary of using stimulants in patients with or at-risk for psychosis or in non-complaint. ADHD is a common condition and likely a common comorbidity with schizophrenia and other Mood disorders. Controlled studies examining the risks of treating or not treating A-ADHD in those with psychosis, mood disorders and high co-morbid Schizo-affective states are needed to help navigate this clinical challenge. **METHODOLOGY:** Forty-one (N = 41) Non-complaint Schizo-affective with Adult ADHD (A-ADHD) subjects participated in a 6 weeks prospective follow-up study comparing treatment response with augmentation of Methylphenidate (Stimulant therapy) and Paliperidone LA subjects on admission. The primary outcome measure was

Clinical Global Impression- Efficacy Index (CGI-EI) and Motor Impulsivity-Barrats Impulsive Scale (BIS-MI) were administered pre-treatment and on 6 weeks post treatment along with Connor's Adult-ADHD self-rating scale. RESULTS: The mean CGI-EI and BIS-MI scores before (pre-treatment) and after (post-treatment) shows there is gradual decrease in the post treatment mean scores after they are treated with stimulant therapy. The cumulative mean of BIS-MI on admission and BIS-MI after 6 weeks of treatment was 13.01 (S. D=3.44) and paired t value of 4.50 with $p < 0.03$ shows there is statistically significant difference between pre treatment and post treatment, defining improvement in BIS-MI scores with post treatment even in CAARS score. The mean CGI-S illness score after 6 weeks of treatment is 6.71 (S. D=1.03) and paired t-value of 12.12 with $p < 0.04$ which is less when compared to CGI-EI score on admission. Adult ADHD-Inattentive subtype, relative to ADHD-Combined, was associated with higher risks of being non-compliant among Schizoaffective disorder ($p=0.05$). CONCLUSION: Treatment with A-ADHD medications may reduce comorbidity. Non-compliant psychiatric comorbidities have a high prevalence in patients with adult ADHD. Our results also indicate that the psychiatric comorbidity in Adult ADHD is higher than expected and need careful combination protocols for managing both in acute and chronic settings. There is a need for better targeted diagnostic tools to detect psychiatric comorbidity as an essential component in providing care as well as new insights into the nature and mechanisms of its underlying biological associations at receptor level.

No. 26

Is There a Mediating Role of Mood and Sleep in Relationship Between Inflammation and Subacute or Chronic Pain?

Poster Presenter: Noah D. Lee

Co-Authors: Patrick Walsh, Ph.D., M.P.H., Paul Geha, M.D.

SUMMARY:

BACKGROUND: Chronic low-back pain (CBP) is one of the leading sources of disability globally, yet its pathogenesis is yet to be elucidated. Inflammation is thought to have a potential role in the physiology of

chronic pain but that role may be confounded by chronic pain comorbidities. Mood symptoms (e.g., depression and anxiety) and sleep impairment are common among those with chronic pain, and each of these comorbid symptoms could mediate the association between pain and inflammation. This study aims to compare the level of two peripheral biomarkers of inflammation (TNF- α and BDNF) among three groups (chronic pain, subacute pain, and healthy control) while accounting for mood and sleep symptoms among the subjects. DESIGN and SETTING: A case-control study based in an academic medical center. PARTICIPANTS: We recruited a total of 64 subjects (mean age: 31.9 ± 10.3 ; female: 59.4%). Subjects had CBP for > 1 year ($n = 18$), subacute back pain (SBP) for 6-12 weeks ($n = 23$), or were healthy control (HC) subjects without any pain ($n = 23$). MEASUREMENTS: For all subjects, mood symptoms were assessed on the Beck Depression Index (BDI) and Beck Anxiety Index (BAI), and sleep quality was assessed on the Pittsburgh Sleep Quality Index (PSQI). For SBP and CBP groups, pain was assessed on the 10-point Visual Analogue Scale (VAS), Neuropathic Pain Scale (NPS), Pain Catastrophizing Scale (PCS), Pain Disability Index (PDI), and PainDETECT questionnaire. Peripheral blood samples were obtained from all subjects, with levels of in-vitro production of tumor necrosis factor α (TNF- α) and brain-derived neurotrophic factor (BDNF) measured by immunoassays. RESULTS: All three groups were similar in sociodemographic characteristics and body mass index. The mean VAS scores were significantly higher ($p < 0.05$) in the CBP group than in the SBP group. Subjects in both CBP and SBP groups had significantly higher mean BDI, BAI, and PSQI scores compared to the HC group. After adjustment for age and sex, the TNF- α level for the CBP group, but not SBP, was significantly higher ($p < 0.05$) than the HC group while there was no difference in BDNF levels across the three groups. The association between CBP and higher TNF- α levels remained significant when adjusting for BDI, BAI, or PSQI scores. In the CBP group, TNF- α was negatively correlated ($p < 0.05$) with PSQI scores while BDNF was positively correlated ($p < 0.05$) with VAS scores. In the SBP group, TNF- α was negatively correlated ($p < 0.05$) with BAI only. CONCLUSION: Our study replicates prior reports of increased inflammation in CBP patients. A mediating role was

however not indicated for mood symptoms and sleep quality for the association between the TNF- α and CBP. Our study suggests that inflammation appears to have an independent role in pathophysiology of CBP.

No. 27

Implementing a Holistic Review Process for Psychiatry Residency Screening and Interviews

Poster Presenter: Sahana Malik, M.D.

Co-Authors: Allison Cabrera, Lawrence Malak, M.D., Anaheed Shirazi, Kristin Cadenhead

SUMMARY:

Background: Despite efforts to improve diversity and inclusion, underrepresented minorities in medicine (URM) within psychiatry are 16.2% in residents, 8.7% in faculty and 10.4 % in practicing physicians, lower than that of the US population (32.6%). Increasing diversity and inclusion of underrepresented socioeconomic, gender and over minoritized backgrounds may alleviate disparities in delivery of care within psychiatry. A holistic review process may address deficiencies in representation. This approach de-emphasizes standardized test scores and encourages consideration of the “whole” applicant and their contributions to the field of medicine given their unique background. **Methods:** To align our recruitment efforts with inclusion and diversity values, we implemented a holistic review process in the 2021-2022 application season within the psychiatry residency program at the University of California San Diego. Data from 2016 through 2022 was extracted from the Electronic Residency Application Service. The holistic file review eliminates potential sources of bias (demographics, grades, test scores) and identifies characteristics we value in our trainees (leadership qualities, professionalism, community involvement, clinical acumen). **Results:** A total of 6602 individuals applied between 2016 and 2022, increasing from N=762 per year in 2016 to N=1148 in 2021. We interviewed 9.6% to 13.4% each year. Over time, the proportion of female applicants significantly increased ($X^2=12.6$, $p<0.002$) from N=322 (42.3%) in 2016 to N=555 (50.6%) in 2022. Across all years, a significantly greater proportion ($X^2=22.0$, $p<0.001$) of those selected for interview were female (55.1%), with the

greatest proportion in 2022 (64.5%), following the holistic review. Similarly, the proportion of URM applicants significantly increased ($X^2=28.0$, $p<0.001$) from N=102 (13.4%) in 2016 to N=234 (21.3%) in 2022. There were no significant differences in the proportion of URM applicants selected for interview over time (range 13% - 21%). Altogether, 16.5% of our applicants were URM while 18.1% of those interviewed were URM. In 2022, following the holistic review, 19.8% of our interviewed applicants were URM. **Discussion:** Over the last 7 years, the number of applicants to UCSD psychiatry has increased, mirroring the national statistics. The proportion of female applicants has increased over time but the proportion interviewed was greater than the proportion who applied. This potential female bias was most striking the year we incorporated the holistic review. The proportion of URM applicants has increased over time. While not statistically significant, the proportion of URM applicants interviewed was greater than or equal to the proportion who applied in most years, although it was lower following the holistic review process. Clearly, further work is needed to increase diversity in psychiatry training and to continue to eliminate potential bias in the process.

No. 28

Treatment Challenges in Patient With Avoidant Restrictive Food Intake Disorder (ARFID) With Underlying Mood Disorder

Poster Presenter: Narmada Neerja Bhimanadham, M.D., M.P.A.

Co-Authors: Andreas M. Damianides, Juan Penaloza

SUMMARY:

Abstract- Avoidant Restrictive Food Intake Disorder (ARFID) is an eating/feeding disorder treated with psychotherapy and adjunctive pharmacotherapy. Bipolar Disorder (BD) depression can be treated with combination of Olanzapine/Fluoxetine. This case study examines an instance where simultaneous treatment of both disorders caused significant improvement of symptoms and no adverse effects. **Introduction-** ARFID is an eating/feeding disorder characterized by a decrease in eating that leads to a “persistent failure to... meet nutritional and/or energy needs.” (1). **Case Presentation-**A 14-year-old

female with a past medical history of treated PFAPA (Periodic Fever, Aphthous Stomatitis, Pharyngitis, Adenitis) presented due to ongoing suicidality. At baseline she is an honors student, however her home life was chaotic since age 11, owing to her brother's suicide attempts, her father's major depressive disorder, and her mother's BD. Food intake restriction was her coping mechanism as "this was the only thing... in my control." She underwent talk therapy for ARFID, but 4 months prior to her presentation, she lost 20lbs with cessation of menstrual periods. She admitted to an acute worsening of anxiety and depression. She has history of hypomanic symptoms and was diagnosed with bipolar disorder. After thorough history taking and workup, she was started on 2.5 mg olanzapine and 10mg fluoxetine leading to significant improvement of symptoms and discharge. **Discussion** -While psychotherapy is first line treatment for ARFID (1,2), this patient was treated with adjunctive pharmacotherapy because of her acute depression and suicidality. A combination of Olanzapine (D2, 5HT2c, and 5HT2a agonist) and Fluoxetine (SSRI), was used. Combination of Olanzapine and fluoxetine is FDA-approved treatment for acute bipolar depression for adults but not in child and adolescent patients, but it was the best choice here because of Olanzapine's association with weight gain (3,4) and its moderate efficacy in ARFID (5). Additionally, using this combination, both disorder were treated with the same regimen despite fluoxetine's risk of inducing mania in patient's with BD. ARFID and other eating disorders are commonly seen in patients with PFAPA and have been found to be one cause of quality of life decrease during symptomatic periods (6). It is conceivable that this patient's PFAPA affected her eating patterns so much that they developed into a disorder. This case study is limited by its one subject and thus lacks generalizability; a larger study should allow for quantitative results. Follow-up study with this patient should examine the long-term efficacy of this treatment. **Conclusion** -A literature search revealed that even though a recent estimate of the comorbidity of these conditions was about 20% (5), the pharmacological treatment of both conditions simultaneously required further review. Further quantitative research should be done in both pediatric and adult populations.

No. 29
Risk of Lithium Toxicity in Patients Taking Other Antipsychotic Therapies

Poster Presenter: Pajtesa Kukaj, M.D.

Co-Authors: Palak Atul Fichadia, M.B.B.S., Alexandra Fleck

SUMMARY:

For over half of a century, Lithium has been used as a mood stabilizer to treat bipolar disorder. Despite the extensive evidence of its efficacy, its mechanism of action as a mood stabilizer remains unclear. Previous research has shown that Lithium reduces cognitive decline and increase the volume of brain structures involved in emotional regulation such as hippocampus, prefrontal cortex, and amygdala. At a neuronal level, it reduces the excitatory transmission (dopamine & glutamate) and increases the inhibitory neurotransmission (GABA). Despite the positive efficacy of Lithium, one of the most common problems remains its narrow therapeutic index, toxicity burden and side effects associated. With this review, we aim to provide evidence of side effects and toxicity related with Lithium therapy. In addition, our goal is to find an association between lithium toxicity in patients who are using other concomitant antipsychotic therapies. We undertook a systematic review of previous literature review and 5 case reports from 2016- 2021. Combined therapy of therapeutic levels of lithium and second generation antipsychotics such as Olanzapine and risperidone, account for adverse effects such as nephrotoxicity and neurotoxicity. Simultaneous usage of Lithium and high potency antipsychotics like Haloperidol, resulted in sudden onset muscle stiffness with cogwheel rigidity and generalized myoclonus. Adverse events were able to be revised with therapy discontinuation, proper hydration and periodic analysis of lithium blood levels. There are two hypotheses of neurotoxicity from drug- induced interactions between Lithium and other antipsychotics. One yields evidence of pure lithium induced neurotoxicity without any relation to antipsychotic usage, and the other hypothesis suggests that both lithium and other antipsychotic drugs block dopamine receptors. Based on our review, we suggest that close observation of neurological signs for at least 3 weeks is necessary

when lithium therapy is combined with other antipsychotic therapies.

No. 30

The Link Between Multiple Sclerosis and Psychosis: A Case Report

Poster Presenter: Pajtesa Kukaj, M.D.

Co-Authors: Sanjana Das, Janice Lee, Syed N. Kamal, M.D.

SUMMARY:

Multiple Sclerosis (MS) is a chronic autoimmune disease that affects the central nervous system (CNS). By targeting myelinated axons, MS causes inflammatory de-myelination of these nerves predominantly in the white matter of the CNS. Diagnosis is not based on a single diagnostic test but rather fulfillment of criteria. These criteria includes both clinical and imaging requirements: (1) evidence of neuronal damage in at least two separate locations within the CNS; (2) at least two symptomatic episodes that are entirely discrete and separate; and (3) chronic inflammation of the CNS determined by analysis of the patient's cerebrospinal fluid (CSF). The exact cause of MS is unknown, but genetic susceptibility in combination with a trigger, whether it is viral, metabolic, or environmental, seems to be the catalyst to this relentless autoimmune disease. Classically, MS has a remitting and relapsing course that leaves 50% of patients unable to walk within 15 years of disease onset. In addition to physical symptoms, MS is associated with psychiatric consequences as well, namely Major Depressive Disorder (MDD). The lifetime prevalence of MDD in MS patients was found to be approximately 50%, which is not only higher than other neurologic disorders but 3 to 10 times more prevalent than the general population. In addition to MDD, MS has been linked with Bipolar affective disorder, Euphoria, Pathological Laughing and Crying, as well as Psychosis. Psychosis is one of the more unusual psychiatric manifestation of MS, but not one that is so rare that it is attributed to chance. There have been multiple studies that illustrate psychosis linked with MS, with no previous medical or psychiatric history. In these cases, the temporal lobe has been implicated in contributing to the psychosis, with these patients having a higher total lesion load,

particularly in the periventricular region. Here we have a case of a 32-year-old male with MS that presents with psychosis with no prior psychiatric history, but other socioeconomic and substance abuse issues that might have contributed to his psychosis. This case also aims to highlight the uncommon but significant psychiatric manifestation of psychosis and examine the probable catalysts that incited these symptoms as well as treatments that helped this patient.

No. 31

Mania, Psychoses, and Pregnancy: Emphasizing Patient Education

Poster Presenter: Chand Grewal, D.O.

Co-Authors: Rina G. Bhalodi, M.D., Maaz Siddiqui, M.D.

SUMMARY:

Postpartum mania and psychoses are considered psychiatric emergencies that necessitate early detection and management regardless of symptoms' severity at the onset. Recent literature demonstrates increased risk of bipolar spectrum mood episodes during the peripartum period. Thus, it is imperative that patients and their families receive directed education about postpartum mania and psychoses regardless of prior psychiatric history to be able to recognize signs and symptoms warranting a higher level of psychiatric management. Some of these concerning features include mood-congruent delusions, auditory hallucinations, or thoughts of self-harm or harm to the newborn. In this poster, we will discuss the case of a 26-year-old Caucasian female postpartum day 9 with a self-reported history of anxiety who was admitted to the psychiatric unit due to new-onset disorganized behavior, mood instability, impulsivity, and decreased need for sleep. After giving birth to her first child, the patient began exhibiting uncharacteristic, labile mood and bizarre behavior. During her hospitalization, the patient repeatedly mentioned delaying seeking care for these new symptoms due to a lack of knowledge and awareness of postpartum mania and psychoses. In contrast, she received ample counseling on and was actively screened for signs and symptoms of postpartum depression. Through this case example, we will describe some challenges for and the

importance of educating peripartum patients and their families on postpartum mania and psychoses. Further, we will also explore strategies and screening tools that can be utilized by healthcare providers in the care of patients in the peripartum period.

No. 32

A Call to Action for Evidence-Based Research Supporting the Utilization of Long-Acting Injectable Antipsychotic Agents in Adolescent Pregnancy

Poster Presenter: Natania Paul

Co-Authors: Geetha Vyas, Luis Carlos Isaza, M.D.

SUMMARY:

Ms. P. is a 17-year-old pregnant adolescent female with a past psychiatric history of depression and suicidal behaviors who presents to the adolescent psychiatry inpatient unit following a suicide attempt via acetaminophen overdose. Stressors prior to admission included unexpected pregnancy, lack of partner support, recent transition into DCS custody, legal stressors including court involvement for truancy and reckless driving, and prior nonadherence with outpatient treatment plans. Ms. P. described previously taking sertraline for depression, however discontinued on learning she was pregnant 6 months ago, reportedly to eliminate medications potentially harmful to her baby. On admission, she was emotionally labile, denied suicidal ideation, and insisted her overdose was not suicidal in nature, despite documentation indicating prior statements of suicidal intent. She was not participative in her treatment, isolative from the unit milieu, and resistant to pharmacotherapy. We learned that her irritability, rejection of medical advice, and inconsistent commitments to treatment had previously led to her being discharged from her outpatient clinic due to persistent nonadherence. She did eventually consent to another trial of sertraline 25mg—initiated on day 7 of admission. On day 10, she began to exhibit symptoms of mania with psychosis, sleep was disrupted, and she began actively responding to internal stimuli with concurrent disorganization of her speech and behaviors. Sertraline was discontinued; however, Ms. P. continued to exhibit severe signs and symptoms of psychosis. As the formulation transitioned to include more severe psychotic illness, olanzapine was

utilized for stabilization. The treatment team considered that her prior “nonadherence” could likely be explained as prodromal or even fulminant psychosis that had been misinterpreted to be teenage oppositional behaviors. Further investigation uncovered evidence of past psychotic symptoms and behaviors. Her inconsistent adherence to pharmacotherapy and catastrophic decompensations warranted consideration of long-acting injectable (LAI) medication. However, due to Ms. P.’s pregnancy and age, there was concern regarding a lack of evidence-based research supporting use of LAIs in pregnancy. A PubMed search with MeSH terms was utilized, revealing only twelve articles total. Breakdown of these articles will be discussed. Due in part to the limited research and lack of guidelines for LAI utilization in adolescent pregnancy, it was decided that Ms. P. would be continued on an oral antipsychotic agent as she transitioned to outpatient care. We highlight the need for further evidence-based research and guidelines regarding LAI utilization for this patient population.

No. 33

A Qualitative Analysis of the Benefit of Teaching an Undergraduate Course on Sustainable Well-Being for Undergraduate Mental Health

Poster Presenter: Miranda Rasmussen

Co-Authors: Kaitlyn M. Vanson, Annette M. Strube

SUMMARY:

Background: Our society is facing an unprecedented mental health crisis, with nearly one in two people being affected by mental health challenges over their lifespan (for a review, see Kazdin, 2019). This trend is particularly notable among undergraduate students, who undergo significant transitions in social, familial, and academic roles and responsibilities. In response, many universities have attempted to expand their mental health services. However, these programs are often under-resourced and focus on treating symptoms that have already arisen, resulting in students utilizing these services when problems have already become overwhelming. Here, we propose an alternative: to prevent the onset of mental health concerns by teaching behaviors to optimize mental

health and augment well-being, which we refer to as preventive mental health. Specifically, we argue that universities can aid in the mental health crisis on college campuses by creating courses that teach students the skills they need to thrive emotionally and personally. **Methods:** Toward this end, the senior author created an experiential, workshop-style 10-week course, entitled "Learning Sustainable Well-Being (LSW)". The principles taught in this course combine the wisdom of several disciplines, including: mindfulness, psychology, neuroscience, philosophy, and clinical psychology. For this study, semi-structured interviews were conducted with 33 undergraduates, of which ($n = 21$) completed the LSW course. Transcripts were analyzed with NVIVO using reflexive thematic analysis. **Results:** In terms of *needs assessment* ($n = 33$), themes participants commonly reported as negatively impacting their mental well-being included: feelings of loneliness, basic needs insecurity, imposter syndrome, and limited or delayed access to mental health resources. Themes reported as helping people to improve their mental well-being included: taking time to reflect, being mindful, and connecting with others. In terms of *skills learned as a result of taking LSW* ($n = 21$), themes participants commonly reported included: using positive self-talk, practicing radical acceptance, and fostering healthy relationships with others. This resulted in self-reported improvements in overall functioning and mental well-being. Discussion: Such a preventive mental health strategy has the potential to reduce the risk of mental health challenges and to augment the psychological well-being of students in general. Offering a course that teaches intrapersonal and interpersonal skills as part of the undergraduate curriculum may help to address the underserved mental health needs of adolescent and young adult populations.

No. 34

WITHDRAWN

No. 35

Efficacy of Ibudilast in the Treatment of Alcohol Use Disorder

Poster Presenter: Joy Osaji

Co-Authors: Chiedozie Ojimba, Taylor Harder

SUMMARY:

Introduction: Alcohol Use Disorder (AUD) is a prevalent psychiatric disorder with severe consequences. Worldwide, it accounts for 5.1% of the global disease burden (Alcohol abuse statistics, 2022). AUD is characterized by difficulty cutting down the amount or frequency of consumption and a high relapse rate despite its severe consequences (American Psychiatric Association, 2013 & Dousset et al., 2020). Therefore, in treating patients post detoxification, it is essential to use medications that can increase the efficacy of sustained abstinence from alcohol use and has fewer side effects.

Currently, naltrexone, acamprosate, and disulfiram are FDA-approved medications in the United States for the treatment of AUD (Ch'Ng & Lawrence, 2018). However, multiple studies have shown that most patients with AUD have increased levels of pro-inflammatory cytokines (Roche et al., 2015). Recently the use of immune modulators has been tried for the treatment of AUD. Ibudilast, a relatively nonselective phosphodiesterase inhibitor, is a novel medication being assessed for managing AUD (Freedman, 2016). It reduces the brain's reward response to alcohol cues, cravings, and heavy drinking (Grodin et al., 2021). Its suitable pharmacokinetics and generally good tolerability make it a promising potential treatment for AUD (Rolan et al., 2009). Therefore, it is essential to critically appraise the literature to see if Ibudilast can be used as a treatment for AUD.

Methods: We conducted a critical appraisal of the literature by doing a literature search on the following databases; SCOPUS, OVID, PUBMED, and CINAHL. Our initial search yielded 230 articles. Then, using our inclusion and exclusion criteria, we retrieved 39 articles. Excluding duplicates, we had 13 articles. Eleven were Randomized Controlled Trials (RCT), and 2 were secondary analyses of RCT. **Search Terms:** Alcohol abuse, Alcohol Use Disorder, Ibudilast, Humans, Alcoholism, anti-inflammatory, Alcohol Dependence, treatment, pharmacotherapy, and Medication. **Inclusion Criteria:** Articles within the last ten years on AUD and Ibudilast. Studies in English, humans, completed studies, RCT, Non-RCT, Systematic Reviews, and meta-analysis. **Exclusion Criteria:** Conference paper, editorial notes, animal studies, and ongoing studies. **Results:** This critical appraisal showed that Ibudilast is a Novel promising drug for the treatment of AUD due to its effects

compared to placebo on decreasing craving for alcohol, cues for stimulating alcohol, and heavy drinking days and improving the mood of participants. Ibudilast achieved this through its neuromodulatory effects on the brain. **Limitations:** The appraised studies had a small sample size and were not multicentered. **Conclusion:** While Ibudilast shows great promise for AUD, a long-term, large-size, multicentered RCT will shed more light on its efficacy and side effect profile.

No. 36

The Use of Ketamine in Addressing Pediatric Treatment-Refractory OCD

Poster Presenter: Madeline Graham

Co-Author: Sohail Nibras, M.D.

SUMMARY:

Background: Ketamine is a non-competitive N-methyl-D-aspartate receptor (NMDAr) antagonist used as an induction anesthetic. Its abilities to improve symptoms of treatment-resistant depression, post-traumatic stress disorder (PTSD), and obsessive-compulsive disorder (OCD), along with substance use disorder and eating disorders have been documented in several small studies.^{1,2} However, definitive evidence is still lacking, and there is much research to still be done on the subject. A crossover study of ketamine infusions versus placebo for OCD conducted by Rodriguez et al. found that effects of ketamine significantly decreased OCD symptoms on the OCD visual analog scale (OCD-VAS) and the Yale-Brown Obsessive-Compulsive Scale. These observed results lasted up to a week.³ **Case:** An 11-year-old male, L, was admitted to pediatric hospital from a psychiatric hospital with poor PO intake, self-harming behaviors, and periorbital ecchymoses. Consultation/Liaison Psychiatry was consulted for his self-harming behaviors, anxiety, and OCD evaluation. Upon evaluation, psychiatric diagnoses of OCD, generalized anxiety disorder (GAD), and avoidant-restrictive food intake disorder (ARFID) were indicated, with suspicion for PANS/PANDAS. L's symptoms were refractory to all trialed medications including selective-serotonin uptake receptors (SSRIs), antipsychotics, benzodiazepines, clonidine, hydroxyzine, and memantine, with limited

symptomatic relief and reported adverse side effects. The antibiotics and IVIG were given to address suspected PANS/PANDAS with no improvement in symptoms. After trialing medications with little improvement, the team decided to explore the use of subanesthetic levels of ketamine to control his self-harming behaviors and OCD symptoms. L was given a starting dose of 0.5mg/kg of ketamine via continuous drip over 72 hours. The dose was increased until the point of sedation. He was also started on naltrexone to further decrease his self-harming behaviors. **Discussion:** This is a very complex case with unusual presentation and lack of response to numerous medications, complicated by difficult family dynamics and resistance to psychotherapy. The resources of many consultants and extensive liaison activity ultimately resulted in a positive outcome. While L showed dramatic improvement in his OCD symptoms, it is unclear that the changes were solely in response to his ketamine treatment. After his ketamine treatment, his medications consisted of naltrexone, clonidine, and clonazepam which were potentially beneficial for his self-harming/anxiety symptoms.

No. 37

Virtual(ly) No Support: Associations Between Virtual Support Group Participation and Peripartum Mental Health Outcomes During the Covid-19 Pandemic

Poster Presenter: Amanda Koire, M.D., Ph.D.

Co-Authors: Cindy Liu, Ph.D., Carmina Erdei, M.D.

SUMMARY:

Background: Prior to the COVID-19 pandemic, in-person peripartum support groups were a staple for promoting emotional wellness. Participation in virtual support groups is often suggested in the literature as a possible avenue for improving peripartum mental health during the pandemic, yet data to support this assumption has been absent. This study examined associations between participation in virtual support groups for peripartum women and mental health outcomes at follow-up approximately 8 months later. **Methods:** This cross-sectional online survey study assessed 383 women from the Perinatal Experiences and COVID-19 Effects (PEACE) study. Initial participants (T1) were re-

contacted (T2) and self-reported mental health symptoms of depression (CES-D), anxiety (GAD-7), and COVID-related grief were assessed at both time points. Participants reported involvement in virtual support groups and their perception of effectiveness of social media in addressing feelings of loneliness. **Results:** The majority (62%) of respondents participated in a virtual support group, 99% of whom used informal social media-based groups (e.g. Facebook groups). At initial evaluation, virtual group participants reported higher levels of depressive symptoms ($p = 0.008$) and COVID grief ($p = 0.004$), but not higher levels of anxiety. Across the cohort, self-reported depressive, anxiety, and grief symptoms did not change significantly at follow-up in paired analysis, and virtual group participants did not demonstrate more improvement in mental health symptoms. Those in social media-based virtual support groups were more engaged in social media ($p < 0.001$) but not more likely to report that social media was addressing their feelings of loneliness. **Conclusions:** As clinicians, we should be aware the majority of peripartum women do engage in informal social-media based support groups and be willing to explore their motivations, which may be associated with grief or underlying depression. Mental health symptomatology was in general highly persistent at ~8 month follow up, and virtual group participation did not seem to improve mental health outcomes. Since the type of informal support groups assessed in this study tend to function as asynchronous peer message boards rather than facilitator-led discussions, virtual support groups that more closely mimic the format of an in-person group may be found to be more effective. Patients and clinicians alike may not readily make the distinction between types and features of various groups and assume that any group will bolster social support; however, based on our findings we would advise that social media-based groups may not have the same effect as has been seen for traditional group formats.

No. 38

The Effect of Family Intervention on Familial Functioning in Children at-Risk for Severe Mental Illness

Poster Presenter: Paulette D. Orhii, B.S.

Co-Author: Sarah Martin, M.D.

SUMMARY:

Introduction: Bipolar disorder and schizophrenia are severe mental illnesses that affect about four percent of the population^{1,2}. While the exact pathophysiology of these disorders is unclear, studies have shown that there is a strong genetic component³. However, familial support is a protective factor in bipolar disorder and schizophrenia and can decrease duration and frequency of psychosis and overall symptom severity⁴. Therefore, we sought to investigate the long-term effect of early familial intervention on familial and behavioral functioning in children with first degree relatives with bipolar disorder and schizophrenia. We hypothesized that familial intervention would improve familial and behavioral functioning in children at-risk of severe mental illness. **Methods:** We recruited 158 high-risk participants and an epidemiological sample of 134 participants. Incomplete data was excluded, and a retention analysis was performed. High risk participants were randomly assigned to an intervention group that received Family Focused Treatment, which consisted of a weekly 1 hour-long session for 10 weeks, or to the high-risk control group which participated in research procedures only. The last group was an epidemiological control that did not receive family intervention. We administered the UCLA Life Stress Interview at baseline and after 12 months to measure familial and behavioral functioning. We then conducted Wilcoxon Signed Rank analyses of each group to determine whether there was an improvement in familial and/or behavioral functioning. **Results:** The results of the Wilcoxon Signed Rank analyses are shown in Table 1. For familial functioning, the sample sizes were as follows: intervention group $N = 35$, high risk control group $N = 32$, and the epidemiological control group $N = 48$. Familial functioning significantly improved in the intervention group ($p = 0.0198$) but there was no significant improvement in the high-risk or epidemiological control groups. There was no significant improvement in behavioral functioning in any of the groups. **Conclusion:** We found from the results of our study that Family Focused Treatment is effective at improving familial functioning in children who are at risk for severe mental illness ($p = 0.0198$). There was no effect on behavioral functioning. More

studies should be conducted to determine how to improve behavioral functioning in children at-risk for severe mental illness.

No. 39

Dispositional Mindfulness: A Mediator Between Adverse Childhood Experiences and Adult Health Outcomes

Poster Presenter: Nika Moussavi

SUMMARY:

Background: Adverse childhood experiences (ACEs) have long been associated with poor, chronic health outcomes in adulthood. More recently, the role of dispositional mindfulness has been implicated as a potential link between ACE exposures and better overall health in adulthood; however, to our knowledge, this relationship has not been examined in a psychiatric patient population. Objective: To examine the role of dispositional mindfulness as a potential mediator between ACE scores and overall medical health in a psychiatric sample. Methods: Participants were 464 adults (18-80 years old) presenting for treatment at the Albany Medical Center Department of Psychiatry Outpatient Clinic. As part of the intake procedure, patients complete a battery of self report questionnaires including the following measures that were used for this study: Adverse Childhood Experiences (ACE), the Mindful Attention Awareness Scale - (MAAS), and overall mental health functioning using the Treatment Outcome Package - (TOP). TOP surveys were also used to calculate a health indicator score which was a sum of endorsed medical conditions. Results: More than half the sample (54.4%) reported ³ 4 ACEs. The ACE total score was significantly correlated with dispositional mindfulness ($r = -0.311, p < 0.001$), dispositional mindfulness ($r = -0.148, p < 0.01$) and the ACE total score ($r = 0.186, p < 0.001$) were both significantly correlated with health indicator score. Consistent with hypotheses, dispositional mindfulness was found to mediate the relationship between the ACE total and health indicator score with a complete standardized indirect effect of 0.0296 (SE = 0.0144, CI [0.0011, 0.0589]). Conclusions: Dispositional mindfulness serves as a mediator between ACEs and chronic health outcomes, which would suggest that one of the

mechanisms by which ACEs impact medical health is that ACEs reduce mindfulness which in turn results in poor medical health in adulthood. These results have implications for interventions to increase mindfulness for individuals with adverse childhood experiences.

No. 40

Transient First-Episode Psychosis in an Adolescent With Recent Sars-Cov-2 Infection

Poster Presenter: Enioluwafe Ojo, M.D., M.P.H.

Co-Authors: Joseph A. Dayaa, M.D., Anthony Kulukulualani, M.D., Michael T. Kane, M.D.

SUMMARY:

A 16-year-old Caucasian female with a remote history of toxic encephalopathy following cannabis consumption presents to the Emergency Department with acute onset and rapidly progressing paranoia, delusions, auditory and visual hallucinations, insomnia, anxiety, and suicidal ideation over a five-day period. On initial assessment, there was also concern for catatonic features of ambitendency, perseveration, and stereotypy. Further history revealed recent international travel and symptomatic SARS-CoV-2 infection with a positive test within seven days of presentation. She was admitted to the Adolescent Inpatient Psychiatry Unit. The inpatient team considered a broad differential diagnosis given the abrupt onset of symptoms. A thorough work-up for organic psychosis, including labs and imaging was unremarkable. Olanzapine and lorazepam were initiated targeting symptoms of psychosis and catatonia, respectively. The patient became progressively disorganized, bizarre, and paranoid during the first several days of her hospitalization, but saw rapid improvement of these symptoms with titration of olanzapine (10 mg total daily dose). The patient was discharged from the hospital 13 days following her initial presentation. Two days following discharge, the patient's parents reported to the inpatient team that the patient was home and at her baseline. In this poster, we describe a temporal relationship between a patient's neuropsychiatric symptoms and SARS-CoV-2 infection. We also discuss the differences in neuropsychiatric presentations based on etiology, including multisystem inflammatory syndrome and toxic encephalitis. There

is a paucity of literature examining these relationships, particularly in this patient population, emphasizing the need for further studies exploring the temporal relationship and pathophysiology of neuropsychiatric symptoms and SARS-CoV-2 infection in adolescents.

No. 41

Adapting to Disappearing Bereavement Support and the Growing Burden of Covid-19-Related Grief: The Grief Clinic

Poster Presenter: Saba Anwer

SUMMARY:

Background: · The Grief Clinic at the provides long-term services to adults who have experienced the death of a loved one. · Our team sought to organize grief resources for our patients by auditing organizations for information on services offered, and to better understand if grief support organizations evolved during the pandemic.

Methods: · The pandemic has increased overall burden of grief,^[i] and the economic effects of the pandemic led to many organizations responding to the crisis by closing.^[ii] · We compiled a directory of organizations offering counseling, support, and other services for grief in the Milwaukee area. · Organizations were contacted via telephone to assess services offered including relationship to the deceased, age group, religious affiliation, in-person or virtual services, and individual or group counseling.

Results: · We identified 72 organizations offering grief support services in Milwaukee and surrounding counties, of which 15 (20.8%) had shuttered over the course of the pandemic. · Of the 57 remaining organizations, 20 offer virtual services (14 offer virtual services only and 6 offer a mix of virtual and in person counseling or group sessions). · Of the 35 organizations offering some in person services, 80% (n=20) only offer services 1 or 2 days per month. · Of the organizations that closed permanently, 12 catered mostly to adults, 2 organizations catered to parents experiencing the loss of a child, and 1 catered to adults experiencing the loss of a spouse.

Conclusions: · The availability and format of grief resources have changed because of the effects of the COVID-19 pandemic. · While many support organizations have shifted to offering

virtual or hybrid services, most organizations limit any in-person services to a couple days per month. · The Grief Clinic helps address some of these needs by providing acute and prolonged grief treatment to address these gaps. · These results will help guide future treatment options and resources offered through the Grief Clinic.

No. 42

Metabolic Concerns in a Patient on Long Acting Injectable Aripiprazole

Poster Presenter: Jacob A. Davidson, M.D.

SUMMARY:

Long-acting injectable antipsychotics have become a valuable tool for the treatment of psychotic illnesses. They can help reduce the risk of rehospitalization especially in patients who are poorly adherent to medications. Among the injectable options, Aripiprazole has been found to be generally well tolerated with a relatively low risk of motor side effects, metabolic adverse effects, serum prolactin level, and QTc interval. Despite its benefits, Aripiprazole is not benign and still carries the risk of weight gain and metabolic adverse effects. In this poster, I will discuss the case of a young male patient initially on long acting injectable Aripiprazole who needed to be transitioned to oral Geodon due to worsening metabolic lab values despite symptomatic improvement. Patient's lipid levels and hemoglobin A1C nearly tripled during the time that he was receiving his Aripiprazole Long Acting Injectable. While it is unclear whether the injectable was the primary cause of his metabolic derangement it is important to consider the role that it may have played as well as the risks and benefits of continuation of therapy. Will evaluate patient's long-term response to transitioning to oral Geodon in terms of symptom recurrence and metabolic parameters. Will also discuss potential prevention and treatment strategies that can help mitigate metabolic effects of long acting injectables.

No. 43

Community Mental Health Advocacy: Hospitalize or Detain, Who Decides and How Do We Help?

Poster Presenter: Melissa A. Peace, B.A.

SUMMARY:

Introduction: Recent events of unarmed individuals facing serious harm and fatality from police brutality has raised questions of law enforcement practices in situations of crisis.¹ Additionally, patients with Serious Mental Illness (SMI) are incarcerated at higher rates than the general population.² Questions as to how psychiatrists can be involved in mitigating such systemic issues remains pertinent to optimize clinical outcomes of patients. **Case Report:** A 32 year old African-American female with a past psychiatric history of bipolar disorder, cannabis use disorder, and no significant past medical history presents to the psychiatric emergency department directly from detention center after being held for 15 days. Patient presents acutely manic with psychotic features and is without insight into condition, after initially being detained by law enforcement at a public venue in the community due to assault committed during a manic episode. The psychiatric provider performing the intake had awareness of this history due to a local grassroots protest around this local event calling for minority mental health advocacy. Discussion: This case highlights the pivotal role law enforcement plays in the fracture point of whether a patient may be directed to emergent mental health treatment or siphoned to the criminal justice system. Within the national advocacy framework exists an opportunity for mental health workers to play a pivotal role in this decision and comes in the form of Crisis Intervention Training (CIT), which aims to provide training to law enforcement on how to knowledgeably and safely interact with individuals in a mental health crisis and ultimately reduce the risk of serious injury.³ A common sentiment in a survey of police after exposure to CIT was that individuals “going off meds” typically yielded a behavioral health outcome; however much complexity remains in this discussion as the patient in crisis is often without insight and unable to depict a story of being non-adherent to medications let alone divulge a psychiatric history,⁴ and ultimately exemplifies how the expertise of psychiatrists is relevant in such CIT training. Community mental health advocacy directly intersects psychiatric clinical practice and calls on not only psychiatrists’ awareness to current events in the community but deserves their engagement and expertise to mitigate inappropriate diversion of mentally ill patients away from timely treatment.

Conclusion: We urge that psychiatrists and mental health providers engage in collaborative advocacy measures with law enforcement. CIT is an opportunity for psychiatrists to be involved in local efforts to reduce unnecessary diversion of mentally ill patients to jails and detention centers.

No. 44**Seeing Ghosts: A Unique Sequelae of Stroke**

Poster Presenter: Ashley L. VanHaverbeck, D.O.

SUMMARY:

J.B. is a 60 year old male patient who presented to the emergency department with depression and visual disturbance. While in the emergency room the patient reported seeing “ghosts” in addition to endorsing symptoms of depression. The patient was subsequently admitted to inpatient psychiatry for treatment of suspected depression with psychotic features. However, during his psychiatric admission intake the patient reported a history of recent stroke. This prompted review of imaging which showed an area of ischemia in the posterior lobe, which corresponded with the areas of his reported visual field disturbances. It was then determined that patient’s visual hallucinations were due to neurologic deficits secondary to stroke as opposed to a mood disorder with psychotic features. In this poster, we will review the literature regarding the more common neuropsychiatric symptoms associated with stroke. We will also discuss less frequently encountered symptoms such as visual hallucinations in post-stroke patients and the impact this may have on patient care and quality of life. We intend to raise awareness regarding benefits of psychiatric involvement in patients with a history of stroke. We also hope to highlight the utility for psychiatric consultation in the emergency room, including advantages associated with early intervention and involvement in guiding the care of patients with psychiatric symptoms.

No. 45**A Case of Very Late Onset Schizophrenia in a Post-Menopausal Female With No Past Psychiatric History**

Poster Presenter: Rochelle-Anne Benjamin

SUMMARY:

Schizophrenia is a psychiatric disorder characterized by psychosis. The disease is characterized by increased dopaminergic activity in the mesolimbic neuronal pathway and decreased dopaminergic activity in the mesocortical pathway (Castle et. al, 2018). Schizophrenia typically occurs in individuals within their 20's (early twenties in men and later twenties in women) rarely after 40's, and even more rare to occur after 60's. The late onset or very late onset schizophrenia is mostly seen in women. Those who present after the age of 40, including the predominance in women, have lower severity of positive symptoms, lower antipsychotic requirement, and have a greater protective factor. Women who get schizophrenia late in onset (s/p menopause), similar to our case, is often attributed to the loss of estrogen (Diaz-Pons, 2022). We present a 64 year old college educated, retired, widowed female with no past psychiatric history and past medical history of menopause (diagnosed 3 years prior), with no history of stroke, head injury, seizure disorder, and alcohol/substance abuse, presented to the emergency room with altered mental status and catatonic-like features. Prior to arrival the patient was found unresponsive and sitting in an upright position on a bus at 5:30 in the morning. While in the emergency room, the patient was reported to be "acting bizarre and saying bizarre things". Psychiatry was consulted for active hallucinations. During initial assessment, she appeared confused and was unaware of current circumstances of hospitalization, stating "I was shot and yes I do like to decorate my home". The patient spoke incoherently, appeared preoccupied, guarded, withdrawn, suspicious (seen scanning the room and looking at the door with little noise as if someone was there), and endorsed auditory hallucinations (hearing voices from her "boyfriend Joe when listening to music"), but she did not present with symptoms of mania or depression. She was medically cleared with all labs including, drug screen, Chest Xray, CT scan, EKG, Covid-19, and UA/Urine culture, TSH, RPR, HIV, and NAAT, which were negative; thus the patient was transferred to the inpatient psychiatric unit. She was closely monitored and continued psychotropic medications. She responded well to risperidone and her psychotic symptoms resolved in 2 weeks. In this presentation, we discussed the importance of

identifying symptoms of psychosis in elderly females. More research is needed to screen and diagnose schizophrenia in perimenopausal women, especially in correlation with decreasing estrogen levels and new treatment options, including the benefits of estrogen supplementation in this population.

No. 46**An Unusual Case of Catatonia Onset From Acute UTI in a Patient With a History of Depression**

Poster Presenter: Rochelle-Anne Benjamin

SUMMARY:

Catatonia is a neuropsychiatric syndrome presenting as abnormal movements, behaviors and withdrawal features. It is most often seen in mood disorders and psychosis but can also present in association with medical and neurological disorders. Urinary tract infections (UTI), if treated inadequately or untreated can cause acute delirium and even precipitate psychosis or catatonia in some rare cases. We present a 58 year old African American female with past psychiatric history of depression (medication non-compliant) and past medical history of Monoclonal gammopathy of undetermined significance (MGUS), chronic hepatitis B infection and hypertension who was brought to the psychiatric emergency room by EMS. Prior to arrival the patient was found walking aimlessly on the street, naked, stating " I grieve the holy spirit and the holy spirit told me that I do not belong in my apartment". She appeared catatonic, constricted, internally pre-occupied, paranoid, stiff and tried to verbalize but couldn't speak- these symptoms improved with one time lorazepam 2mg IM injection. Patient was prescribed bactrim for a UTI the day before psychiatric admission. Shortly after being admitted to the inpatient psychiatric unit, she was found to have diaphoresis, fever and tachycardia likely secondary to her untreated UTI. Objective screening with Bush Francis rating scale showed worsening of catatonia features in the presence of UTI symptoms. We explore this unique case to discuss the challenges and importance of managing complex catatonia features in patients' with an underlying medical etiology.

No. 47

The Association Between Stage of Treatment-Resistant Depression and Clinical Utility of Ketamine/Esketamine: A Systematic Review

Poster Presenter: Anastasia Levinta, M.D.

SUMMARY:

Background: Ketamine has demonstrated rapid and significant antidepressant effects in patients with treatment-resistant depression (TRD). Yet, the optimal initiation time to maximize the likelihood of clinically meaningful improvement remains unclear. Herein, we conducted a systematic review to determine ketamine's efficacy as a function of the stage of treatment resistance among individuals with TRD. Methods: A systematic search of PubMed and Scopus from inception to August 2022 was conducted. Where applicable, the studies were categorized into low and high stages of resistance, where the low category included studies where the mean number of failed antidepressants was <3 or had a higher proportion of subjects with ≤ 2 antidepressant trials. Reported indicators of treatment resistance and efficacy were extracted from randomized-controlled trials (RCTs) assessing ketamine or esketamine for TRD. Results: In total, 18 RCTs were included in the original review; another RCT was identified in an updated analysis in August 2022. Ketamine was effective in reducing depressive symptoms in RCTs at both lower and higher stages of treatment resistance. However, the effect size and duration of effects were greater in RCTs of the lower stage of treatment resistance. Conversely, ketamine appears to be efficacious even in samples that failed to respond to on average 5-7 adequate antidepressant trials. However, the foregoing differences in treatment response tended to be short-lived, with a loss of efficacy within 3-7 days. There was variability across reported indicators of disease severity, the definition of treatment resistance, number of prior treatments, types of interventions, study designs, periods of follow-up, and sequence of interventions. Individual participant data was not available for analysis. Conclusions: Our findings suggested that ketamine has antidepressant efficacy across all identified stages of treatment resistance, however with increasing failed treatment trials, treatment may be less efficacious. The variability of the selected studies in regard to the

definition of TRD and methods of reporting on the resistance stage makes it challenging to juxtapose these studies to a particular point in the treatment algorithm for TRD and to establish the comparative efficacy of ketamine. Thus, the present analysis highlights the key potential predictive importance of the degree of treatment resistance impacting treatment response. Herein, we call for consistency in reporting on the stages and definitions of treatment resistance, depression illness characteristics and inclusion of participant-level data in trials evaluating antidepressant properties of ketamine and its analogues, as well as other existing and novel therapeutic targets for depression.

No. 48

Anxious Symptoms in Preschool and School Children as Predictors of Mood Symptoms in Adolescence

Poster Presenter: Jorge Valdivia

SUMMARY:

Background: The prevalence of mental health diseases in children and adolescents in Santiago de Chile was determined by a prolonged study (2004), resulting in 22.5%. Of these, 8.3% corresponded to symptoms of anxiety. These symptoms, which present in childhood and adolescence, are associated with disability and may have a chronic course. There are high levels of comorbidity between different anxiety disorders, and other mental disorders such as depression or alcohol consumption. Community studies show that anxiety is common among depressed children. Likewise, studies suggest that anxiety disorders in babies are predictors of depression in adolescence, a fact that has not yet been determined exactly. Objective: to determine if anxiety symptoms present in childhood function as predictors of depressive symptoms in adolescence. Method: The participants were 245 children (45% men) who were part of a preventive randomized clinical study on iron deficiency anemia carried out in Santiago, Chile (Lozoff et al., 2003). The original study involved 1,657 babies recruited between 1991 and 1996 and followed for more than 21 years. The variables studied included: measurement of anxiety and affectivity levels at 5 years using the CABI test

(Cowan & Cowan, 1990) and measurement of anxiety and depression levels at 10, 16 and 21 years using the CBCL test. (Achenbach and Ruffle, 2000). The educational level of the mother was measured using the Graffar instrument. The WISC III test applied at 10 years, and the CES-D maternal depression applied at admission, at 5 and 10 years, were included as covariates. The analysis was performed with the Pearson statistical test to find the possible direct relationship over time between anxious and depressive symptoms. Results: the score obtained on the "Anxiety" scale measured in the CABI test at 5 years was correlated with the score obtained from "Anxiety/Depression" scale measured in the CBCL test at 10 years, with a significant result of 0.36 $p < 0.001$. Subsequently, the score obtained on the "Anxiety/Depression" scale measured in the CBCL test at 10 years was correlated with the score obtained on the "Depression" scale measured in the CBCL test at 16 and 21 years, both with non-significant results. As a finding, a poor but significant connection was found between the measure of maternal depression (CES-D) at 5 years and the "Anxiety" and "Affectivity" scales measured in the CABI test at 5 years (0.28 and 0.26 both with $p < 0.001$ respectively). Conclusion: The depressive symptoms in the mother in a 5 years old child can determine an emotional change in it, similar results were found in other studies that relates the mother's responsiveness to behavioral changes in her children. Clearly, there's an evolutionary path for anxiety from 5 to 10 years of age. However, further investigation is needed to determinate it relationship with depressive symptoms in adolescence and adult life.

No. 49

Light Therapy Anxiolytic Effect in Depressed Patients

Poster Presenter: Elena Manfredi

Co-Authors: Matteo Carminati, Raffaella Zanardi, Cristina Colombo

SUMMARY:

BACKGROUND These are challenging times for psychiatry, with incidence of depression increasing and treatment-resistant depression (TRD) as well. A

known risk factor is anxiety, for both TRD and residual symptoms that impact quality of life, disability and costs. An easy and cost-effective potentiation therapy that grounds on neurobiology of depression is chronotherapy, and Bright Light Therapy (BLT) is the most used. Recently, translational experiments showed that light, known to act on serotonergic system involved in depression, guides clock-gene expression related with anxiety behavior. We inquired if BLT could foster clinical improvement not only in depression but specifically on anxiety that strongly distresses patients in acute phase. METHODS We propose a retrospective study on 184 consecutively admitted (2019-2021) adult depressed patients (124 F, 60 M, $p=0.884$; 61 BP, 123 MDD, $p=0.121$) at a tertiary referral center for mood disorder rehabilitation, receiving treatment as usual (TAU) alone or BLT potentiation based on clinical evaluation (75 TAU, 109 BLT+TAU). We collected demographic and three weekly rating scales (HAMD-17, t_0 mean 22.804, sd 5.428, $p=0.927$) data and analyzed them with Jasp software (v. 0.16.3). We performed Principal Component Analysis (PCA) with varimax rotation on the validated HAMD-17 scale, deriving 3 factors (Eigenvalue>1, load>0.4: melancholy MF, item 2, 3, 8, 17; sleep SF, item 4, 5, 6; anxiety AF, item 9, 10, 11, 12, 13, 14, 15). Then, we inquired if we could extrapolate anxious core from HAMD-17 t_0 scale and if BLT had a specific effect on it. We compared weekly total HAMD-17 and AF scores in BLT+TAU and TAU groups seeking any time-dependent changes, response and remission differences. RESULTS Factor scores in the two groups were comparable. BLT prompts AF response (>50% reduction) at t_2 ($p=0.033$) through t_3 ($p=0.030$) than TAU alone. MF and SF did not differ between groups at t_1 - t_3 , but hypnotics are frequently titrated so unadjusted scores are spurious, and our MF did not include core items (1, 7) for high uniqueness and kept cognitive ones (2, 3, 17) that are known from previous literature and clinical experience to improve slowly. BLT+TAU group obtained faster response (>50% reduction of HAMD-17 t_0 , $p=0.033$) and remission (HAMD-17 ≤ 7 , $p=0.032$) already at t_2 . At t_3 , the two groups converge (except for AF response; HAM-17 mean 7.321, sd 4.524, $p=0.136$) accordingly with the standard timelag for TAU to act. We did not have drop-outs nor significant side effects (e.g. headache, symptomatically treated). CONCLUSIONS

We found that BLT hastens response and remission, both in overall depressive symptoms and anxiety (AF), facilitating the resolution of the episode. At our knowledge, our preliminary data are the first that focus on anxious features and promote efficacious BLT use on these symptoms.

No. 50

Intranasal Esketamine for Peripartum Depression With Comorbid Lg1+ Limbic Encephalitis

Poster Presenter: Julia Hana Jones Schroeder

SUMMARY:

Peripartum depression is a common form of major depressive disorder with symptoms onset occurring during pregnancy or within 4 weeks following delivery. This condition is estimated to affect 10-20% of peripartum women. This condition has potential for severe adverse effects including suicide and infanticide and therefore warrants rapid acting treatment. Here we present a 22-year-old female 3-week postpartum patient with peripartum depression and suicidality. Her condition is complicated by comorbid LG1+ limbic encephalitis on daily steroids with seizures while on levetiracetam. We describe her presentation and rationality behind choosing intranasal esketamine as her rapid acting treatment. This is the second case of esketamine use in peripartum depression reported in the literature. This case adds to the literature the potential use of esketamine in peripartum depression and depression comorbid with epilepsy.

No. 51

How Translation of “Depression” in Other Languages Affects Access to Mental Healthcare: A Review

Poster Presenter: Kelly Blake, D.O.

SUMMARY:

Introduction: The theory of linguistic relativity by Sapir-Whorf describes how language determines how one experiences reality (Lucy, 2001). The linguistic definition of a construct can affect behavior surrounding that construct. The terms can have poor connotations and may impact an individual getting this diagnosis or seeking treatment for it. In English, different terms used by mental health professionals

impact stigma and engagement in mental healthcare. There are less stigmatizing terms such as “psychiatric disorder” and “mental health problem,” whereas there are more stigmatizing terms including “junkie” and “insane” (Ozer et al., 2017). Other research has shown that internalized stigma played a more significant role in patients not adhering to treatment than any sociodemographic factors (Livingston & Boyd, 2010). Awareness of these terms can improve communication for mental healthcare providers with those of other cultures and languages. This review aims to examine the extent of research near the research question: How has cross-cultural variation in the translation/meaning of depression impacted barriers to mental healthcare in different cultures? **Method:** A literature review was completed with advanced searches of PubMed, PsycINFO, Embase, Defense Technical Information Center, and Google Scholar. Inclusion criteria consisted of a foreign language term for depression translated into English, explained an impact on mental healthcare, and published since mid-1980’s. Exclusion criteria consisted of depression with psychotic features, distress that resembled more closely anxiety or PTSD, and not in English. Evaluation criteria consisted of country, culture, & language, the foreign word for or close to depression, direct translation to English, and the impact that term has on barriers to mental healthcare, either positive or negative. **Results:** The search identified 57 publications. Only 6 articles met inclusion criteria. An additional 12 articles were included from screening references in the articles during the review process and hand searching. 4 articles were not included that used the same language and term as another article already included. 18 articles were included in this review after being screened for evaluation criteria. 1 article contained 2 countries, so the Results Table consists of 19 countries. The Results Table shows all 19 countries, the foreign word for or close to depression, how that term is directly translated into English, and the impact that term has on mental healthcare barriers, either harmful or protective. **Discussion:** Not every language has an exact translation for the word depression. Terms are often related to the “heart”, “head”, or “thinking too much”. Terms used sometimes contribute to stigma and other times protect from it. The terms described

impact all aspects of the bio-psycho-socio-cultural formulation.

No. 52

Factors Limiting the Clinical Utility of Smartphone Apps for Eating Disorders

Poster Presenter: Theodora O'Leary

Co-Author: John Torous, M.D., M.B.I.

SUMMARY:

Eating disorders are a common mental health condition and are estimated to impact 9.9% of Americans in their lifetime (Pater et al., 202). Yet, there continues to be a lack of access to effective treatment modalities, with only one third of eating disorder patients receiving adequate treatment (Hart, Granillo, Jorm, & Paxton, 2011; Kazdin, Fitzsimmons-Craft & Wilfley 2017). Mobile health apps serve as a possible solution as they offer a low-cost accessible service. In June of 2021, a review of eating disorder apps in the Google Play and Apple Store was conducted along with a PubMed search to identify relevant publications around smartphone apps for eating disorders (O'Leary, T., & Torous, J. 2022). This poster presents an overview of the data presented in the O'Leary, T., & Torous, J. 2022 paper along with an updated review of the additional 11 eating disorder apps available as of September 2022. The apps were analyzed using the 105 questions evaluation framework to code for factors such as efficacy, privacy, and clinical applicability (Torous et al., 2018). While apps offer clear potential benefits such as increased accessibility, continuity of care, and ease of use our assessment identified certain drawbacks. Apps available in the marketplace were found to have many limitations to use including inadequate privacy protection, lack of clinical application and limited features.

No. 53

Evaluating Quit Interest and Pharmacological Treatment of Smokers Enrolled in a Male Residential Substance Rehab Program

Poster Presenter: Nicole Ann Lim

SUMMARY:

Background: Tobacco use is the leading preventable cause of death in the United States.

Emerging research supports tobacco cessation interventions during substance abuse rehabilitation treatment. Further, data is clear that tobacco cessation pharmacotherapy is effective. Yet, our previous study determined that tobacco pharmacotherapy was rarely given at two of our student-run free clinics (SRFCs) serving residential substance abuse facilities. This study aimed to study smoking behaviors, quit interest, and pharmacological treatment of smokers dealing with other substance use disorders. Methods: This is a retrospective cross-sectional chart review of patients at an all-male residential substance abuse rehabilitation facility in New Orleans, Louisiana. Data from 248 patients were recorded from February 2017 to March 2020. Patient information was de-identified using RedCap, a secure online database. SPSS was used to perform statistical analysis. Patient demographic, tobacco use behavior, and self-reported quit interest were summarized by descriptive statistics, specifically frequency and cross-tabulation functions. Results: This retrospective chart review analyzed 248 patients that were seen for intake and for specific medical complaints during substance addiction treatment. 53.4% of patients endorsed a past medical history of smoking. 50.4% of patients endorsed smoking less than 10 cigarettes daily, while the rest smoked between 11 and 40 cigarettes daily. On May 15, 2019, the question "Are you interested in quitting smoking?" was added to the H&P form. Nearly half of smokers were interested in quitting smoking at the time of the visit or were considering quitting at a later time. However, among those interested and who were not already on cessation medication, half were not prescribed tobacco cessation medication (nicotine replacement patches, gum, and Chantix). Notably, half of patients endorsing a past medical history of smoking were not asked about their daily tobacco consumption. Conclusions: Analyses demonstrated that patients who were interested in tobacco cessation were not being met with adequate pharmacological support during their visits. More importantly, there were tobacco users who were not being asked about their smoking patterns and motivation to quit. Asking is the first component of the 5 As model for smoking intervention (ask, assess, advise, agree, and assist), which has been widely recommended during primary care visits. Further

investigation is needed to identify factors preventing the prescription of pharmacological materials at our student-run free clinics. This would aid development of a routine screening tool that can identify all patients motivated to quit smoking and connect them to appropriate resources. This project was supported by a grant from the ASPIRE Program of Tulane University School of Medicine, New Orleans, LA.

No. 54

The Impact of a Ketogenic Diet on Binge Eating Disorder

Poster Presenter: Adam Malik, D.O.

Lead Author: Allen D'Souza, M.D.

Co-Author: Fayrouz Gadalla

SUMMARY:

The Ketogenic diet, a high fat diet, low to moderate protein and low carbohydrate diet has established benefits with treatment of seizure disorder in the Pediatric population. This diet has been known to be effective in weight loss, and has shown some promise with various other psychiatric and neurological conditions. To attain a state of nutritional ketosis the diet is structured with a ratio of fat: protein: carbohydrates varying from 2:1:1 to 6:1:1. The Ketogenic diet has been known to have some positive benefits with various other psychiatric and neurological conditions, in smaller sample sizes, making it a promising avenue for further research. We present this literature review with an attempt to look at the possible benefits of the Ketogenic diet on Binge Eating disorder. Binge Eating disorder one of the more common Eating disorders, has shown to have limited pharmacological options. Psychiatric comorbidities are very common, with most adults with BED also experiencing anxiety disorders, mood disorders, impulse control disorders, or substance use disorders. In addition to this, patients with Binge Eating Disorder have shown signs of food addiction. One study published in the Journal of Eating Disorders, studied 3 patients that reported Binge Eating disorder symptoms had been prescribed a ketogenic diet as part of the study for a period of approximately 6 or 7 months. The study showed that after 6 to 7 months on a ketogenic diet, the patients had reported improvement in obsessive thoughts

about food, improved ability to resist these obsessive thoughts if any, and significant reduction in the Yale Brown Obsessive Compulsive Binge Eating score. In addition to this improvement was seen in depression symptoms; weight loss and reduction of BMI scores. Another study on women with Binge Eating and symptoms of food addiction who were asked to follow a Very Low Caloric Ketogenic Diet, yielded positive results wherein the patients not only showed weight loss but also showed significant improvement in food addiction and Binge eating symptoms. Some of the important factors that could explain these results are the possible effect of nutritional ketosis, and its regulation of gut hormones and peptides, increasing satiety levels and causing appetite suppression. Also a ketogenic diet decreases the amount of refined sugars and high glycemic index carbohydrates being consumed, with resultant decreased insulin spikes which has shown to cause overeating. A review of the existing literature and studies shows the possibility of the Ketogenic Diet as a feasible treatment option for Binge Eating Disorder in the future, albeit the literature available is limited, and further studies with larger sample size is warranted to check the benefit of this diet with Binge Eating disorders which not only has limited scope of pharmacologic treatment options at the moment, but also a dearth of prior studies.

No. 55

Experiences and Attitudes to the Reporting of Workplace Violence by Staff of Acute Psychiatric Units in the Republic of Ireland

Poster Presenter: Joanne M. Fegan, B.Sc.

SUMMARY:

Background: The WHO and the Violence Prevention Alliance define violence as "the intentional use of physical force or power, threatened or actual, against oneself, another person, or against a group or community, that either results in or has a high likelihood of resulting in injury, death, psychological harm, maldevelopment, or deprivation." The types of violence examined in this study include physical, sexual, verbal and racial as the most commonly reported manifestations of violence in the workplace. Aims: To obtain the most recent statistics

on violent acts perpetrated against mental health care workers in the Republic of Ireland. To capture the experiences and attitudes of staff to the reporting of this violence. Methods: The State Claims Agency (SCA) were contacted to obtain the most up to date figures on violence against mental health care workers. An electronic survey based on the WHO's validated questionnaire on violence was then disseminated to all acute psychiatric units nationally. Results: According to the SCA there were 6,690 episodes of violence against staff in the Mental Health Division in 2018 and 2019. Regarding the online survey, 92.4% of 66 respondents reported verbal abuse, 30.3% recorded physical assault, 15.2% had suffered sexual violence and a further 13.6% experienced racial harassment in a 24-month period.. 4.5% of 89 respondents said that violence occurred daily. 54.4% felt this was preventable. 13% of 69 respondents reported violence to the Gardai with only one case proceeding to prosecution. 20.3% of study participants took no action at all, and of those who did, more than 70% felt that the incident had not been investigated properly. More than half of respondents felt that there were no consequences to the aggressor. 90.5% of 63 people said they would report violence in the workplace again. Of those who said they would not, 90% felt that it was pointless, again citing the lack of consequences to the aggressor. Discussion: It is clear from the response to the survey that there is a high degree of non-reporting of violence with an apparent sense of futility amongst staff. The recorded figure of 6,690 incidents likely falls far short of the reality. Further work is needed in the prevention of workplace violence as well as improvements in reporting and investigating of incidents when they do occur.

No. 56

WITHDRAWN

No. 57

WITHDRAWN

No. 58

Provider Comfort and Self-Assessed Competency in Assessing and Treating LGBTQ+ Patients

Poster Presenter: Scott Leary

Co-Authors: Valentina Metsavaht Cara, M.D., Heather Cherry, Ash Mehra, Felicia Gallucci

SUMMARY:

Problem: Approximately 9 million Americans identify as LGBTQ+. Gender and sexual minorities are considered a vulnerable population and are more likely to delay or avoid medical care. Additionally, providers' failure to elicit sexual orientation (SO) and gender identity (GI) may lead to inadequate screening and diagnosis of certain conditions. Since 2011, the Institute of Medicine has recommended the routine inclusion of SO and GI within electronic health records. However, many providers do not have adequate training in LGBTQ+ health education, as demonstrated in several surveys nationwide, and do not routinely assess these issues. A key variable in determining how providers will treat a given individual is providers' self-assessed competence. However, providers tend to overestimate their skills and therapy outcomes, so education is imperative to improve patient care. **Purpose:** Our goal is to assess and improve providers' competency and level of comfort in providing care for LGBTQ+ patients. We also seek to understand the most prevalent challenges providers face in providing care for this population in order to guide future educational interventions. **Methods:** We are using a comprehensive questionnaire sent via email, to be answered before and after an educational intervention. The initial phase of the project includes psychiatry residents from the University of Miami / Jackson Memorial Hospital / Bruce Carter Miami VA program. We plan to expand to include residents from other specialties and eventually all staff at the Miami VA. We are currently developing an educational intervention to occur during new interns' orientation that will be tailored according to the answers of this questionnaire. **Results:** As of May 2022, we had 32 responses from psychiatry trainees from our program (PGY1 - PGY4). Responses demonstrate: 1) providers have varying levels of comfort and competency in having LGBT-related discussions; 2) providers are more comfortable discussing LGBT issues if patients initiate this discussion; 3) common challenges include a fear of offending or embarrassing patients as well as a lack of familiarity with terminology and transgender laws and guidelines; 4) 50% of respondents are not aware

of LGBTQ+ specific patient resources. Discussion: Based on our results, respondents have widely variable levels of comfort and self-assessed competency when addressing issues related to the LGBTQ+ population. Many respondents have a suboptimal level of comfort when discussing SO and GI with patients and would benefit from further education regarding these specific topics as well as community resources available for individuals who identify as LGBTQ+. The challenges faced by respondents will help inform topics that need to be addressed in our educational intervention. This is an ongoing project and we are modifying the questionnaire to include respondents' demographic information.

No. 59

Why Are We Not Doing as We Say? Assessing Providers Clinical Competency in Caring for LGBTQ+ Patients

Poster Presenter: Valentina Metsavaht Cara, M.D.

Co-Authors: Scott Leary, Heather Cherry, Ash Mehra, Felicia Gallucci

SUMMARY:

Problem: Gender and sexual minorities are considered a vulnerable population and are more likely to delay or avoid medical care due to homophobia and poor treatment from providers. Additionally, providers' failure to elicit sexual orientation (SO) and gender identity (GI) may lead to inadequate screening and diagnosis of certain conditions. Many providers do not have adequate training in LGBTQ+ health education, as demonstrated in several surveys nationwide, and do not routinely assess these issues. Lack of training translates into discomfort working with LGBTQ+ patients, which contributes to patient's perceived unequal or unsatisfactory health care. Goal: To assess and improve providers' competency and level of comfort in providing care for LGBTQ+ patients. We also seek to understand the challenges providers face in providing care for this population in order to guide future educational interventions. Methods: a comprehensive questionnaire is being sent via email, to be answered before and after an educational intervention. The initial phase of the project includes psychiatry trainees from the University of Miami /

Jackson Memorial Hospital / Bruce Carter Miami VA program. This is an ongoing project, and the next phases include residents from other specialties and staff. An educational intervention will be tailored according to the answers. This study discusses some of the results obtained from the 35 questions asked. Results: As of May 2022, we had 32 responses from psychiatry trainees. Results are preliminary, but some issues are relevant to be addressed: 1) 24 respondents answered "very much" to their understanding of the term SO, while only 12 chose this answer for Gender Expression and 18 for GI. There were zero answers to "not at all" understanding, and varied answers to "a little", "somewhat" and "mostly". 2) 27% of respondents identify as part of the LGBTQ+ community. 3) Regarding in which setting it's important to ask about patient's GI and SO (Inpatient, Outpatient, ER, Depends on the case), there were zero answers to "none", and "depends on the case" was the most popular answer. 4) As to how often providers ask about patients' preferred name, pronouns, GI and SO, the most popular answer was "sometimes". 5) All respondents believe it is important to document patients' GI and SO in the chart, even though it might depend on case and setting. 6) While 16 respondents find it's "always important" to ask patients' preference on what's documented in their chart, only 4 answered they always ask it, with varying responses for "never", "rarely" and "sometimes". Discussion: A minority of providers identify as part of the LGBTQ+ community, and LGBTQ+ terminology and concepts are not widely understood. The discrepancy between what providers believe is important versus what they actually do in practice underlies the importance of increasing provider awareness and comfort in discussing LGBTQ+ matters, to improve health care outcomes in this population.

No. 60

Neurocognitive Deficits Associated With Low Level Exposure to Solvents. a Case Report: Nail Salon Dementia

Poster Presenter: Nitin Pothen, M.D.

Co-Author: Saba Afzal

SUMMARY:

Learning Objectives: A) Recognize the role of organic solvents in the development of mild to moderate neurocognitive deficits. B) Raise awareness of exposure to chemicals in nail salon workers and development of neurocognitive deficits in this occupational group. Abstract: A 61-year-old Vietnamese male with no past psychiatric history and a 5-year history of cognitive issues and short-term memory loss was referred to an outpatient psychiatric clinic for treatment of generalized anxiety and depressed mood. He initially reported to a neurologist due to intermittent episodes of memory loss with confusion. Multiple tests and imaging were completed by neurology. MRI was done with inconclusive results. Extensive neurocognitive testing was completed with a grossly negative workup. Labwork was also completed, including CBC and CMP, which revealed normal findings. Due to ongoing stressors, he developed anxiety and a depressed mood. He was started on Lexapro 10 mg by his primary care physician and referred to psychiatry for continued care for his mood symptoms. A thorough initial psychiatric evaluation was done. MMSE was done on which he scored 22 out of 30. Labs were repeated. CBC and CMP continued to be within normal limits. LFTs, Thyroid panel, and Vitamin B12 within normal limits. Negative RPR and Negative Lyme PCR. He has no history of hypertension or hypercholesterolemia. No family history of Alzheimer's disease. Heavy metal screen was done, which did not show the presence of heavy metals. He was continued on Lexapro 10mg. For his memory deficits, he was initially started on Memantine 5 mg and then titrated to 10 mg. He will continue to follow up. On this third follow-up visit, he reported that his co-workers have had similar symptoms at his nail salon. Conclusion This finding may correlate with an existing body of research regarding nail technicians and their occupational exposures to chemicals linked to Alzheimer's disease (Ma et al, 2021; Nguyen et al, 2021). It has been hypothesized that this unique and often vulnerable population may have significant exposures to chemicals such as dibutyl phthalate (Park et al, 2021). In this poster, we hope to add to the much-needed discussion on occupational exposures via a case report on this patient.

No. 61**The Influence of Behavioral and Psychological Symptoms of Dementia (BPSD) on Course and Severity in Patients With Alzheimer's Dementia (AD)**

Poster Presenter: Wonseok Lee

SUMMARY:

The influence of behavioral and psychological symptoms of dementia (BPSD) on course and severity in patients with Alzheimer's dementia (AD): 1 year follow-up study Objective Behavioral and psychological symptoms of dementia (BPSD) are common clinical manifestation of dementia. The influence of BPSD on course and severity of dementia remains unclear. This study investigate the influence of BPSD on course and severity in patients with Alzheimer's dementia (AD) Methods Among subjects registered in the dementia cohort, 530 patients with AD were included in this study. BPSD were assessed by the Neuropsychiatric Inventory (NPI). The severity of AD was evaluated by Clinical Dementia Rating (CDR) Sum of Box (SOB), and the functional decline was by Disability Assessment for Dementia (DAD), Dependence Scale (DS), and Dysexecutive questionnaires (DEX). The relationships between BPSD, change of severity, and change of function for 1 year were analyzed by mixed measures ANOVA. Results Delusion, hallucination, agitation, aberrant motor behavior, night-time behavior, and eating change were associated with increased scores of CDR-SOB, DEX and DS in patients with AD ($P<0.05$). In addition, delusion, hallucination, agitation, euphoria, apathy, aberrant motor behavior, night-time behavior, and eating change were associated with decreased scores of DAD, indicating functional decline in activities of daily living, in patients in AD ($P<0.05$). The changes of SOB for 1 year were greater in AD groups of BPSD(+) such as agitation, irritability, aberrant motor behavior, and night-time behavior, compared to AD groups without the above symptoms. Conclusion Various behavioral symptoms were associated with greater severity, dysexecutive function, increased dependency, and functional decline in AD patients. Severity of dementia progresses faster in AD patients experiencing one of behavioral symptoms such as agitation, irritability, or aberrant motor behavior. Keyword Alzheimer's Dementia, behavioral and

psychological symptoms of dementia (BPSD),
Severity and course of dementia

No. 62

Interactions Between Early Life Experience, Puberty, and Pathophysiology in Youth Resettled as Refugees of Syria

Poster Presenter: Erin Hendrix

Co-Authors: Arash Javanbakht, Lana Grasser

SUMMARY:

Background: Pubertal hormones may play a role in the development and maintenance of mental illness given sex differences in the prevalence of trauma-related psychopathology. Integration of the hypothalamic-pituitary-gonadal (HPG), hypothalamic-pituitary-adrenal (HPA), and sympathetic-adrenal-medullary (SAM) axes in response to trauma may describe mechanistic processes underlying this phenomenon. Therefore, we investigated whether pubertal status was associated with trauma exposure and related psychopathology (PTSD, anxiety) in youth resettled as refugees. We also explored the role of skin conductance responses (SCR), a biomarker of autonomic nervous system arousal that has previously been linked to trauma exposure and severity of posttraumatic stress. **Methods:** Participants were 74 youth (38F, $M_{age}=12.41$, range=7-17) resettled as refugees of Syria. We used multiple regression to examine the associations between trauma (Harvard Trauma Questionnaire), related psychopathology (UCLA PTSD Reaction Index and SCARED), pubertal status (Pubertal Development Scale), and SCR to trauma interview (HTQ). **Results:** Pooled Pearson correlations indicated significant associations between trauma and pubertal status ($r=.33$, $p_{corrected}=.01$) as well as SCR to trauma interview ($r=.33$, $p_{corrected}=.01$) but not pubertal status and psychopathology. In a follow-up regression analysis, trauma exposure and pubertal status were scaled, mean-centered, and entered as predictor variables along with age as a covariate and SCR as the outcome. The overall model was significant, $R^2=.13$, $F=3.10$, $p=.03$, and pubertal status significantly predicted SCR above and beyond that of age and trauma exposure, $b=.99$, $t=2.21$, $p=.03$. Given that we had previously found trauma exposure

as a significant predictor of SCR in this cohort (Grasser et al., 2022) we tested pubertal status as a mediator between trauma exposure and SCR. Pubertal status, controlling for trauma exposure, was significantly associated with SCR, $b=.81$, $t=2.32$, $p=.02$, while trauma exposure when controlling for pubertal status was not, $b=.36$, $t=1.04$, $p=.30$. Bootstrapped 95% confidence intervals confirmed that pubertal status mediated the relation between trauma exposure and SCR, $LLCI=.01$, $ULCI=.77$. In sex-segregated analyses, adrenarche was significantly correlated with SCR in males ($r=.38$, $p_{corrected}=.04$) while gonadarche was significantly correlated with SCR in females ($r=.44$, $p_{corrected}=.01$). **Conclusion:** Previous work has indicated that greater trauma exposure may confer increased autonomic arousal linked to posttraumatic stress in youth. The present research supports the role of the HPG axis in this process, with potential sex-related variation. The interactions between early life experience, puberty, psychophysiology, and psychopathology are complex and have implications across multiple medical specialties for prevention, evaluation, treatment, and policy.

No. 63

Donepezil Induced Nightmares in a Patient With Mild Cognitive Impairment: A Case Report

Poster Presenter: Rochaknaveen Singh Bains, M.D.

Co-Authors: Tyler Zahrl, Rebecca Sue Lundquist, M.D.

SUMMARY:

Abstract This case focuses on a patient with mild cognitive impairment (MCI) who developed nightmares on donepezil. Donepezil is FDA-approved for treating patients with MCI and Major Neurocognitive Disorder (MNCD) but has the less known side effect of nightmares. Donepezil influences the overall quality of sleep and the quality and quantity of dreams. We observed a relationship between nightmare occurrence and donepezil dosing in our patient. Case presentation: The case is a 78-year-old female with a history of type 2 diabetes mellitus, hypertension, major depressive disorder, and generalized anxiety disorder managed with metformin 500 mg BID, Lisinopril 10 mg daily, Zolof 100mg daily, and buspirone 10 mg three times daily. The patient was eventually diagnosed with MCI, had

no history of sleep difficulty, including nightmares, and practiced good sleep hygiene. The patient was prescribed donepezil 5 mg nightly for MCI. After two months, the patient started complaining of vivid dreams, which she described as dreams of people attacking and robbing her. Donepezil administration was changed to the morning, decreasing the frequency of nightmares for three weeks; however, her nightmares eventually worsened. She started complaining of nightmares of people dying in airplane crashes. This significantly interfered with her sleep leading to daytime somnolence, irritability, and worsening anxiety and depression. Three days later, her husband called and said that his wife was screaming in the middle of the night due to nightmares. At this time, donepezil was stopped. The patient reported improvement in sleep and denied nightmares at the subsequent follow-up visit after nine days. Discussion and Conclusion: Rapid Eye Movement (REM) sleep is mainly regulated by the cholinergic system present in the midbrain pontine tegmental region. The ascending pathway regulates REM sleep through serotonergic and noradrenergic systems. In contrast, the descending pathway, which runs through the reticular spinal descending axons, helps release muscle tension often present in REM sleep. Donepezil is a selective and long-acting acetylcholinesterase inhibitor that is indicated for treating MCI and mild to moderate MNCD. As an acetylcholinesterase inhibitor, donepezil decreases the hydrolysis of acetylcholine (ACh). It increases ACh concentration in the blood, leading to increased REM sleep, REM density, and duration of the REM sleep period and reducing REM latency. Patients taking donepezil have increased the REM sleep phase and reduced the slow frequencies of theta waves (range 4- 8 Hz) during REM on EEG while asleep. The above case report suggests that the over-activation of the cholinergic nervous system by donepezil may lead to more frequent nightmares and sleep difficulties in patients diagnosed with MCI. Based on this case, we recommend that clinicians should pay close attention to patients with sleep changes while taking donepezil.

No. 64

A Cautionary Tale of Anti-NMDA Encephalitis Mimicking as an Affective Disorder in a Young Female

Poster Presenter: Adam Kasparek

Co-Author: Chase Peng Yun Ng, M.B.

SUMMARY:

A female in her mid thirties with a history of depression and recreational cannabis use presented to Accident & Emergency (A&E), following a road traffic collision, with acute-onset psychosis, impulsivity and agitation. Failing verbal de-escalation and mental capacity assessment, she was tranquilised and intubated in her best interest for investigations and safety. Her initial drug screen, lumbar puncture and MRI head returned unremarkable but her Ca-125, Ca 19-9 and LDH tumour markers were raised. An 11-cm complex pelvic mass was also found incidentally on her CT trauma series but was reported as a probable degenerate fibroid. An autoimmune encephalitis antibody screening, including anti-NMDA and anti-VGK+ were sent, with results pending at that point of time. Despite being given 10mg Olanzapine prior to extubation, she was re-intubated due to recurrent agitation. She continued to await mental health assessment with plan for a transfer to a Psychiatric Intensive Care Unit for management of probable mania secondary to an undiagnosed bipolar affective disorder. However, eventually a positive anti-NMDA antibody and MRI pelvis finding confirmed instead the diagnosis of anti-NMDA encephalitis secondary to an ovarian teratoma.[1] She was promptly started on immunosuppressive therapy- intravenous immunoglobulin and high-dose steroids- following neurology advice. As her symptoms remained refractory to treatment, she underwent a unilateral salpingectomy in her best interest, under the Deprivation of Liberty for Safeguards (DoLS). She recovered without complications one week later and proceeded to have her eggs harvested in case of a relapse. Given the juxtaposition of the novelty and rarity of anti-NMDA encephalitis and its ubiquitous initial presentation to psychiatrists, our case aims to raise awareness of this organic cause of psychosis within the multidisciplinary medical field.[2] First, we elaborate on the pearls and pitfalls in diagnosing anti-NMDA encephalitis, including the typical

chronology of symptom onset, the sensitivity of MRI and EEG as well as the clinical picture of such patients.[3,4,5] Second, we share our learning through managing this young female patient conservatively, medically and surgically, with recommendation of current best clinical practices.[4,6,7] Third, we emphasize on clinical challenges faced, especially when surgical management such as salpingectomy is indicated, as it involves risking the fertility of an incapacitated female of childbearing age.[6,7]

No. 65

Genome-Wide Association Study of Genetic Susceptibility and Clinical Features Related to Obsessive-Compulsive Disorder in Korean Population

Poster Presenter: Chun Il Park

SUMMARY:

Introduction: Obsessive-compulsive disorder (OCD) is a severe and disabling clinical condition characterized by intrusive thoughts and repetitive behaviors. A growing body of studies has investigated the genetic etiology of OCD, and genome-wide association study (GWAS) has emerged as a powerful tool for investigating the genetic architecture of common diseases. However, only few studies have conducted GWAS on OCD among Asian populations. This study aimed to identify common variants associated with OCD using genome-wide analysis in the Korean population. In addition, further analyses, including polygenic risk score (PRS) analysis, were performed. **Methods:** We collected two genome-wide variant datasets produced by the Korean Biobank Array Chip. Dataset #1 included 429 patients with OCD and 2400 healthy controls. In addition, dataset #2 of independent samples, including 115 patients with OCD and 228 healthy controls, was gathered for the replication study. We performed a logistic regression analysis for case-control associations. Further, gene-based analysis was performed using the web-based platforms FUMA and MAGMA. PRS analyses were performed using PRSice-2 in two steps: (1) we used the previous GWAS results of the Psychiatric Genomics Consortium as a discovery set and dataset #1 as the target sample, and (2) we used the summary

statistics from dataset #1 as a discovery set and calculated the PRS in dataset #2. Finally, the association between genetic predisposition and clinical characteristics and onset age of OCD was investigated. **Results:** There were no significant genome-wide markers in the multiple logistic regression analysis. Further analysis with gene annotation revealed that upregulated gene expression was associated with genetic differences in OCD in the frontal areas of the brain. PRS was calculated using a discovery set from a previously reported GWAS in other populations, and the threshold of $P = 0.4288$ showed the best model fit. When using the GWAS results of the present study as a discovery set, the R^2 value was 0.018 with a P -value threshold of 0.0249 in independent Korean samples. Regarding the genetic association with onset age of OCD, rs372803 in the *CIT* gene showed genome-wide significance, although it was not replicated in independent samples. **Conclusions:** Although we could not identify the genome-wide significant loci associated with OCD susceptibility, we found a genetic effect on the onset age of OCD. Further studies with larger sample sizes are needed to explore the candidate SNPs and related genes.

No. 66

Assessment of Suicidality and Components of Burnout Among Vcu Health Resident Physicians

Poster Presenter: Hena Yakoob, M.D.

Co-Author: Aradhana Bela Sood, M.D.

SUMMARY:

Background: It is well-documented that physicians are at increased risk of burnout relative to workers in other fields and burnout is associated with unsafe care and low career satisfaction (1,2,3). Trainee-level physicians face many challenges during the intensity of residency and/or fellowship, often caring for others while their own needs are neglected. The literature shows a strong trend of residents facing a higher risk of developing depressive symptoms, burnout, and suicidal ideation compared to their peers (4,5). However, there is mixed evidence on the direct relation of burnout to suicidality (3,6,7). **Objective:** This study aims to explore the burden of suicidality and burnout in the VCU Health System resident physician population. The

hypothesis is that trainees who qualify as high risk for future suicide or suicidal behaviors on the Suicide Behaviors Questionnaire Revised will report a high level of burnout on the Oldenburg Burnout Inventory. **Methods:** A REDCap survey was disseminated using Program Directors as liaisons for recruitment. The survey also captured factors impacting mental health besides burnout, including the PHQ2 screening for depression. Rank correlation was used to estimate and test for associations between the scored values of SBQR, OBI, and PHQ2, both overall and stratified by Training Stage (p -value <0.05). **Results:** Rank correlation ($n=74$) revealed a significant association between OBI and SBQR overall ($r = 0.28$, 95% CI: 0.06, 0.48, $p=0.015$) but not when stratified by training stage. PHQ2 is associated with both OBI ($r = 0.53$, 95% CI: 0.35, 0.68, $p<0.0001$) and SBQR ($r = 0.29$, 95% CI: 0.07, 0.49, $p=0.012$) overall and across early and middle training stages. High scores on OBI (≥ 35) and PHQ2 (≥ 3) were more predominant in PGY1-2s, while high scores on SBQR (≥ 7 with 93% sensitivity, 95% specificity) were comparable between early and middle training stages. Work/residency (81.1%), the COVID pandemic (52.7%), interpersonal issues (44.6%), and finances (28.4%) were among the major factors cited as negatively impacting mental health over the past year. Although more than 60% of trainees express discomfort discussing mental health with supervisors ranging from attendings to GME, up to 67.6% feel safe talking about mental health in the workplace overall. **Conclusion:** The burden of unrecognized burnout, depression, and suicidality has far-reaching implications on the community within a hospital, especially during earlier years of training. The evidence here suggests a significant association between all three factors. Although there is a significant association between burnout and suicidality shown here, results were likely limited by sample size. The study aims to share data with GME to inform the development of institutional level initiatives to improve resident physician quality of life and ultimately enhance care of both physicians and patients.

No. 67

Using Empathy to Prevent Burnout Treating Patients With Cluster B Personality Disorders in Psychiatry Residency

Poster Presenter: Derrick M. Knox Jr., M.D.

SUMMARY:

Burnout is a ubiquitous consequence of residency and medical practice. One-third of psychiatry trainees may suffer from negative physical and emotional symptoms secondary to burnout. Individuals with cluster B personality disorders, or traits, represent a significant population of patients who present to the primary care clinic or emergency department in need of psychiatric care. Patients with severe character pathology can exacerbate burnout, which can negatively influence patient care, healthcare outcomes, and increase medical errors. Active utilization of empathy in clinical practice, using a developed framework split into three components: transactional, relational, and instrumental, may ameliorate and protect from burnout and increase job satisfaction in psychiatric residents.

No. 68

Creatively Connecting: A Virtual Music Showcase, Featuring Members of the Urmc Psychiatry Department, to Promote Trainee Wellness

Poster Presenter: Grace Sungun Ro, M.D.

Co-Authors: Tomotaro Monte, D.O., Daniel Lee, Pharm.D., Mark W. Nickels, M.D.

SUMMARY:

Background: In a time of unprecedented societal disconnection, healthcare providers have been subject to undue amounts of stress with limited options to alleviate it. There is an estimated overall U.S. physician burnout rate of 40 to 54%, potentially detrimental to the quality of health care provided by physicians, and to their own health.¹ There are ongoing interventions that target systemic administrative stressors, as well as programs that focus on individual providers' mental health.² Despite the current movement to incorporate humanities in medical education,³ there is limited research in implementing such interventions in residency training. **Methods:** On April 26, 2022, the

University of Rochester Medical Center Psychiatry Department hosted a virtual event to bring members of the Department and Rochester community together via a musical showcase. The event featured performances by members of various disciplines within the department, as well as a local business owner. The event was streamed via YouTube Premiere and lasted 33 minutes. Following the event, viewers were encouraged to support the featured local establishment. The authors conducted anonymous surveys of URMCI Psychiatry residents and trainees using a modified version of the Perceived Stress Scale (PSS) prior to and following the event. **Results:** Pre- and post-event surveys were sent to 82 total trainees. The pre-survey sample consisted of 22 respondents (27% response rate), with 14 respondents (17% response rate) in the post-survey sample. The PSS score calculated based on average response scores was 17 (moderate stress) from the pre-survey and 12 (low stress) from the post-survey. Results from the pre-survey also indicated that approximately 95.5% of respondents used music in general as a coping mechanism for stress to some degree. In the month prior to the event, 86.3% of pre-survey respondents reported feeling some degree of workplace isolation, whereas following the event, this percentage dropped to 64.3%. Based on post-survey results, 100% of respondents indicated the event increased feelings of connectedness with one another to some degree. **Conclusion:** Though survey findings were limited by several factors, they suggest that social events centered around fostering (re)connection through music may have immediate benefit in reducing stress levels and feelings of workplace isolation among participants. This event featured musical performances mainly. It is unclear if these findings are generalizable to events with other forms of creative arts. Given the above, further exploration of art-centric social events as a means of helping mitigate resident/trainee stress and burnout is warranted. Increasing the frequency of such events may also demonstrate longitudinal changes in individual wellbeing, potentially justifying the permanent inclusion of such events into residency training.

No. 69

The Effect of Depressive Symptoms on Health Examination Participation: The 2020 Korea National Health and Nutrition Examination Survey Database

Poster Presenter: Seungwon Cho, M.D.

Co-Authors: Kyung Seu Yoon, Sohn Boyoung, Seok Hyeon Kim

SUMMARY:

The National Health Insurance Service (NHIS) of South Korea conducts health examinations once every two years for adults over the age of 19 for disease prevention and early detection. Depressive symptoms affect apathy and low energy, making it difficult to lead a health seeking behavior. Accordingly, depressive symptoms are thought to lower participation in health examinations. Considering that depressive symptoms are associated with multimorbidity of physical illness, it is also associated with higher mortality in depressed patients. In this study, we investigate the effect of depressive symptoms on health examination participation using the large epidemiological study data in South Korea. The Korea National Health and Nutrition Examination Survey (KNHANES) is one of the large-scale national surveys in South Korea. The health questionnaire items in this survey include the Patient Health Questionnaire-9 (PHQ-9) for the assessment of depressive symptoms. Participants also answered whether they had accepted a health examination within 2 years. To investigate the relationship between depressive symptoms and health examination participation, a multiple logistic regression model controlling covariates was used. There was a significant association between health examination participation and depressive symptoms in adults. Significantly lower rates of health examination were observed in those with depression-level depressive symptoms (PHQ-9 scores 10 to 27; OR 0.73, 95% CI: 0.56-0.95). This association was still observed in people with pre-depression level depressive symptoms (PHQ-9 scores 5 to 9; OR 0.82, 95% CI: 0.69-0.98) Decreased health examination participation rate is associated with depressive symptoms. This study showed that even if depressive symptoms are at the pre-depression level, they were significantly less likely to get a health examination. Psychiatric attention in people with depressive symptoms, including pre-depression

levels, is needed for disease prevention and early detection. At the same time, when establishing a policy to increase the health examination rate, it is necessary to establish a policy that can solve the decreased examination rate due to depressive symptoms.

No. 70

Improving Outpatient Clinic Use of the Abnormal Involuntary Movement Scale (AIMS) as a Screening Tool for Tardive Dyskinesia

Poster Presenter: Benjamin Babchick

Co-Authors: Christian King, Daniel Lewis, Kitty Leung

SUMMARY:

Introduction: The Abnormal Involuntary Movement Scale (AIMS) is a validated twelve-item rating scale of involuntary movements used to screen and monitor for clinical symptoms of tardive dyskinesia (TD). The 2021 Clinical Practice Guidelines encourages screening at a minimum of every six months in high-risk patients or every twelve months in patients with nominal risk levels. The objective was to increase the use and documentation of the AIMS scale to APA standards within an outpatient psychiatric clinic via the use of clinician education, facilitation of documentation and surveillance of clinician reported barriers to TD screening. **Methods:** First, a retrospective medical record review determined pre-education provider AIMS screening rate from September 2020 through August 2021. Then an educational meeting was held and attended by all providers with the goal of educating providers on AIMS screening guidelines, how to conduct AIMS testing, and how to document in the electronic medical record. Next, post-education provider AIMS screening rate was determined from September 2021 through November 2021. Chi-squared analysis was used to determine statistical significance between pre-education and post-education groups. In addition, a subset analysis was conducted reviewing the entire data set of pre- and post-education patient charts stratifying patients based on diagnosis for which antipsychotics were prescribed. **Results:** The pre-education rate of AIMS screening for all providers in our clinic was 9.5% (n=148) with the post-education rate increasing to 19.4% (n=134, p=0.017). When stratifying by

diagnosis, the pre-education AIMS screening rates for patients prescribed antipsychotics for psychotic and mood disorders were 19.2% and 2.9%, respectively, increasing to post-education rates of 34% (p=0.094) and 12.7% (p=0.032), respectively. **Conclusion:** Our providers had a statistically significant improvement in rates of AIMS screening increasing from 9.5% to 19.4% after educational intervention was implemented. When stratifying data based on primary diagnosis, post-education AIMS rates increased for patients with both psychotic and mood disorders. However, AIMS exams were being completed for psychotic disorders at significantly higher rates compared to mood disorders, both pre- and post- educational intervention. This project can be expanded upon in the future by implementing a hard stop within the electronic medical record reminding providers to complete an AIMS exam every six months for every patient prescribed an antipsychotic. This may achieve better compliance rates compared to an educational meeting and documentation simplification.

No. 71

Factors Influencing Burden of Dementia Family Caregiver in Athens, Greece

Poster Presenter: Dimitris Avramidis

Lead Author: Konstantinos Argyropoulos

Co-Authors: Eleni Jelastopulu, Argyro Argyropoulou

SUMMARY:

Background: Studies have shown that dementia family caregivers to be significantly more burdened than non-dementia caregivers. **Aim:** The aim of the present study was to analyze factors affecting the quality of life and the burden of dementia family caregivers. **Material and Method:** 70 dementia family caregivers who lived in the Attica Region, Greece participated in the study from February to April 2022. An anonymous questionnaire was used including 16 items regarding demographic and socio-economic factors. The 22 -item Zarit Burden scale was used to estimate the burden of dementia family caregivers. Statistical analysis was performed with SPSS 21. **Results:** 1.4% of caregivers showed minimal to no burden (n = 1). 28% of caregivers (n = 20) a mild to moderate burden 40.6% (n = 29) presented a moderate to severe burden, while 28% (n = 20) a

very serious burden. According to the results of the present study, there are three main factors that affect the quality of life of caregivers. Caregivers who spend more time with the patient have an increased burden compared to caregivers who spend less time. The patient's low Mini Mental score is associated with an increase in burden. Caregivers who have attended training and management programs for the care of a patient with dementia have a lower burden than those who have not attended programs. Conclusion: The study highlights an increased burden on caregivers. Social supports with multiple coping strategies focusing on different levels of patients' with dementia and caregivers' needs should be planned to relieve the caregiver burden.

No. 72

Covid Positivity and Covid Morbidity in Adults With Serious Mental Illness and Substance Use Disorders

Poster Presenter: Shirley Diana Angela Alleyne, M.D.

Co-Authors: Kellcee Jacklin, M.S., Reham Sadek, M.D., Andrew Bugajski, Ph.D.

SUMMARY:

BACKGROUND: Coronavirus-19 (COVID) positivity rates and COVID morbidity in adults with Serious Mental Illness (SMI) and substance use disorders (SUD) have been mixed, with more severe morbidity associated with SMI (bipolar and psychotic disorders), and SUD. In Polk County, Florida the ratio of mental health providers to population ratio is 25% of the US benchmark (2019); many persons with SMI and SUD in Polk County forego mental health and addiction treatment, which can result in poor health. Moreover, Florida's COVID mitigation measures were limited during the pandemic, providing a unique situation to examine human behavior and outcomes as a "natural experiment" caused by COVID. Nationally, and internationally, scant data exist regarding COVID positivity rates and outcomes in persons with mental illness, furthermore those who live in mental health resource-poor counties, with minimal COVID mitigation measures such as Polk County. Thus, this study served to assess COVID positivity rates and the variable impact of COVID, SMI, and SUD on morbidity (hospital and ICU admission) and mortality. **METHOD:** This retrospective chart review compiled data on all

patients who received COVID tests in the emergency room of a large, tertiary-level hospital in Central Florida between September 2020 and March 2022. Data from records were extracted regarding ICD 10 codes associated with SMI and SUD. Outcome data included COVID positivity, hospital admission status (inpatient or ICU), and death. A series of logistic regressions were deployed to examine the effects of COVID, SMI, and SUD on outcomes. In each model, age, sex, COVID positivity, SMI, SUD, and the interaction of COVID with SMI/SUD were the variables. **RESULTS:** The cohort included 101,659 adults; 8,512 (8.4%) with a SMI, and 28,646 (28.2%) with a history of SUD—only these patients were used in logistic regression modeling. Patients were predominantly female (54.4%) and racially diverse: Caucasian (66.3%), Hispanic (14.8%), and African American (17.1%). Patients with a history of any mental health disorder were 34.4% (OR = .656; $p < .001$) less likely to test positive for COVID. When examining the effects of SUD and SMI on hospitalization, COVID-positive patients with SMI (but not SUD) were more likely to be hospitalized (OR= 1.50). Having SMI and/or SUD did not have significant impact on ICU admission in COVID patients. When predicting mortality, COVID-positive patients with SUD (OR=3.31) or SUD and SMI (OR=2.90) were at increased risk of death as compared to those without. **CONCLUSION:** Our findings support previous reports of lower COVID positivity in patients with SMI and SUD. Increased risk of hospitalization occurred only in COVID patients with SMI. COVID patients with SUD experienced increased death rates, however, death rates for those with SMI increased only in the presence of comorbid SUD. Further studies to understand the COVID trends in these vulnerable populations are warranted.

No. 73

Suicidal Ideation Induced by Treatment-Resistant Chronic Insomnia: A Case Study

Poster Presenter: Alexander D. Zhang

Co-Authors: Akhil Pola, Yezhe Lin

SUMMARY:

Introduction Insomnia is a prevalent global health problem that affects 11.7% - 36% of the population.

It is a risk factor for depression, poor quality of life, and accidents. Increasingly, insomnia has been identified as a suicide risk factor. We present a case report of insomnia-induced suicidal ideation (SI) in a 43-year-old. **Objectives** Learn the mechanism of insomnia-induced SI Understand current insomnia treatments Discuss the possible mechanism of ECT treating insomnia-induced SI **Case** A 43-year-old single male with past psychiatric diagnoses of social anxiety, borderline personality disorder, chronic SI, and severe recurrent depression was admitted to inpatient due to intractable SI from insomnia. He failed trials on SSRIs/SNRIs, bupropion, trazodone, lithium, vortioxetine, quetiapine, zolpidem, and ketamine. The patient was initiated on electroconvulsive therapy (ECT) three times a week with 20mg vortioxetine and 100mg quetiapine for sleep initiation. After 6-sessions, the patient's mood, affect and sleep had improved considerably, and his suicidal ideations resolved. The patient was discharged with outpatient follow-up and applied ECT as rescue therapy. Outpatient, the patient averaged 4-6hrs/night and remained at his baseline mood. **Discussion** ECT is an effective treatment for refractory insomnia-induced SI, and its early application may avoid prolonged ineffective treatment as in our patient. ECT's mechanism is likely due to persistent REM suppression and reduced dendritic arborization/excitatory synapses in the amygdala. Possible mechanisms for insomnia-induced SI include impaired decision-making, abnormalities in 5-HT function, or HPA dysfunction leading to a hyperarousal state and cortisol release. Current insomnia treatments address underlying medical/psychological problems and non-pharmacologic and pharmacologic strategies. The predominant non-pharmacologic approach is Cognitive Behavioral Therapy Insomnia (CBT-I), such as relaxation techniques, sleep hygiene education, cognitive structuring, and sleep restriction. Pharmacologic options include benzodiazepines, non-benzodiazepine hypnotics, tricyclic antidepressants, trazodone, and antihistamines. Clinicians should consider ECT, as the most effective treatment for depression, in the early stage of insomnia-induced suicidal ideation.

No. 74

Mental Health Impact of Obstructive Sleep Apnea: A Systematic Review

Poster Presenter: Niroshan Sathivadivel, M.D.

Co-Author: Keerthiga Raveendran, M.D.

SUMMARY:

Background: Sleep related breathing disorders often go undiagnosed in the mentally ill population. On average, an individual with sleep apnea (SA) is more likely to seek mental health services compared to those without sleep apnea. It is thus crucial to diagnose and treat these individuals prior to worsening of their mental illness. SA currently affects 13% of adult men and 6% of adult women in the United States. SA is categorized into three forms: Central, Obstructive and Complex. The most common of these being Obstructive and is the central focus of this poster. Chronic repeated hypoxemia can lead to poor neurocognitive development. Additionally, recurrent nightly hypoxemia can affect regions of noradrenergic and dopaminergic pathways, through which mood is controlled. This poster will outline the prevalence of sleep apnea and its worldwide bearing on mental health. **Method & Results:** Cross-sectional national survey, retrospective review, and cross-sectional telephone survey were used in this review. Systematic search was completed using electronic databases PubMed and Psych-Info. Results of three large-scaled studies exploring mental health comorbidities in SA patients are outlined in this poster. A combined data pool from National Survey on Drug Use and Health by Kaufmann et al. concluded that in individuals with SA, depression is 3 times higher, suicidal ideation is 2.75 times higher, anxiety is 3.6 times higher and generally any psychological condition is 2.88 times higher when compared to those without SA. In a 2005 retrospective review by Sharafkhaneh et al. of the Veterans Administration Healthcare System, it was found that veterans with SA had comorbid depressive disorders (21.8%), anxiety disorders (16.7%), PTSD (11.9%), psychotic disorders (5.1%), and bipolar disorders (3.3%). In another multi-national European study (Ohayon, 2003) completed with over 18,000 subjects across 5 major European countries; 17.6% of the participants with breathing-related sleep disorder diagnoses also met criteria for

MDD. **Discussion:** It is crucial to explore the impact of SA in mental health patients. Psychotropic medications can worsen SA symptoms. This is an important relationship as SA significantly increases the risk of metabolic disorders and cardiovascular incidents, commonly seen in psychiatric patients. This cycle can continue to occur. Severe SA can significantly alter one's behavior and personality, which may be mistaken for another organic mental disorder. Combination of lifestyle modifications and Continuous Positive Airway Pressure have shown to be beneficial in treating OSA. After OSA treatment with CPAP, grey matter volume increase has been observed in the hippocampus, thus improving memory, attention, and executive function. Improving an individual's sleep quality can positively impact the state of their mental health and therefore also improve their quality of life.

No. 75

Narcolepsy Is Associated With an Increased Risk of Hla-Related Autoimmune Diseases: A Nationwide Healthcare System Database in South Korea

Poster Presenter: Hongshik Chun

Co-Author: Seung-Chul Hong

SUMMARY:

Abstract Study Objectives: To determine the incidence of narcolepsy in South Korea and to closely examine the relationship between narcolepsy, which is believed to be an autoimmune response, and other systemic autoimmune diseases. **Methods:** We examined data from the South Korean nationwide health insurance claims database from 2010 to 2019. Our study included patients with narcolepsy, and age- and sex-matched controls without narcolepsy. We estimated the incidence of narcolepsy and the odds ratio of narcolepsy and associated autoimmune comorbidities in South Korea. **Results:** We identified 8,710 patients with narcolepsy (59.8% men and 40.2% women). The incidence of narcolepsy was 0.05%. Patients with narcolepsy are at a significantly high risk of ankylosing spondylitis, rheumatoid arthritis, and Sjögren's syndrome, which are related to human leukocyte antigen (HLA) genes.

Conclusions: Narcolepsy is closely associated with systemic autoimmune diseases, particularly those related to HLA genes.

No. 76

Acute Hyperactive Delirium Followed by Excited Catatonia: A Case Study

Poster Presenter: Oluwole Adeyemi Babatunde

Co-Authors: Frank Clark, M.D., Jessica Hill, Belynda Vesper, Anusuiya Nagar

SUMMARY:

Ms. A. is an 84-year-old Hispanic female with a past psychiatric history of major depressive disorder (MDD), and one episode of catatonia about six years prior to current presentation. She first presented to the emergency department (ED) for a motor vehicle collision that led to bruising. She had four ED visits over the next four weeks. At the fifth visit, she was hospitalized because of concerns of altered mental status (AMS), agitation, and hallucinations. She was subsequently admitted to the inpatient medical service and the working diagnosis was delirium secondary to UTI/bacteremia, exacerbated by sleep deprivation. Patient was assessed by consult liaison psychiatry service on day one of admission. Mental status exam was remarkable for the following pertinent positives: oriented to self only, tangential with loose associations, perseveration on her deceased husband, religiously preoccupied and responding to internal stimuli. She was able to recall 0 out of 3 objects in both immediate and delayed recall and having auditory and visual hallucinations. CT scan and MRI were negative and helped rule out acute intracranial abnormalities. Working diagnosis of acute hyperactive delirium, was managed with quetiapine, improving gradually over the subsequent eight days. Medical team managed UTI/bacteremia with 10 days of antibiotics and there was clinical evidence of resolved bacteremia and UTI. Quetiapine was titrated to maximum dosage of 100mg QAM, 100mg QPM and 200mg QHS with ongoing gradual improvement. However, she decompensated on day eight with new symptoms of catatonic-like stereotypical hand movements, repetition of words, and general sustained hyperactivity. The Bush Francis score (BFS) was 12. A trial dosage of lorazepam 2mg IV was administered with subsequent improvement of BFS to 6. Over the next four days, lorazepam 1 mg IV was administered daily, and patient continued to improve. During this time, the dosage of Quetiapine

was reduced, considering that delirium had improved, and Quetiapine could have exacerbating the catatonia. However, titrating down of Quetiapine was done slowly to avoid abrupt discontinuation which could cause delirium to re-emerge. After receiving second dose of lorazepam, Montreal Cognitive Assessment (MoCA) score also dramatically improved from 6/30 to 22/30. She was subsequently discharged on day 13 to a nursing home where she was managed for 20 days and discharged home. It is possible for a patient with clinical improvement and resolution of acute hyperactive delirium to develop excited catatonia in a short time, so clinicians need to have a high index of suspicion especially among patients who have a history of catatonia. Given that hyperactive delirium alone responds excellent to antipsychotics while excited catatonia responds excellent to lorazepam IV, early diagnosis is of utmost important to adjust medications at the earliest time of noticing symptoms of excited catatonia.

No. 77

A Case Report of Functional Neurological Symptom Disorder After Covid-19 Vaccine and Literature Review

*Poster Presenter: Oluwole Adeyemi Babatunde
Co-Authors: Anusuiya Nagar, Frank Clark, M.D.,
Sanjeev Sivakumar, Jessica Hill*

SUMMARY:

Ms. A., a 47-year-old White female with a past surgical history of repair of brain aneurysm and a past psychiatric history of generalized anxiety disorder (GAD) and major depressive disorder (MDD) presents to the psychiatric consult service with recent onset bilateral upper and lower extremity weakness two days post first dose of COVID-19 Pfizer vaccination. She was admitted to the inpatient medicine service. Neurological findings include being alert and oriented, with normal language function and normal cranial nerve reflexes; weakness against resistance in bilateral upper extremities involving proximal and distal muscle groups, MRC grade 3; weakness in bilateral lower extremities, MRC grade 0, hip and knee flexors and extensors, with trace movement (MRC 1) in ankles bilaterally; deep tendon reflexes 1+ in bilateral biceps, triceps, brachioradialis,

with absent reflexes in bilateral knees and ankles. Additionally, there were no response to plantar stimulation in both feet. There was normal coordination. There were no involuntary movements and absent pinprick sensation in bilateral lower extremities, decreased sensation in left upper extremity (UE) and normal in right UE. Patient endorsed decrease in vibration and proprioception in both upper and lower extremities. The medical team considered the diagnosis of strokes, seizures, Guillain barre syndrome, and meningitis. Subsequently, a brain magnetic resonance imaging (MRI), spinal MRIs, electromyography, and lumbar puncture were utilized to rule out these neurological syndromes as all tests were negative. This led to the concern that this may be a case of conversion disorder (also known as Functional Neurological Symptom Disorder (FNSD) which is a mental disorder characterized by neurologic symptoms (either motor or sensory) that is incompatible with any known neurologic disease. Hoover's sign was positive. Being that this patient has comorbid psychiatry disorder (GAD & MDD), surgical history of repair of brain aneurysm, a positive Hoovers' test, and negative neurologic workups, a diagnosis of FNSD was made. Some studies have documented FNSD post COVID vaccination and research over the past decade has identified potential mechanisms for FNSD following other vaccinations. A thorough medical workup and history gathering can help elucidate this diagnosis in this patient population. In this poster, we discuss the challenges and importance of differentiating a FNSD from other neurologic syndromes post-COVID vaccination as an early positive diagnosis of FND is critical for the treatment of the individual patient and both neurology and psychiatry play an important role in the delivery of such early treatment. We recommend follow-up longitudinal studies & Randomized Control Trials to further understand this relationship.

Poster Session 5

No. 1

Navigating Perinatal Psychiatric Care in Post Roe Texas: A Case Study of a Patient With Hyperemesis Gravidarum and Prenatal Diagnosis of Anencephaly

Poster Presenter: Janett Ordonez

Co-Author: Diana Robinson

SUMMARY:

Effective July 24, 2022, abortion was outlawed in Texas following the Supreme Court's decision on *Dobbs v. Jackson Women's Health Organization*, which overturned the landmark Supreme Court ruling, *Roe v. Wade*. The only scenario where an abortion is permitted is to save the life of a pregnant woman. This care report highlights treatment dilemmas by Ms. T, a woman admitted to an obstetrics & gynecology service at a tertiary care hospital in Dallas, Texas. Ms. T is a 25-year-old Hispanic, pregnant female at 23w0d (G2P1A0) complicated by anencephaly, with past medical history of poorly controlled type 1 diabetes and severe hydrocephalus in a previous pregnancy who was admitted for intractable nausea and vomiting. Psychiatry was consulted due to concerns for anxiety and substance use disorder/misuse. The patient reported markedly increased anxiety since the diagnosis of anencephaly this pregnancy. She was informed that her pregnancy was unviable and sought care for an abortion at an outside hospital, however she was denied due to poorly controlled diabetes. Additional history was obtained from the patient's mother, who stated that the patient had been to several hospitals for the past two months due to nausea and vomiting. The patient's mother noted she had been prescribed a short course of alprazolam due to worsening anxiety and had also tried three cannabinoid gummies with little improvement of her nausea and vomiting. Subsequently, substance use disorder/misuse was quickly ruled out. She was admitted for further management of hyperemesis and hyperglycemia. The primary team considered the differential diagnosis of cannabinoid hyperemesis, hyperemesis gravidarum, and diabetic gastroparesis. Gastroenterology and endocrinology were also consulted for further management of hyperglycemia and hyperemesis. Initial treatment with intravenous ondansetron, scheduled metoclopramide, and an insulin drip was started. Despite several escalations in her anti-emetic regimen, the patient's hyperemesis did not improve. After a week, an attempt was made to transition to oral intake, however Ms. T could still not tolerate fluids. Additionally, she continued to report increased

anxiety. At this point, she was at high risk of ketoacidosis, infection, and death. An ethics consultation was held and ultimately decided that induction of labor at 24 weeks of pregnancy was necessary due to refractory emesis and anxiety worsened by pregnancy, putting the patient at increased risk of death. In this poster, we discuss the challenges faced in healthcare following trigger bans on abortion in the state of Texas. We will focus on its effects on the care of pregnant patients and how the narrow exceptions in abortion bans create a climate of fear for providers, putting many patients lives at risk. We also place special focus on the importance of providing perinatal bereavement and palliative care to these patients.

No. 2

Impact of the Covid-19 Pandemic on Mental Health in Pregnant and Postpartum Women: A Literature Review

Poster Presenter: Jazmin Scott, M.D.

SUMMARY:

The COVID-19 pandemic began in late 2019 when the first cases were observed in China. Shortly after this, the virus began to spread to other countries and by March 2020 was declared a pandemic by the World Health Organization (WHO). When countries began to take measures to limit the spread of disease which included stay at home orders these impacts were felt by everyone, but pregnant and postpartum women are a unique population that is already at risk for mood and anxiety disorders. Worldwide estimates show that approximately 10-20% of women experience postpartum depression and that suicide is the leading cause of mortality in the first year postpartum. The purpose of this review was to determine if there is an association between the COVID-19 pandemic and postpartum mental health disorders, specifically depression and anxiety disorders given the significant ways the pandemic has altered the prenatal, delivery, and postpartum experiences for many women. This poster presents a summary of findings from 40 articles, 3 of which were a systematic review and/or meta-analysis. This literature review showed several important findings. First, women who became ill with COVID-19 showed statistically significant increases in depression and

anxiety when compared with women who did not contract COVID-19. Second, women who delivered during the pandemic showed statistically significant increases in depression symptoms with rates as high as 44.2% in pandemic groups as compared to pre-pandemic groups who only had rates as high as 22.4%. Third, women who delivered during the pandemic showed statistically significant increases in anxiety symptoms with rates as high as 56.6% - 72% in pandemic groups compared to rates of about 29% in pre-pandemic groups. The screening scales used most frequently included the Edinburgh Postnatal Depression Scale (EPDS), Patient Health Questionnaire-2 (PHQ-2), and Patient Health Questionnaire-9 (PHQ-9) to screen for depression. The screening scales used most frequently to screen for anxiety were the General Anxiety Disorder-7 (GAD-7) and the State-Trait Anxiety Inventory (STAI). Overall, this literature review shows that the COVID-19 pandemic has contributed to increased symptoms of depression and anxiety in pregnant and postpartum women. It is worth noting that while these scales are helpful to quickly screen for symptoms, these findings should be correlated with clinical findings before making a diagnosis. Limitations identified during this review included that the majority of articles available utilized data gathered in early 2020 which only evaluates the early stages of the pandemic.

No. 3

Effects of Sports Therapy on Improvement of Mental Health and Body Mass Index in Perimenopausal Women

Poster Presenter: Kim Na Yeon, M.D.

Lead Author: Doug Hyun Han, M.D., Ph.D.

Co-Authors: Sun Mi Kim, M.D., Ph.D., Sol I. Kim, M.D., Hyunchan Hwang, M.D., Ph.D.

SUMMARY:

Background: Despite the high prevalence and social costs of menopausal symptoms, accurate treatment has not been achieved due to the lack of common treatment guidelines from doctors in different specialties. Although there are many non-pharmaceutical treatment possibilities for various mental and physical symptoms of perimenopausal women, verification of the effectiveness is still

insufficient. This study aims to increase the treatment rate of perimenopausal women by providing evidence-based non-pharmaceutical treatment through developing scientific evidence-based sport therapy and verifying its effectiveness. **Methods:** Experts in related fields have developed customized sport therapy according to the symptom groups based on scientific evidence. A cross-over design was used, and thirty-three perimenopausal women were assigned to the experimental group (sport therapy group) for 8 weeks and to the control group (telephone intervention group) for the other 8 weeks. Evidence-based sport therapy was performed twice a week for 8 weeks (60 minutes per session) in the experimental group, while only telephone intervention to encourage walking was performed twice a week for 60 minutes in the control group. Self-report clinical symptom survey was conducted before and after the experimental and control periods, and the measures used were the modified Kupperman Index, Menopause Rating Scale (MRS), World Health Organization Quality-of-Life Scale, Patient Health Questionnaire-9 (PHQ-9), Generalized Anxiety Disorder scale, and Patient Health Questionnaire-15 (PHQ-15). The data were analyzed by the mixed ANOVA and Pearson correlation. **Results:** Thirty-three women (mean age: 46.03 ± 4.08 years) have completed the study protocol. There were significant differences in the changes of MRS ($F=4.54, p=0.03$), the PHQ-9 ($F=7.55, p=0.008$), and the PHQ-15 ($F=7.32, p=0.009$) between the experimental group and the control group. In addition, the changes of weight ($F=5.34, p=0.02$) and body mass index ($F=4.83, p=0.03$) during sport therapy were significantly different from the changes during telephone intervention. In the sport therapy group, there were positive correlations between the changes of MRS scores and the changes of weight ($r=0.33, p=0.02$) and positive correlations between the changes of MRS scores and the changes of PHQ15 ($r=0.50, p=0.003$). **Discussion:** Significant improvements in menopausal symptoms, depressive symptoms, and somatic symptoms as well as changes in body weight and BMI were noticed in the sport therapy group. Therefore, sport therapy is an effective alternative to medication in perimenopausal women suffering from psychiatric and physical symptoms.

No. 4**Antipsychotic Use in Pregnancy: A Case of Involuntary Olanzapine Treatment in Severe Mania**

Poster Presenter: Sitara Soundararajan

SUMMARY:

Objective: Determining a treatment decision for a peripartum patient with severe mania with psychotic features while psychiatrically hospitalized. Methods: Ms. C is a 25-year-old female with a past psychiatry history of unspecified psychosis and history of sexual trauma and tobacco use who was brought into the emergency room by EMS and NYPD after she was found knocking on people's doors and noted to be disorganized and agitated. On arrival to the ED, she was also found to be tangential, endorsing grandiose and paranoid delusions, and COVID positive. Transvaginal ultrasound revealed that the patient was eight weeks pregnant. She received multiple PRN medications for agitation in the emergency room and was involuntarily hospitalized for decompensation of bipolar disorder with psychotic features. During her hospitalization, the patient was consistently refusing standing antipsychotic medication as she believed it to be harmful to the fetus. Results: A relational ethics framework was used to manage the patient's manic and psychotic symptoms. Risks and benefits of initiating this medication in the perinatal period were carefully reviewed. The treatment team made the decision to apply for treatment over objection with olanzapine. The patient showed gradual improvement of her grandiose and paranoid delusions without experiencing side effects. Conclusion: Autonomy often conflicts with beneficence when treating peripartum patients with bipolar disorder. Clinicians must consider the risks and benefits to both the mother and fetus associated with initiating olanzapine when treating this population.

No. 5**Getting to the Heart of Clozapine Rechallenge: A Case of Clozapine-Induced Myocarditis**

Poster Presenter: Phuong B. Vo

Co-Authors: Jeffrey Ezennia, Beth Chung, Omar Abbas

SUMMARY:

AD is a 35 year old male with schizophrenia, admitted to a forensic state hospital as incompetent to stand trial for an attempted murder charge. In the offense, he was accused of repeatedly stabbing his mother with a knife, who he perceived was "turning into a demon," while she was driving him to a psychiatry appointment. The patient's severe psychotic symptoms include auditory hallucinations, and delusions of grandiosity, hyperreligiosity, persecution, and paranoia. AD was started on clozapine after several failed trials of olanzapine and haloperidol, both at high normal therapeutic drug levels. His psychotic symptoms were well-controlled but he developed tachycardia, nausea, and vomiting three weeks after initiation. He was diagnosed with myocarditis, likely clozapine-induced on only 300mg total daily with a clozapine level of 1380 on this low dose. After following cardiology recommendations and discontinuation of clozapine, he eventually recovered medically but not psychiatrically. Despite feeling ill on the clozapine, the patient requested to be placed back on the medication as up until this point, it was the only medication that controlled his voices and thought process. The question now stands on the appropriate way to rechallenge the patient through collaboration with other disciplines and emphasizing the importance of charting side effects early. Myocarditis, an inflammatory disease affecting the myocardium, is a rare side effect of clozapine use, affecting about 3% of users. (Higgins, et al., 2019; Sagar, Liu, & Cooper, 2012) The clinical presentation of myocarditis is variable, ranging from asymptomatic to sudden death. (Tschöpe et al., 2021) In the weeks prior to the acute phase, a prodromal phase with manifestations such as fever, gastrointestinal distress, and influenza like symptoms has been noted in up to 80% of patients. (Tschöpe et al., 2021) The most common clinical manifestations of acute myocarditis are chest pain, dyspnea, fatigue, palpitations, syncope, and cardiogenic shock. (Tschöpe et al., 2021) Diagnosing acute myocarditis requires an ECG, C-reactive protein, serum troponin levels, chest radiography, and cardiac imaging, with definite diagnosis through histological examination of myocardium. (Sagar et al., 2012) High serum clozapine levels may increase risk of myocarditis, particularly in female non-smoking patients or those concurrently on CYP1A2, CYP2D6,

or CYP450 inhibitors. (Albitar et al., 2020) In the current literature, there are case studies regarding clozapine rechallenge but little standardization. This case discussion aims to add to the current case study load in a unique environment highlighting treatment through interprofessional collaboration at the state hospital level. A collaborative care approach, with an emphasis on early symptom detection, would be beneficial in rechallenging AD. With enough care, AD could potentially be rehabilitated back to competency, stand trial and understand his legal options.

No. 6

How Covid Caused a Woman to Become Psychotic

Poster Presenter: Adam Newlin

SUMMARY:

SARS-CoV-2 (COVID-19) is commonly associated with flu-like symptoms involving fever, cough, fatigue, and shortness of breath; however, COVID-19 has also been linked with a wide variety of sequelae including increased rates of depression and suicidality, increased incidence of substance use disorders, and exacerbation of existing psychiatric illnesses [1,2]. Potential causes may include those directly related to the infection such as CNS inflammation, or indirect such as increased stress or isolation [3]. In this case report, a previously healthy 39-year-old African-American female with no prior personal psychiatric history, family psychiatric history, or psychiatric medication trial presented with concerns for psychosis a month after a positive COVID-19 PCR test. After previously holding a successful job as well as being a house owner, she presented to the emergency department (ED) when her family had concerns about recent changes in behaviors. Her family reported uncharacteristic violent actions where she assaulted her brother and a nurse during a previous ED visit, became increasingly paranoid, attempted to jump out of a moving car on multiple occasions, and walked out of the house in the snow without any footwear. Ten days prior to arrival in the ED, she was worked up for possible stroke or transient ischemic attack after having weakness and paresthesia. There were no found abnormalities in her labwork as well as no noticeable head CT or MRI findings. After discussing her family concerns and the

concerns for her symptoms, she agreed to a voluntary inpatient stay. Diagnosed with a brief psychotic disorder, she was begun on olanzapine, but signed a 72-hour notice soon after inpatient admission. During her stay she was compliant with the medication, and was able to effectively stay safe without exhibiting any psychotic behaviors or beliefs. While psycho-social factors may have contributed to these changes in behaviors, organic causes attributable to COVID-19 could have led to this new onset psychiatric disease. This case highlights the importance of understanding the impact COVID-19 may have on an individual's neuropsychiatric chemistry and what short-term or long-term effects may result and if it can be prevented.

No. 7

The Bugs That Bug Me: A Longitudinal Perspective Case Study of Delusional Parasitosis in a Geriatric Psychiatry Unit

Poster Presenter: Anisa Suparmanian, M.D.

SUMMARY:

Delusional parasitosis is not a common presentation in hospital-based geriatric units. Our aim was to review the presentation of a sudden onset of parasitosis in an older patient who had no prior psychiatric history, and its management. This case report describes an 82-year-old man who was diagnosed with schizoaffective disorder with psychotic features (delusional parasitosis was most present), which manifested in the past three years of his life. The report includes a longitudinal description of the patient's symptoms, signs, and manifestations during his stay at an inpatient senior mental health service center, emergency department (ED) visits, and medical floor stay along with medication management of his psychiatric symptoms with concomitant medical issues. This patient was treated with several first generation and second generation antipsychotics; eventually, symptoms gradually improved after several sessions of electroconvulsive therapy (ECT). Presentation of delusional parasitosis poses a special challenge not only psychiatrically but also medically and dermatologically. The unique difficulty of finding appropriate antipsychotics for not only the symptoms of parasitosis but also the obsessions and compulsive behavior that follow a

deeply ingrained belief of being infested must be carefully managed, especially in the elderly. Somatic delusions that resemble a plausible but inaccurate reality of infestations could delay treatment as well. In this patient, it was difficult to identify whether an underlying neurocognitive decline was playing a role in his pathology. The clinical picture and progression of this case could have been more positive if, at an earlier stage, a referral to psychiatry was made or consult-liaison psychiatry services were involved. Integration of psychiatric care during initial stages, along with a transition of care from consult-liaison psychiatric services to outpatient psychiatric follow-up, might have changed the outcome of this case. Involvement of neurology in patients with neurocognitive decline could help assist the team further in the complexities of the case presentation.

No. 8
Seizures or Neuroleptic Malignant Syndrome: A Diagnostic Dilemma

Poster Presenter: Anisa Suparmanian, M.D.

SUMMARY:

This is a case of a 60 year-old female with a past medical history of primary generalized epilepsy with aura of abnormal smells since 2014, as well as intellectual disability, depression and schizophrenia. She presented with altered mental status, jerking movements, muscle rigidity, and visual hallucinations. Patient has had hallucinations in the past during seizure episodes. She has been on perphenazine 8 mg in the morning and noon and 16 mg in the evening, aripiprazole 30 mg daily for schizophrenia and lamotrigine 100 mg in the morning and 125 mg in the evening and valproic acid 250 mg three times a day for seizures. It was unclear if the patient was having an epileptic seizure or showing symptoms that point towards a neuroleptic malignant syndrome. Lab findings did not show an elevated creatine kinase or leucocytes, and the patient's vitals were relatively stable with mild temperature and low blood pressure briefly. However, once dantrolene 1 mg/kg was given, her rigidity relatively improved, possibly pointing towards a neuroleptic malignant syndrome despite its atypical presentation. Antipsychotic medications were held due to the concern of neuroleptic

malignant syndrome. Long term electroencephalogram monitoring did not show any epileptiform activities. Seizures arising from the occipital lobe, occipitotemporal, and occipitoparietal regions of the cortex are often epileptic hallucinations. The appearance of visual hallucinations during these 'shaky', seizure-like episodes does not necessarily preclude an epileptic cause of the hallucinations. Patient was advised to follow up with her outpatient psychiatrist for consideration of antipsychotic monotherapy rather than antipsychotic polypharmacy to avoid future possibilities of repeat neuroleptic malignant syndrome.

No. 9
Vitamin B6 in the Treatment of Antipsychotic Induced Hyperprolactinemia: A Literature Review

Poster Presenter: Ashley Booth

Co-Author: Renzo A. Costa, M.D.

SUMMARY:

Introduction: Hyperprolactinemia is a well-established side effect of antipsychotics which contributes to decreased adherence along with detrimental reproductive and endocrine effects. This side effect is a common and consistent reason to switch a patient's antipsychotic medication. The leading research surrounding Antipsychotic-Induced Hyperprolactinemia (AIHP) suggests using Aripiprazole as an adjunct therapy. Other adjunct therapies are limited but include dopamine agonists (ie Cabergoline, Bromocriptine) or Metformin. Recent research has highlighted the potential of vitamin B6 as adjunct treatment for AIHP. Method: A literature review using articles from multiple databases was conducted to gather supporting evidence on the use of vitamin B6 as adjunctive therapy in treating AIHP. Keywords included "prolactin", "hyperprolactinemia", "antipsychotic", "schizophrenia", "schizoaffective", "treatment-resistant", "vitamin B6", and "pyridoxine". Results: One case report successfully utilized vitamin B6 in treating Quetiapine-induced AIHP. One randomized control trial compared vitamin B6's effectiveness in treating AIHP to adjunctive Aripiprazole's effectiveness in treatment-resistant schizophrenia patients; vitamin B6 was shown to lower prolactin

levels significantly more than Aripiprazole. In 2022, researchers included this randomized control trial in a network meta-analysis comparing various AIHP treatment options and found adjunctive high-dose vitamin B6 to have a significant benefit in treating subjects with prolactin levels above 50 ng/mL. Conclusion: There is a promising body of evidence highlighting the success of vitamin B6 as adjunctive therapy for treating AIHP. If further research shows success in adding vitamin B6 as an adjunctive therapy, patients will be able to use this treatment to adequately trial long-acting antipsychotics and/or maintain their currently effective antipsychotic despite experiencing increases in prolactin level. Future research should consider further variables including, but not limited to, antipsychotic choice, dosage, and patient characteristics such as age, sex, and menstrual status.

No. 10

Differentiating Between Neurodevelopmental Disorders and Psychotic Spectrum Disorders: A Case Report and Review of the Literature

Poster Presenter: Sakirat Akadri

Co-Authors: Jon Lindefeld, M.D., Zachary Brooks, D.O., Anna Russell, D.O., Shannon Ford

SUMMARY:

While developmental disorders have been treated by psychiatrists since before the first Diagnostic and Statistical Manual (DSM), the term “neurodevelopmental disorders” did not become its own categorical section until the DSM-5. Neurodevelopmental disorders encompass a wide set of psychiatric conditions ranging from intellectual disability to issues with communication, speech, attention, or motor skills, to autism spectrum disorder with the common link between all these conditions being present early in a child’s life. These disorders can be comorbid with one another as well as with other psychiatric conditions and the differentiation between these conditions is both crucial and potentially difficult. This differentiation is perhaps uniquely difficult with neurodevelopmental disorders and psychotic spectrum disorders. Some examples of this include differentiating between pseudo-hallucinations (such as personification of emotions) versus true hallucinations; concrete

thinking (which can be seen in both neurodevelopmental disorders and psychotic spectrum disorders); or issues communicating feelings or needs which could be misrepresented as negative symptoms of psychosis. Distinguishing between the positive and negative symptoms of psychotic disorders and the symptoms seen with neurodevelopmental disorders can be especially challenging during moments of crisis. However, this distinction is particularly important as overdiagnosis can lead to mismanagement of patients and risk exposure to potentially unnecessary interventions such as antipsychotic medications and the subsequent side effects. In this poster we discuss the case of a 19-year-old male with a past psychiatric history of Intellectual Disability who presented to the emergency department with concerns for possible new-onset of psychosis. Using this case we then explain why diagnostic clarity is so important and report what the current literature recommends as ways to distinguish between neurodevelopmental disorders and psychotic spectrum disorders.

No. 11

A Case of Post-Traumatic Brain Injury Psychosis

Poster Presenter: Amanda Wilder, M.D.

Lead Author: Amanda Wilder, M.D.

Co-Authors: Waylon Whitley, Eric Geier

SUMMARY:

Traumatic brain injury (TBI) has been estimated to increase the risk of psychosis in the general population. Psychotic disorders due to TBI (PDTBI) are categorized into two different types: Post-TBI delusional disorder (DD) and Post-TBI “schizophrenia-like” psychosis (SLP). In this poster, we will discuss the diagnostic journey for a presumed case of Post-traumatic brain injury “schizophrenia-like” psychosis. We will illustrate some of the characteristic differences between PDTBI and primary psychotic disorders. This patient is a 68-year-old female with a past medical history of a TBI requiring craniotomy for subdural hematoma evacuation after a pedestrian versus motor vehicle accident that occurred approximately two years prior. Additionally, she has a history of alcohol use, cannabis use, and a past psychiatric history of depression with catatonia but no history of

psychosis. She presented to the inpatient psychiatric service due to worsening suicidality, depressed mood, and insomnia in the setting of a new onset psychosis. Over the last several months the patient had experienced persecutory delusions about her neighbors spying on her which had persisted despite changes in environment. Exam was notable for narrative (non-command) auditory hallucinations and significantly distressing paranoia. Despite these findings, the patient had a remarkably linear thought process and no appreciable negative psychotic symptoms. Laboratory studies and electroencephalography were unremarkable. Imaging demonstrated the chronic right frontal subdural hematoma without evidence of atrophy. This pattern of persecutory delusions and auditory hallucinations, with a lack of prominent negative symptoms, has been consistently reported in previously described cases of Post-TBI psychosis. These cases usually present without a prodromal period or thought disorganization commonly found in schizophrenia. This pattern of symptoms often presents, on average, several years following the time of injury making it more challenging to establish the correct etiology. The patient was started on olanzapine which was slowly titrated throughout her hospital course with a progressive response. At discharge, she was no longer paranoid of neighbors and her secondary suicidal ideations had resolved. She continued to experience non-command auditory hallucinations although now described them as “whispers” and found them less distressing.

No. 12

Remission of HPPD With Treatment of Concomitant Psychosis: A Case Report

Poster Presenter: Rachael Brothers, D.O.

Co-Author: Migena Dervishi

SUMMARY:

BACKGROUND: Hallucinogen Persisting Perception Disorder is commonly described as the recurrence of some or all of the perceptual disturbances that were experienced while intoxicated with hallucinogens after immediate effects of the substance had worn off. It is reported to be a rare occurrence among individuals who use hallucinogens. Its exact origin remains unknown, and its clinical presentation is

complex, involving overlapping psychiatric, neurologic, and psychosocial symptoms. **OBJECTIVE:** The primary objective of this case report is to review the etiologies, clinical features, co-morbid psychiatric conditions, diagnosis and treatments of HPPD. **CASE:** This is a case report of a 17 year old male with previous history of hallucinogenic substance abuse, low mood, feelings of guilt and intermittent visual hallucinations. He presented to the ED with acutely erratic, bizarre behavior, grandiose delusions and sleep disturbances, necessitating admission for further psychiatric management. Treatment with sodium valproate and haloperidol not only resolved his acute psychosis but also his long standing visual hallucinations. **CONCLUSION:** It is critical to understand the difference between clinical presentation of HPPD I and HPPD II which is crucial in establishing accurate treatment plan for a successful outcome. We believe that by highlighting the severe psychological and social effects of this disorder, we will raise public awareness of abstention of hallucinogenic drug use. In addition, we hope to motivate researchers to better understand the etiology, pathology of this disorder and develop accurate treatment methods. In this acutely psychotic patient, treatment with Haldol and sodium valproate not only resulted in remission of his psychotic symptoms but also his visual illusions/distortions related to HPPD.

No. 13

Dilutional Hyponatremia in the Setting of Delusions

Poster Presenter: Lymaries Velez, M.D.

Co-Authors: Steven Toffel, M.D., Srinath Gopinath, M.D.

SUMMARY:

Background/Significance: Dilutional hyponatremia is seen in several medical conditions such as liver cirrhosis, congestive heart failure, and SIADH. Psychiatric conditions can also put patients at risk for this life-threatening condition, particularly in the setting of psychosis. We present a unique case of dilutional hyponatremia in the setting of persecutory delusions and comorbid alcohol and stimulant use. **Case:** This is a case of a 50-year-old male with psychiatric history of alcohol and stimulant use disorder, and delusional disorder who presented to

the hospital believing that the mafia was attempting to capture and murder him. Due to paranoia, he chose to live in his car for a week prior to hospital admission. He admitted to cocaine use for at least one week prior and to drinking “at least a 4 pack a day” of beer to help with increased anxiety. He also had poor oral intake as he was afraid to leave his car. Workup revealed decreased sodium (117 mmol/L), chloride (81 mmol/L), serum osmolality (238 mOsm/Kg), and urine sodium (<20 mmol/L). Urine drug screen was positive for cocaine. The patient was admitted to the MICU and was started on a slow 0.9% NaCl infusion and free water restriction. The patient’s sodium was corrected in a week, and he was then admitted to the psychiatry unit and treated with brexpiprazole 2mg daily. Discussion: The patient’s persecutory delusions resulted in poor oral intake due to paranoia (Oudman, 2020). While he was drinking notable amounts of beer, which may have resulted in dilutional hyponatremia from beer potomania, an additional consideration is stimulant-induced overhydration. In stimulant-induced overhydration, physical hyperactivity and increased body temperature that patients experience with stimulants may prompt them to drink substantial amounts of water, leading to dilutional hyponatremia. Significant beer or water consumption along with poor solid oral intake can lead to cases of critically low sodium levels and low serum osmolality (Michael 2016). Management of hyponatremia is typically treated with slow sodium replacement to prevent osmotic demyelination syndrome (Adrogué, 2022). Conclusion/Implications: While electrolyte abnormalities and nutritional deficiencies are recognized in psychiatric disorders such as eating disorders and pure substance use disorders, they are less commonly screened for in patients with psychosis. This case highlights the importance of psychiatrists understanding nutritional status workup and treatment as it can prevent life threatening and life altering conditions such as osmotic demyelination syndrome.

No. 14

Gut-Brain Axis Interaction and Effectiveness of Microbiome in Mental Health Disorders

Poster Presenter: Darshini Shah

Lead Author: Darshini Shah

SUMMARY:

After the COVID-19 pandemic, the prevalence of mental health disorders has burdened society, which has led The American Health care system to focus more on the efficacy of the gut-brain axis on mental well-being, there has been increased research on this over the last decade¹. Recent advances showed a connection between the cognitive and emotional processing of the brain with the gastrointestinal processes. This bidirectional interaction between the gut and brain occurs via endocrine, neural, immune, and humoral processes². Substantial research has pointed out this interaction and also has outlined strategies for prevention or treatment of neurodevelopment, neurodegenerative, and mental health illnesses (anxiety, mood stress, and depression)^{3,4,5}. Therefore, there is a developing interest in how microbiota-targeted interventions can ensure better health. Besides these studies with varying degrees of success, there is yet a lot to be discovered regarding the pathophysiology, and implications of microbiota⁴. In this poster, we encapsulate the available evidence underpinning the bidirectional dynamics of the microbiota-gut-brain axis and the underlying mechanisms. It seeks to outline the role and side effects of supplemental probiotics, synbiotics, prebiotics, fecal microbiota transplant or healthy diet, or a combination of both in people with mental illness⁶.

No. 15

Seizure and Brief Psychotic Episode as Sequelae of Blue Lotus Use: A Case Study

Poster Presenter: Jesse Wolfe, D.O.

SUMMARY:

The use of exotic and novel recreational substances not detected by routine drug panels has seen a dramatic increase, especially within populations undergoing regular drug screenings, like the military. Vaporizers are an increasingly popular means of delivery of these substances due to their ubiquity and current under-regulated state of this market. Vaporizers allow for the rapid administration of significantly higher doses and concentrations of substances, with varying effects. Blue Lotus (*Nymphaea caerulea*) is a mildly psychoactive substance in an unprocessed form. When used,

apomorphine and nupurine act on a variety of dopamine, serotonin receptors, as well as inhibiting dopamine transporters. (Farrell et al., 2016). While previously regarded as a low potency substance, high concentration extracts of this plant are now widely available both online and from local retailers despite poorly studied and dangerous outcomes (Schimpf et al., 2021). This ease of access can be partially attributed to the legality of purchase and sale of these extracts, as well as others. Online retailers can openly distribute various substances, including Blue Lotus, via shipping worldwide unhindered. Among the many high concentration extracts and synthetic compounds that are freely available for use in vaporizers, Blue lotus has risen in popularity among U.S. service members. Given the ubiquity and perceived innocuousness of vaporizers as well as the ease of obtaining these various substances, risky and habitual use of these substances has increased. They pose a hurdle to treatment given the sparse amount of research on the topic, the lack of detectability by common screening panels, and the obscure nature of these substances. Additionally, the unregulated nature of this market has led to broadly varying purity and validity of the advertised substances (Poklis et al., 2017, Peace et al., 2020). The case presented is of a 19 year old male, active duty service member who presented to the Carl R. Darnall Army Medical Center Emergency Department with acute onset of seizure, audio/visual hallucinations, and weakness, in the context of acute Blue Lotus intoxication. This clinical presentation represents a concerning new possible symptomology of acute Blue Lotus intoxication in the context of vaporizer administration. He was subsequently admitted for observation and followed by, inpatient medicine, inpatient psychiatry and neurology. He was later discharged following full return to baseline and followed up with the Substance Use Clinical Care program and outpatient psychiatry. Understanding the variability of acute Blue Lotus intoxication and recognizing the expanding list of substances used recreationally is important regardless of care setting. Further investigation of this unregulated and potentially hazardous psychoactive substance and common additives would be useful, especially for psychiatrists in the setting of routinely screened populations, like the military.

No. 16

Alcohol, Opioid, and Combined Alcohol and Opioid Use Disorders Affect Shared and Unique Pathways: A Proteomic Analysis of Postmortem Brains

Poster Presenter: Edison Leung

Co-Authors: Consuelo Walss-Bass, Ph.D., Sudhakar Selvaraj, Michael Nadeem Kandalaft, M.D., M.S., Laura Stertz

SUMMARY:

Background: Few studies have explored the proteomics landscape in the human postmortem brain or how polysubstance use alters proteins in the brain. To help address this gap in understanding of the protein changes after comorbid alcohol use disorder (AUD) and opioid use disorder (OUD), we performed a comprehensive evaluation of protein alterations in postmortem brain from individuals with AUD, OUD, combined AUD and OUD, and non-substance users. Methods: Postmortem brain samples from 41 individuals were used for analysis. Proteomic analysis of postmortem brains from individuals with SUD (n=29), including AUD (n=11) and OUD (n=12), or both disorders (n=6), were compared to controls (n=12). Psychiatric clinical syndromes, age of onset of substance use, types of substances used, and other comorbidities were obtained via standardized interviewing of the next of kin. Proteins showing a difference between individual SUD or co-morbid SUDs with a $p < 0.05$ after statistical screening were selected for linear regression analysis, adjusting for covariates, and were included in the final pathway analysis. Results: Proteomic analysis of the AUD group showed changes in proteins involved in protein translation, translational silencing of ceruloplasmin expression, rRNA processing, nonsense mediated decay, and selenoamino acid metabolism. The OUD group showed major alterations in PP2A mediated dephosphorylation, platelet homeostasis and sensitization, calcium levels regulation, rRNA processing, nonsense mediated decay, translation of proteins, glucose metabolism, and G protein activation. In AUD+OUD, the TCA cycle and respiratory electron transport synthesis were affected. Four proteins (IDH3A, RAB5B, SORD, and SSBP1) overlapped between AUD and OUD, 3 proteins (CCDC124, EIF3F, and PPPR1R1B) overlapped between AUD and AUD+OUD, and 13

proteins (ATP2B1, ATP6V1G2, CCBL2, COA6, CPNE5, EIF1, RAB1B, RDH11, SSBP1, TNR, UBE2V2, VCP, and PCBP2) overlapped between OUD and AUD+OUD. Conclusions: The results show that AUD affects primarily protein translation, rRNA processing, and energy metabolism pathways, while OUD influences G-protein signaling, protein translation, rRNA processing, energy metabolism, and angiogenesis pathways. AUD and OUD combined appears to have a synergistic effect on protein expression of the TCA cycle, respiratory transport, mitochondrial function, LGI-ADAM interactions, interleukin signaling, neuronal system changes, and actin polymerization. These findings offer new insights into how SUD leads to protein alterations and how combined substance misuse leads to different protein changes compared to single substance misuse.

No. 17

Functional Connectivity Between the Orbitofrontal Cortex and Putamen in Opioid Use Disorder

Poster Presenter: Mario Montelongo, M.D.

Co-Authors: Michelle Patriquin, Ph.D., Ramiro Salas, Ph.D.

SUMMARY:

Over the last 20 years, opioid overdose deaths and the incidence of opioid use disorder has continued increasing. The ventral tegmental area, substantia nigra, and the ventral and dorsal striatum have long been highlighted as being involved in the development and maintenance of addiction. However, recent imaging studies have begun showing that the prefrontal cortex also plays an important role in this process. One study showed differences in the resting state functional connectivity (RSFC) of the orbital frontal cortex (OFC) and dorsal striatum, and habenula, and habenular and dorsal striatum between patients with high and low risk of addiction. In our study, we compare the RSFC of the OFC and ventral and dorsal striatum, and the amygdala of patients with high risk of opioid use disorder to healthy controls. Psychiatric patients were recruited from The Menninger Clinic in Houston, Texas as part of the McNair Initiative for Neuroscience Discovery - Menninger/Baylor (MIND-MB) research study. Opioid use was determined using the World Health Organization (WHO) ASSIST

questionnaire. Patients were matched with healthy controls using demographic characteristics (age, sex, and race). Participants were scanned in a 3T Siemens Trio MR scanner in the Center for Advanced MR Imaging at Baylor College of Medicine. A 4.5 min structural MPRAGE sequence (TR = 2.66ms, TR = 1200ms, flip angle = 12, 256x256 matrix, 1mm isotropic voxels) was collected, followed by a 5 min resting state scan (TE = 40, TR = 25, flip angle = 90, 3.4 x 3.4 x 4mm voxel). RSFC data were pre-processed using the CONN Functional Connectivity Toolbox. The preprocessing pipeline included realignment, slice-timing correction, structural normalization to the MNI template, functional normalization, ART-based outlier detection and smoothing with an 8mm full width at half maximum Gaussian smoothing kernel. We compared functional connectivity of OFC with the dorsal striatum and the amygdala between psychiatric patients with high risk of opioid addiction (N=33) and healthy controls (N=33). Patients with WHO-ASSIST score for opioid use 4 or more were considered in the analysis; if their WHO-ASSIST score was higher for other substances than for opioids, they were excluded. We observed that the opioid user group had lower RSFC between the left OFC and the left putamen ($p=0.009$), and left OFC and right amygdala ($p=0.05$). These findings suggest that the OFC may be a target for neurostimulation and psychopharmacological intervention for patients with opioid use disorder. To gain further insight into reward-related brain connectivity in the opioid use disorder group, future steps will include assessing the OFC, striatum, and amygdala in a reward disappointment processing protocol. We have already begun a study that assesses the change in functional connectivity when a reward is promised and delivered (juice delivery) or promised and withheld (juice expected but not delivered).

No. 18

It's Not Just a Headache, It's a Death Wish. a Case Report

Poster Presenter: Kristen Strom

Lead Author: Jennifer Wilkinson, M.D.

Co-Author: Ateaya Ali Lima, M.D.

SUMMARY:

Pain associated with migraine headaches has been described as piercing, throbbing, electric-shock-like and unrelenting, which can be both emotionally and physically distressing to the sufferer. It is estimated that headaches affect more than 90% of people during their lifetime (Robbins). A large retrospective study revealed an association between headaches and elements of suicidality (Ho et.al). While there are a variety of both preventative and abortive treatment options for migraine headaches, psychiatric aspects of this condition are often overlooked (Walter, Ilgen). Identification and treatment of suicidal ideations in individuals suffering from migraine headaches can be preventative as well as lifesaving (Ilgen). We present a case of a 58-year-old male who suffered from a debilitating, chronic migraine, which led to a suicide attempt by self-inflicted laceration of neck and deep lacerations of both wrists. This case was further complicated by patient's lack of resources in the community and language barrier, preventing him from receiving appropriate and timely medical and psychiatric care. Due to common beliefs regarding suicidality, services attributed patient's suicide attempt solely to underlying psychiatric illness, disregarding proper evaluation and treatment of his migraine headaches. The Consultation-Liaison psychiatry team intervened and through extensive psychoeducation and collaborative support, ensured the proper evaluation and treatment of this patient's headaches. This case highlights the need for increased screening for suicidality in headache sufferers, and lack of awareness of the link between migraine headaches and suicidality.

No. 19**Characterizing the Psychometric Properties of Scales Used to Assess Perceived Life Meaning in Suicidal Patients**

Poster Presenter: Scott Michael Hoener, M.D.

Co-Authors: Luke White, D.O., M.P.H., Burke Boyle, D.O.

SUMMARY:

Since the time of Victor Frankl and the development of logotherapy, subjectively perceived meaning in life (MiL) has been recognized as a potent marker of

resiliency and protective factor against suicidal thoughts and behaviors. In recent years, studies exploring the therapeutic potential of psychedelic agents such as psilocybin have indicated that experiences characterized by subjects as highly meaningful might predict therapeutic outcomes in the treatment of depression. Moreover, certain non-psychedelic experiences have also been associated with similar type effects on MiL and reductions in suicidality. Despite this newer understanding of the potential benefit of mediating highly meaningful experiences in the treatment of patients with suicidal thoughts and behaviors, little work has been done to systematically evaluate the various psychometric scales that have been used to quantify individual levels of perceived MiL. Recent reviews have identified multiple scales and psychometric measurement tools that have been commonly used to capture perceived MiL. However, it is unclear which tools are most effective for measuring MiL shifts in general. The authors propose a literature review to identify the various psychometric assessment tools used to quantify individual levels of MiL, and characterize shared themes amongst these assessment tools. A recent study identified that certain quality of life factors were improved in patients with major depression following psilocybin therapy that are not captured by existing standardized depression severity scales. Characterizing the qualitative aspects of these MiL oriented factors in such scales may allow for the development of more comprehensive assessments to more thoroughly quantify MiL shifts for suicidal patients. This may also in turn guide more comprehensive research studying the relationship between acute enhancement of MiL and reductions of suicidal thoughts and behaviors

No. 20**Substance Use and Suicide Attempts as Factors Used to Predict Risk of Suicide: A Retrospective Study**

Poster Presenter: Albert Dickan, M.D.

Co-Authors: Arjun Vadlamudi, Syed Qadri, M.D., Michelle Roley-Roberts, Ph.D.

SUMMARY:

Background: Patients who were previously hospitalized for psychiatric conditions die by suicide at rates approximately 30 times greater than global rates.¹ Current literature has identified previous suicide attempts and substance use as risk factors for suicide.²⁻⁵ Substance use is also associated with an increased risk of suicide attempts.³⁻⁵ Additionally, substance use and previous suicide attempts are associated with an increased risk of death by suicide.² Here, we utilized patient substance use history to assess risk of suicide attempts and death by suicide following acute psychiatric hospitalization. Methods: Retrospective analysis examined data from 10,253 patients aged 18-89 initially admitted at an inpatient psychiatric hospital and followed within a health care system from 2014-2022. Substance use history was based on patient self-report and representative of substance use since the date of initial admission. Correlations and t-tests via SPSS were utilized to examine whether substance use was associated with suicide attempts and suicide. Additionally, each substance was individually analyzed to determine if a specific substance was associated with suicide attempts and suicide. Illicit substances included but were not limited to: marijuana, cocaine, crack, amphetamines, hallucinogens, ketamine, heroin, and benzodiazepines. Both number of suicide attempts and suicide were square-root transformed to fit a normal distribution assumptions of these statistical tests. Results: Over an eight-year period, 1.6% of all patients died by suicide after discharge. 47.9% of patients reported use of at least one illicit substance, most commonly marijuana (39.0%), methamphetamines (21.9%), and cocaine (8.5%). Substance use history following initial hospitalization was associated with a statistically significant difference in the number of suicide attempts ($t(867.8) = -3.02, p = .003$) but not suicide ($p = .190$). Of the 33 substances analyzed, use of crack ($r = .022, p = .025$), hallucinogens ($r = .021, p = .030$), heroin ($r = .020, p = .047$), ketamine ($r = .023, p = .020$), and methylphenidate ($r = .020, p = .042$) were associated with suicide but not with suicide attempts ($p = .942, .779, .535, .062, \text{ and } .662$, respectively). Benzodiazepine use was associated with more suicide attempts ($t(900) = -2.24, p = .025$) but not with suicide ($p = .774$). Marijuana was associated with

more attempts ($r = .075, p = .025$) but lower incidence of suicide ($r = -.025, p = .010$). Conclusion: Results illustrate that substance use may be an independent risk factor for suicide. While an unspecified history of substance use alone was not significantly associated with suicide in our sample, specific substances were independently associated with suicide. For example, crack cocaine was associated with suicide while oxycodone and benzodiazepines were not. Future research is needed to identify if specific substances are means or risks for suicide as this will help inform treatment for substance use.

No. 21

Introduction of Antipsychotic in an Adolescent After an Episode of Neuroleptic Malignant Syndrome

Poster Presenter: Oleksandra Gerus

Co-Author: Celena Ma

SUMMARY:

INTRODUCTION Neuroleptic Malignant Syndrome (NMS) is a life-threatening neurologic emergency associated with a reaction to antipsychotic medications. NMS presents with high fever, altered mental status, muscle rigidity, autonomic dysfunctions and elevated CK levels. The risk factors for NMS include young age, male sex, dehydration, and use of high-potency antipsychotics. **THE CASE** BC is a 19-year-old male with a past medical history of non-verbal autism spectrum disorder, OCD, and ADHD presented to the emergency department for agitation, self-harming behavior, and stabbing his aunt with scissors. On admission, home medications included hydroxyzine, fluvoxamine, clonidine, dextroamphetamine, and guanfacine. Patient received two doses of Haldol 1mL with an interval of 16 hours. On hospital day 2, the patient developed hypertension, tachycardia (170 bpm), temperature (101.3 F), tonic body clenching, diaphoresis and a new-onset eye deviation. Laboratory studies showed leukocytosis and CK of 1374. CT, seizure workup, infection, and dextroamphetamine-related overdose were ruled out on admission. The antipsychotics were withheld, and the patient was started on Versed IM for agitation. The patient's symptoms resolved within the next two weeks, and he was discharged on aripiprazole. **DISCUSSION** NMS is mainly seen with

the use of high potency first-generation antipsychotics, with symptoms usually presenting within the first couple of weeks. NMS can also appear within days of the administration, as seen in our patient. Syndrome is not considered dose-dependent, but the rates of adverse reactions increased with higher potency antipsychotics. The first-generation are associated with mental status changes, muscle rigidity, hyperthermia, and automimic instability. Second-generation have atypical symptoms such as low or absent fever and less extrapyramidal dysregulations. Risperidone has been linked to the largest number of NMS cases among the second-generation antipsychotics, with most cases found in younger medication naïve patients, making it less desirable considering our patient's age. Clozapine has been shown to have the lowest severity of NMS symptoms out of the group. The lack of fever and autonomic instability due to Clozapine-induced agranulocytosis can mask NMS. Quetiapine has been reported to cause NMS in elderly patients with mainly blood pressure fluctuations and tachycardia. Aripiprazole has been shown lower the severity and duration of NMS due to partial dopamine agonist activity. There have been several successful reports of reintroducing quetiapine and aripiprazole in patients with a previous history of NMS, making them the preferred first choice for our patient. The variation in symptoms presentation between different drugs, as well as the absence or delayed CK enzyme elevation, makes the diagnosis of NMS difficult. Our case illustrates the successful reintroduction of antipsychotic therapy following the remission of NMS symptoms.

No. 22

Approach to Treatment of Psychosis in Patients With Huntington's Disease

Poster Presenter: Celena Ma

Co-Author: Oleksandra Gerus

SUMMARY:

INTRODUCTION Huntington's disease (HD) is a rare autosomal dominantly inherited neurodegenerative disorder. It can occur at any age, but most cases will present in the third or fourth decades. The characteristic symptoms include chorea, dystonia,

rigidity, and cognitive symptoms, such as apathy, poor decision-making, depression, and paranoid psychosis. THE CASE WB is a 70-year-old single male with a past medical history of schizophrenia, PTSD, and late-onset Huntington's disease. He presented to the emergency department due to worsening chronic paranoid persecutory hallucination and depressed mood and worsening HD-related movement problems despite medication adherence. The patient was diagnosed with HD in 2015 and developed psychotic symptoms 2 years later. At-home medications included: amantadine (300 mg daily), quetiapine (600 mg daily), sertraline, and diphenhydramine. Tetrabenazine was not used due to the patient's medication nontolerance. During the examination, the patient was agitated, endorsed delusions, and exhibited circumstantial to tangential thought processes. His vital signs and blood work results were within normal limits. The examination revealed tremors, bilateral choreic movements of upper and lower extremities, facial grimacing, and choreic gait. The quetiapine was tapered off, and the patient was started on risperidone 6mg daily. The amantadine dose was decreased to 200 mg daily. The patient was medication compliant and made significant progress. He was cooperative on the day of discharge and showed good judgment and behavioral control, but he continued to have chronic residual delusions regarding the Black Partner. **DISCUSSION** The prevalence of psychotic symptoms in HD patients varies from 3 to 18%. Psychiatric symptoms include apathy, depression, anxiety, and psychosis. The patients who develop psychosis reach impairment earlier and then deteriorate more slowly. Antipsychotics have been used to manage both neurological and psychiatric symptoms of HD. However, currently, there are no randomized controlled trials to support the treatment choice. The first-generation antipsychotics have been the most beneficial to managing chorea but have been linked with significantly increased bradykinesia. Quetiapine has shown to reduce psychotic symptoms with limited effect on reducing chorea. As seen in our case, the patient's symptoms were not adequately controlled on a max dose of 600 mg of quetiapine daily. Therefore, the decision was made to switch the patient to risperidone, which showed to be effective in controlling psychotic symptoms in patients with mild to moderate chorea. The case

demonstrates a patient who developed psychosis in Huntington's disease. After the lack of response to the max dose of quetiapine, risperidone has been effectively prescribed to 6 mg daily. Treating patients with HD can be challenging due to the absence of disease-modifying therapies and psychiatrists only seeing a handful of cases during their careers.

No. 23

Resident Perspectives on the Use of Simulation in Psychiatry Residency Training

Poster Presenter: Hannah Solomon, M.D.

Co-Authors: Amy Graham, Sanjeev Sockalingam, M.D., Michael Mak, M.D.

SUMMARY:

Background: Simulation is an essential educational tool that allows learners to develop their clinical skills in a supervised and psychologically safe environment. Simulation training is used across a wide variety of specialties, and yet it appears to be underutilized in the field of Psychiatry. For example, only 20% of medical schools and 5% of teaching hospitals use simulation in the Psychiatry residency curriculum, compared to the mainstream use in surgical residency programs. Trainee's perspectives and beliefs on simulation training influence their engagement in simulation curriculum. In the current literature, there is a lack of information on medical trainee's perceptions of the use of simulation in Psychiatry. Objectives: We are conducting a needs assessment to understand Psychiatry residents' beliefs on the barriers and facilitators of the use of simulation in their training, as well as which EPAs (entrustable professional activities) can be achieved via simulation. This information will inform the development of a Psychiatry simulation education curriculum at the University of Toronto. Methods: An online questionnaire on Google Forms has been sent out to the Psychiatry residents at the University of Toronto (approximately 175 people). The survey includes both multiple choice and open-ended questions. There are 5 subsections which are as follows: Background/demographic information, Timing of Simulation, Benefits of using Simulation in psychiatry, CANMEDS roles/Advantages and Disadvantages of Simulation, and Barriers to Simulation use in Psychiatry. Results: Results are

reported based on preliminary responses to the survey. 85.7% of respondents have not participated in psychiatric simulations in residency. Simulation training was thought to be most useful for the following EPAs: Performing risk assessments (66.7%), managing emergent situations (50%) and neuro stimulation (58.3%). 92% of residents reported simulation training would be beneficial for improving comfort with rare clinical encounters. 84% of respondents believed that simulation training would be beneficial in allowing them to have exposure to a wide variety of clinical scenarios. Time and resources were the biggest barriers to respondents' participation in simulation. Free text responses indicated that some residents had concerns about the authenticity of using simulation for clinical encounters in Psychiatry. Conclusions: Psychiatry residents have limited exposure to simulation training. They have identified certain areas that simulation training could be useful, and these areas can easily be developed into a simulation curriculum. The free text responses indicated that residents had a variety of perspectives about the authenticity and need for simulation in their training. Next steps include disseminating this survey out to Psychiatry residents across Canada and Psychiatry Residency program coordinators to obtain additional perspectives.

No. 24

Getting Medical Students Interested in Psychiatry: What Should We Do More/ Different?

Poster Presenter: Varshinee Sathyanarayanan

Co-Author: Muhammad Azeem

SUMMARY:

Background: With the growing mental health concerns in the world, it is undisputable that there will be a need for more mental health professionals, particularly psychiatrists. It is also well known that increase in interest and enrollment has not yet been commensurate with efforts of stakeholders including psychiatric association. Factors associated with interest of medical students in psychiatry have been studied in many reviews worldwide. To our knowledge, there has been no synthesis of these reviews. Methods: We carried out a systemic review of the review papers (2012-2022) that have been

published on the subject and featured in the Pubmed database. As the US has longitudinal data on the interest of medical students in psychiatry over the years, we also used the data from the graduation questionnaire all school summary report of 2022 to provide context. Results: The trend in the intended area of practice of medical students over the last 5 years in the US is positive (5.6% in 2018 and 6.2% in 2022 – p value<0.05). Participation in in- house and extramural activities and advising/mentoring seems to have served as the most useful resources for choice of specialty and career planning. Over the last 5 years, fit with personality, interests and skills/ content of the specialty; role model influence and work-life balance seem to have the maximum influence in choosing any specialty. From the 20 reviews we identified from Pubmed, we found recurring themes of attitudes towards psychiatry profession, interest in emerging sub-specialities such as neuropsychiatry and child psychiatry, use of novel teaching methods, design of clerkships including with patient simulations, nature of electives and enrichment activities, and personality factors as the key determinants of interest in psychiatry. Conclusion: The theme of the American Psychiatric Association meeting - innovate, collaborate, and motivate blends well with what is needed in today's psychiatry teaching and practice to influence young medical students to take up psychiatry as a career choice. Growing evidence in the use of innovations such as virtual reality, augmented reality, machine learning, gamification and artificial intelligence offer great potential to make psychiatry learning more enticing. At the same time fostering greater collaboration through multi-professional training, wards and better integration of services and appropriate remuneration of providers can evoke greater interest in the profession. Finally, the need for role models and mentors in psychiatry and sub-specialities to motivate medical students are more needed than ever.

No. 25

Osteopenia Associated With Serotonergic Antidepressant Use: A Case and Brief Literature Review

Poster Presenter: Steven Toffel, M.D.

Lead Author: Emily Beydler

Co-Authors: Lyमारies Velez, M.D., Srinath Gopinath, M.D.

SUMMARY:

Background/Significance: Osteopenia associated with serotonergic antidepressant use is reported in the literature, but its prevalence, severity, and mechanism are not well understood. Further understanding of osteopenia secondary to SSRI/SNRI use could affect antidepressant choice and lead to early osteopenia prevention and intervention. **Case:** This is a case of a 61-year-old female with a past medical history significant for osteopenia and anxiety who presented for bone loss of the mandible. She had four teeth removed and three bone grafts with a fourth planned and no history of gingivitis. She had been stable on 75 mg of venlafaxine since she was diagnosed 27 years ago. The patient trialed tapering off venlafaxine a few months ago over an 8-week duration but had a recurrence of anxiety symptoms marked by increased irritability, fatigue, and insomnia. DEXA scan at presentation showed stable bone mineral density from a previous scan 3 years ago, with unchanged osteopenia. Laboratory workup revealed normal calcium, phosphorous, alkaline phosphatase, kidney function, vitamin D, and thyroid hormones. Given a previous trial off of venlafaxine with significant recurrence of anxiety symptoms, the patient elected to stay on the current dose with plans to follow up with her primary care provider for bone loss management. **Discussion:** Although the etiology of the bone loss remains unclear, the association between osteopenia and serotonergic agents is reported in the literature. In a study of 168 patients on venlafaxine, there was increased serum bone turnover markers suggestive of accelerated bone loss¹. In a case-control study of current serotonergic antidepressant users in the Taiwan National Health Insurance Research Database, there was a 16% higher risk of fracture in current serotonergic antidepressant users versus patients not on a serotonergic antidepressant². Furthermore, another study found that the current and former use of serotonergic agents is associated with an increased risk of bone loss in both men and women, with a higher risk in recent users³. Previous studies have also shown that in patients with osteoporosis on a bisphosphonate, concurrent treatment with an SSRI also increases the risk of fracture compared to

non-SSRI users^{4,5}. However, further research is needed since depression has also shown an association with decreased bone mineral density and fracture risk⁶. **Conclusion/Implications:** Future prevention, workup, and interventions for osteopenia should include an evaluation of SNRI usage, particularly in postmenopausal women.

No. 26

Lithium Key When First and Second Generation Antipsychotics Fail in the Treatment of Postpartum Psychosis

Poster Presenter: Margaret Meyer, D.O.

Lead Author: Kimberly Evans, M.D.

SUMMARY:

Ms. K, a 19-year-old G1P1 female with a recent diagnosis of postpartum psychosis and remote history of major depressive disorder, presented to a crisis unit the day she was discharged from another psychiatric facility. During her previous hospitalization, the patient presented less than a week after delivery for suicidal ideation and thoughts about harming her baby and was discharged a month later on haloperidol and valproic acid. During the second hospitalization, she exhibited the 3 core symptoms most commonly associated with postpartum psychosis: mood lability, psychosis, and delirium-like cognitive impairment. She had a waxing and waning grasp on reality and time, extreme anxiety with irritability and despair, auditory and visual hallucinations, thoughts that she would die, and worry that something terrible had happened to her infant son. While at the crisis center, the patient was switched to olanzapine, referred to an inpatient psychiatric unit for a higher level of care to rule out any medical causes of psychosis, and given emergency medications multiple times per day due to agitation and poorly controlled psychosis. After spending a week at the crisis center, she was finally transferred to an inpatient unit. On day 5 of her second inpatient psychiatric stay, she was switched from olanzapine to aripiprazole, and lithium was started as it has been shown to be effective in achieving remission in up to 98.4% of patients diagnosed with postpartum psychosis as monotherapy or dual therapy. While hospitalized, she would at times appear almost clear, but within a

few hours would fall back into delusional thoughts. Over the course of the subsequent 6 days, her mood, psychosis, and cognitive distortions improved slowly and she was able to be discharged home with family on lithium 450 mg BID and aripiprazole 15 mg daily. Postpartum psychosis occurs in 1-2 per 1,000 births and has been documented for thousands of years. The last several years have increased public awareness about postpartum psychosis, but sadly the lack of clear guidelines on how to diagnosis and treat postpartum psychosis have led to underrecognition, a 5% rate of suicide and 4% rate of infanticide. Groups across the globe have collectively processed information from case studies and small trials with the goal of clarifying core features of the illness and discovering the best management for this devastating illness. The goal of this poster is to motivate governments and organizations to recognize the importance of funding further research, modifying existing ways of classifying this illness, and changing laws and access to resources to improve outcomes for families affected by postpartum psychosis. This poster will highlight the diagnostic features of postpartum psychosis and aims to provide further evidence for the first line use of lithium as the treatment for postpartum psychosis.

No. 27

Diphenhydramine Misuse Experiences: An Online Forum Analysis

Poster Presenter: Parisa Thepmankorn

Co-Authors: Nicholas Tkach, Douglas Opler, M.D.

SUMMARY:

Introduction Diphenhydramine (DPH), the active ingredient in common over-the-counter allergy and sleep medicines, is a first-generation antihistamine and anticholinergic drug. Previous literature has described increasing rates of DPH misuse, particularly among adolescents 10-14 years old, since 2011. In 2020, a social media trend (the "Benadryl Challenge") encouraged TikTok users to consume large amounts of DPH and share their experiences on the platform. Although previous research has described clinical characteristics associated with severe outcomes of DPH overdose, there is limited understanding of the subjective

experiences of excessive DPH use. Thus, this study aims to fill the gap by investigating subjective hallucinogenic experiences and side effects, as reported on the internet-based discussion forum Reddit. Methods A search was conducted for the terms "DPH + trip + report" on the internet forum Reddit. Posts were selected if they were text posts on a relevant subreddit that included a self-reported account of the subjective effects and experience of recreational DPH use. 133 posts qualified for initial analysis and were analyzed for qualitative themes. The remaining 57 posts were excluded because they were not trip reports, described simultaneous use of other substances, or reported about DPH use in a non-text format (e.g. Youtube video). Reports were independently coded by PT and NT, and discrepancies were resolved through discussion. Results A total of 76 posts describing experiences with recreational DPH use were reviewed, with an average reported DPH dose of 636.6mg. The most common findings are as follows: Anxiety or Paranoia: 18.4% reported, 81.6% not reported Residual Effects: 22.4% reported, 77.6% not reported Lead paralysis: 43.4% reported, 56.6% not reported Tactile Hallucinations: 14.5% reported, 85.5% not reported Auditory Hallucinations: 57.9% reported, 42.1% not reported Visual Hallucinations: 88.2% reported, 11.8% not reported 59.2% of user experiencing visual hallucinations reported seeing bugs 38.8% of user experiencing visual hallucinations reported seeing shadows Discussion Results show that users commonly reported visual and auditory hallucinations, anxiety/paranoia, leaden paralysis and residual effects due to DPH use. While the methodology involving online forums is limited by selection bias and concerns related to user reports (e.g. confounding variables), forum posts serve as a readily available and seemingly useful source of data regarding the subjective experiences of recreational DPH users. Future studies should investigate the relationship between DPH dosage and the appearance of specific side effects, the results of which may be used to better regulate drug availability, dosage, and related policies. In light of recent social media trends suggesting increased recreational DPH use, particularly among youth, more awareness of its abuse potential and subjective effects is needed.

No. 28

Testosterone-Induced Mania in an Female-to-Male Patient

Poster Presenter: Leah VanBlaricum, M.D.

Co-Authors: Allie Thomas-Fannin, M.D., Bryce Meck, M.D.

SUMMARY:

Gender dysphoria as defined by the DSM V is a condition characterized by the persistent incongruence of gender identity with biological sex. The condition must not be attributed to a comorbid psychiatric condition. Here we present the case of a biological female with past medical history of hypothyroidism, dysthymia, PTSD, anorexia nervosa, and hospitalization for suicidal ideation at age 16. The patient was not in psychiatric care again until age 20. At this point, the patient had started testosterone supplementation and began identifying as male. The patient was obtaining testosterone from unregulated sources and was dosing it based on regimens from Youtube. After beginning hormone therapy, the patient had two hospitalizations for psychotic symptoms which responded to antipsychotic treatment. In 2022, the patient was admitted to the hospital for increased aggression, rapid speech, disorganization, and elevated blood pressure and heart rate. Significant labs on admission included positivity for cannabinoids, elevated TSH, and BMI of 17. The patient was restarted on thyroid medication and treated with an antipsychotic. The patient was unsure of the dose and formulation of the testosterone he had been using, and total testosterone was 865 ng/dL on day 6 of admission (normal range for males 300-1000ng/dl). Hemoglobin was 13.10 gm%, hematocrit 40%, and albumin 4.5 g/dL. The patient was started on risperidone (titrated to 3 mg BID), depakote was added for increased symptom control, and propranolol was added to control elevated heart rate and blood pressure. The patient continued to endorse dissatisfaction with his self-image, making several comments about being too thin and having an asymmetric face. The patient also experienced menses which drastically heightened anxiety. Testosterone level five days later was 234 ng/dl, and patient continued to demonstrate some signs of aggression. Given the elevated testosterone level, lack of documented family history of bipolar

disorder, and symptoms of aggression and elevated HR and BP, this patient likely experienced mania induced by the use of unregulated, exogenous testosterone. The patient was likely well above the normal range for a biological male at time of admission given estimated half-life from total testosterone levels on days 6 and 11 of hospital stay. Similar instances have been documented in biological males taking anabolic steroids.¹⁻² This case occurred in a rural location without access to gender specialists, increasing the risk of testosterone misuse. Given that testosterone has the potential to trigger psychotic episodes, caution should be used when prescribing hormone therapy to patients with gender dysphoria. Moreover, patients with gender dysphoria tend to have psychiatric comorbidities that can be masked or exacerbated by exogenous hormones. ³⁻⁴ This case emphasizes the importance of considering the impacts of hormone therapy beyond treatment for gender dysphoria.

No. 29

Mental Health and Plant Based Nutrition, a Lifestyle Medicine Look at Psychiatry

Poster Presenter: Barrett William Bradham, M.D.

Co-Author: Olli Toukolehto

SUMMARY:

Lifestyle medicine is the integration of evidence-based techniques revolving around lifestyle modification to prevent, treat, or sometimes even reverse various forms of chronic disease. Mental health issues such as depressive and anxiety disorders are included among these pathologies that have an evidence basis for lifestyle modification as a form of prevention and treatment. Lifestyle modifications include whole-food, plant-predominant diets, regular physical activity, restorative sleep, stress management, avoidance of substance abuse, and positive social connections. Through the lens of various studies, we will identify how predominantly plant-based nutrition can have a positive impact on a patient's mental health, and conversely, we will also identify how the consumption of highly processed foods or frequent consumption of red meats can have a negative impact on health. We will additionally answer the questions: "What is a whole food plant-based diet?"

and "How can I counsel my patients on transition to a healthier diet?" Key learning points include: 1) Processed foods significantly increase depression identified by the Center for Epidemiologic Studies Depression Scale. 2) Inflammatory dietary patterns identified by the tracking of C-reactive protein, Interleukin-6, and Tumor Necrosis Factor (TNF) α receptor 2 are significantly correlated with depressive disorder diagnosis. 3) How a plant-based nutrition program launched in a multicenter, corporate setting improved objective and subjective scores on depression, anxiety, and productivity scales. 4) Children diagnosed with Major Depressive Disorder consume fewer healthy foods than those who do not carry the diagnosis. 5) Meta-analysis level reviews show that dietary interventions hold promise as a novel intervention for reducing symptoms of depression across populations.

No. 30

Barbershop Talk Therapy Project: A Quality Improvement Study on Therapy-Led Focus Groups for Minority Males in Community-Driven Safe Spaces

Poster Presenter: Antonio Igbokidi

SUMMARY:

Introduction: Mens' mental health, particularly in communities of color, is an unkempt public health issue. In the United States, 1 in 8 men are likely to be diagnosed with a mental health illness, but compared to their women counterparts, are 33% less likely to reach out for intervention from a healthcare professional for mental or general health. What's more, men are 3.56 times more likely to commit suicide than women. These numbers are hyper intense in Fort Worth, TX. Intervention is desperately needed. Our project goal is to utilize volunteer mental health professionals to provide focus groups, education, and health screening services to barbershops in underserved communities in Fort Worth, TX. The hope is that men of color will be able to have talk therapy during their haircut while receiving resources and support that they would/could not otherwise acquire. We will measure the likelihood of the men seeking mental health services after acquiring resources during their haircut, and how important safe spaces like the

barbershop are vital in dismantling barriers to access resources. Method: 26 question electronic survey that gauge participants knowledge and accessibility to mental health resources in FW. PHQ2 is incorporated into the survey and will be done to gauge if follow up with MH professionals is needed during or after the project. The screening will be administered via electronic survey on iPad. Surveys will provide a participant ID to privately follow up and/or refer participants with anonymity. We will evaluate the emotional impact the project had on the patrons who visited that day. Additionally, it will measure the likelihood that individuals who attended followed up to receive mental health or general health services in the subsequent month. Results: in a sample, n=45 individuals 68% percent deny promoting wellness in their everyday life. Over 53% denote moderate stressors being their occupation (24) and 33% severe stressors being Social injustice/race/class (18). 22.2% do not confide with anyone when they feel overwhelmed. 15% do not feel safe anywhere. 42% screened positive for depression via PHQ2, 59% believe their barber is like a therapist, 59% talk to their barbers about sensitive topics they do not talk to anyone else about. 93% feel more optimistic and less stress after leaving the barbershop. 57% felt more reassured about accessing mental health resources after the conclusion of the project. 74% stated it is important for them to have a therapist that looks like them. 53% stated that after the barbershop event, they probably and/or definitely would consider seeking a mental health provider. 46% stated barbershops are important to communities because haircuts make you feel better about yourself; 46% stated as well that barbershops are a place we can strategize how to be better for our community. Conclusion: Barbershops are a powerful setting in the destigmatization of mental health of men from minority communities.

No. 31

Relation Between Vitamin D Level and Severity, Symptomatology and Cognitive Dysfunction of Major Depressive Disorder, a Sample of Egyptian Patients

Poster Presenter: Sandra Wassim Elsessy

SUMMARY:

Background: Vitamin D helps in the regulation of neurotransmission and neuroprotection. Therefore, vitamin D deficiency might lead to inactivated receptors and may result in depression. Aim: The study assessed the relation between serum level of vitamin D and severity, symptomatology and cognitive dysfunction of Major Depressive Disorder (MDD) in a sample of Egyptian patients. Methods: Serum levels of 25-hydroxy vitamin D were measured with electro-chemiluminescence binding assay in 75 patients with MDD. Vitamin D deficiency was described as < 20 ng/ml. Patients were recruited from Psychiatry and Addiction Hospital, Kasr Al Ainy outpatient clinic. Patients were subjected to the Structured Clinical Interview for DSM-IV Axis I Disorders (SCID), Hamilton depression scale (HAM-D), Mini-mental status examination (MMSE), Wechsler memory subtests (story A and paired associate learning test (PALT)), Benton visual retention test (BVRT) and Trail B test. Results: 94.6% of patients had vitamin D deficiency. There was no significant correlation between levels of vitamin D and severity of depression according to HAM-D. Regarding symptoms of depression, there was a statistically significant difference between levels of vitamin D, being more deficient with decreased concentration, decreased libido and menstrual disturbances. There was no statistically significant correlation between level of vitamin D and cognitive functions. Conclusion: MDD was associated with vitamin D deficiency but no statistical significant correlation could be established neither between levels of vitamin D and severity of depression nor between levels of vitamin D and cognitive dysfunction. Vitamin D level was statistically correlated with decreased concentration, decreased libido and menstrual disturbances.

No. 32

Implementing M-Psych-Pass Handoff in the Psychiatric Emergency Room: Reducing Errors and Systemically Addressing Health Care Disparities

Poster Presenter: Emily Kager

Co-Authors: Samantha Labib, Rachel Belfer

SUMMARY:

Background: An increase in patient handoffs results in an increase in medical errors due to communication breakdown between teams.^{1,2} Through systematic changes, formalized sign-out methods reduce medical errors and preventable events.³ In 2017, Montefiore Psych Pass (M-Psych Pass) was created, adapted from the well-studied "IPASS", to improve handoff on the inpatient psychiatric unit.³ Once established, M-Psych Pass prompted clinicians to include essential patient information into sign-out. Given the successful implementation on the inpatient unit, our team decided to integrate this handoff system into our ED's Psychiatric Observation Suite (POS). The project's aim was to describe M-Psych Pass's impact on the quality of our team's medical and psychiatric care determined by clinician handoff errors. Addressing errors in handoff becomes crucial in our population given the vulnerability of psychiatric patients to poor medical outcomes.⁴ Methods: Data from 79 psychiatric observation suite (POS) patients was collected pre and post implementation of M-Psych Pass. Data was then refined into categories denoting errors in restarting/documenting home medical medication, documenting POS medication, PRNs and seclusions, restarting/documenting home psychiatric medication, and documenting relevant labs. The average number of errors pre/post change were compared using two-tailed t-tests, the null hypothesis stating that there is no difference in the mean number of errors before and after implementation of M-Psych Pass. Results: Testing revealed that for categories: restarting home medical medication ($p=.004$), documentation of medical medication ($p=.0008$), documentation of POS medication, PRNs and seclusions ($p=.007$), and documentation of home psychiatric medication ($p=.04$) there was a statistically significant reduction in the number of errors. However, testing for documentation of relevant labs displayed a statistically significant increase in errors ($p=.002$). There was no statistically significant difference found for the category restarting home psychiatric medication. Conclusion: Mortality in mentally ill patients on average is 25 years younger than those without and systems issues have been identified as major contributors.⁴ Implementation of M-Psych Pass in the emergency room, reduced

documentation errors and improved restarting of home medications, both of which help address gaps in medical care for patients with serious mental illness.^{4,5} We hope this project inspires other institutions to make innovative systemic changes, including to handoff systems, which can improve the overall care provided to our psychiatric patients and help address health care disparities.

No. 33**Hanging on to Hangovers: The Role of the MDMA Hangover in the Clinical Setting**

Poster Presenter: Renzo A. Costa, M.D.

SUMMARY:

Introduction: 3,4-methylenedioxy-methamphetamine (MDMA)-assisted psychotherapy is gaining an increasingly favorable status among both clinicians and the public. Yet, reasonable apprehensions persist within both these groups. As MDMA's reputation transitions from street drug to medication, the residue from its past must be re-analyzed and reconciled. Within this residue is the concept of the "MDMA hangover". Anecdotal reports from recreational users report increased anxiety, low mood, fatigue, and irritability in the week following MDMA dosing. Scientific articles from decades ago report similar findings. However, due to government restrictions on MDMA usage in clinical research, these articles base their results on subjects using MDMA in non-controlled settings (e.g. clubs, homes, music festivals). Recently, restrictions have changed, and researchers have led clinical trials that administer pure MDMA in a controlled setting. Given this recent influx of data, the scientific community should address the MDMA hangover, so that future patients may be better informed on what to expect if they were to undergo MDMA therapy. **Methods:** A literature search via multiple databases was conducted to gather clinical trials that have used MDMA as their intervention. Clinical trials that were not completed and/or without results were excluded. Any remaining clinical trials that did not have data detailing participants' side effects on day 1 to day 7 post-MDMA administration were excluded as well. Descriptive statistics were performed to calculate the rate of symptoms participants experienced between day 1 and day 7 that were

consistent with past reports of an MDMA hangover (anxiety, low mood, fatigue, and/or irritability).

Results: The initial literature search produced 15 clinical trials. Of those 15, nine clinical trials detailed participants' side effects from day 1 to day 7 post-MDMA administration. Altogether, 117 participants were given MDMA to treat various diagnoses. Of these participants, 57 (48.7%) reported anxiety, 47 (40.2%) reported low mood, 78 (66.7%) reported fatigue, and 24 (20.5%) reported irritability in the week following MDMA administration. The vast majority of participants reported mild to moderate symptoms. **Conclusion:** Preliminary results reveal that sub-acute affective symptoms (anxiety, low mood, fatigue, and/or irritability) arise within the week following MDMA administration in a clinical setting. However, the severity of these symptoms appears less than that seen in anecdotal reports or pre-2010 studies. These differences can be due to dehydration, excessive dancing, starvation, tainted pills, or polydrug use seen in non-controlled settings. There is a dearth of recent studies specifically addressing MDMA's subacute effects in a clinical context. Future patients may come across outdated information on "MDMA hangovers" when researching online. Thus, in order to chart a path for the future, clinicians must address beliefs of the past.

No. 34

Examining Hippocampal Circuit Dysfunction in Preclinical Models of Maternal Immune Activation

Poster Presenter: Jonathan Artz, M.D.

Co-Author: Jennifer Donegan, Ph.D.

SUMMARY:

Background: Increasing clinical attention has been drawn to the need for interventions targeting the cognitive and negative symptoms of schizophrenia. Recent efforts have focused on identifying pathology in upstream brain regions that regulate not only striatal dopamine signaling but also cognitive and negative symptoms of the disorder. One such brain region is the hippocampus, which is observed to be hyperactive in schizophrenia patients. The hippocampus connects to brain regions such as the nucleus accumbens (NAc), where excessive dopaminergic activity drives positive symptoms, and

the medial prefrontal cortex (mPFC), which has been implicated in cognitive and negative symptoms. Using a rodent model, we have previously found that inhibition of these discrete efferent pathways from the ventral hippocampus (vHipp), differentially attenuates specific schizophrenia-like behaviors. Pyramidal cell activity is regulated by GABAergic interneurons and in schizophrenia patients, abnormal hippocampal neurodevelopment leads to loss of specific subtypes of GABAergic interneurons, including those that express the calcium-binding protein, parvalbumin (PV) and those expressing the neuropeptide, somatostatin (SST). Previous work has demonstrated that transplanting PV- or SST-positive interneurons into the vHipp differentially alleviates discrete schizophrenia-like behaviors. In healthy animals we have found that PV and SST interneurons differentially synapse on vHipp pyramidal cells, depending on their projection target (namely NAc or mPFC). In the current experiments, we aim to build upon these findings to assess for synaptic changes in rodents exposed to maternal immune activation (MIA), a known risk factor associated with schizophrenia. **Methods:** In all experiments, maternal immune activation (MIA) is induced in time pregnant PV-Cre or SST-Cre mice by injection of 10 mg/kg Poly I:C on gestational day 12.5. The number of synaptic connections formed between interneurons (PV or SST) and vHipp pyramidal cells that project to the mPFC or NAc is assessed using mGRASP technology to examine the structure of hippocampal microcircuits. **Results:** We have shown previously that injection of Poly I:C on gestational day 12.5 results in behavioral correlates of the positive, negative, and cognitive symptoms of schizophrenia in adult offspring. Our preliminary results suggest that MIA may also alter the number of synapses in specific vHipp microcircuits. **Conclusion:** Abnormal neurodevelopment in schizophrenia leads to hyperactivity in hippocampal circuits, driving downstream dysfunction and causing the symptom clusters noted in schizophrenia. Future directions will focus on targeting specific components of these hippocampal microcircuits to alleviate discrete schizophrenia-like behavioral deficits in rodents exposed to MIA.

No. 35**Review of Efficacy of Newer Treatments for Bipolar Depression: Lurasidone Versus Cariprazine Versus Lumateperone**

Poster Presenter: Abhishek Allam

Lead Author: Jayasudha Gude, M.B.B.S.

Co-Author: Viwek Bisen

SUMMARY:

Introduction: According to NAMI, bipolar disorder affects about 5.7 million adults every year. It becomes very important to come up with new treatment strategies to help people with bipolar depression. Methods: We searched PubMed, clinicaltrials.gov databases using the keywords bipolar depression and Cariprazine, Lurasidone and Lumateperone for Phase 3 clinical trials. The search yielded a total of 55 articles. Case reports, case series, review articles and duplicate articles have been excluded following the PRISMA protocol. A final total of 5 articles have been included in this review analysis. Inclusion criteria include phase 3, double blind, placebo controlled randomized clinical trials which have studied the effect of Cariprazine or Lurasidone or Lumateperone on bipolar depression. Exclusion criteria include individuals with any psychotic disorder, or other medical conditions. The primary outcome of the studies is the mean difference between the baseline and 6 weeks after treatment with Lurasidone, Cariprazine or Lumateperone using the Montgomery Asberg Depression Rating Scale and Clinical Global Impression scales. The mean, Standard deviations, p-values have been obtained to compare the different studies. Results: Out of 5 studies, two studies include Cariprazine, two of them include Lurasidone and one include Lumateperone. The sample size ranged between 150-190 individuals for each study included. The mean differences in the MADRS between baseline and at week 6 with Cariprazine, Lurasidone and Lumateperone was found to be 14.85, 14.5 and 16.7 respectively. The greatest difference was found to be with Lumateperone, although the difference in the efficacy was not much. It was also noted that the mean difference in the CGI scores were not statistically significant. The efficacy also was dependent on the dose, lower dosages were statistically significant compared to the higher doses. Further meta-analysis will be done using a

review manager comparing the three medications. The major limitation of this analysis is the limited number of studies. Conclusion: This analysis shows that Lurasidone, Cariprazine and Lumateperone can be equally efficacious in treating bipolar depression. However, more studies with more sample size and long term follow up are needed.

No. 36**Difficulties in Treating Bipolar Disorder in a Patient With a History of Roux-En-Y Gastric Bypass**

Poster Presenter: Jennifer Lenchner, D.O.

Co-Authors: Joseph Dube, Samarth Bhandari, Andrew New

SUMMARY:

Mrs. M, a 32-year-old mixed-race female with a past psychiatric history of bipolar 1 disorder and past medical history of hypertension, obesity, status post roux-en-y gastric bypass 5 years prior presented to the inpatient psychiatric unit with bizarre behavior, racing thoughts, loose associations, increased psychomotor agitation, decreased need for sleep, labile mood, delusions, paranoid ideations, sexual preoccupation, and inability to perform activities of daily living. These psychiatric symptoms began to occur in the setting of overwhelming responsibilities caring for her three children and financial stress. The patient was not engaged in outpatient behavioral health nor taking any psychotropics prior to admission. The patient was diagnosed with Bipolar 1 Disorder, current mixed manic-depressive episode with psychotic features. She was initially treated with an oral antiepileptic mood stabilizer with as needed oral benzodiazepine medication for agitation with minimal response. As the disease progressed, the patient demonstrated the additional symptom of delusion of pregnancy with increased agitation and destructive behaviors. Given the patient's poor response to initial treatment and increasing agitation with immediate threat of harm to others, intramuscular antipsychotic and benzodiazepine medication was administered. The patient demonstrated overall improvement afterward with decreased lability, improved reality testing, decreased intensity of delusions and decreased paranoid ideations. The patient's significant response to intramuscular medication compared to oral

medication in the setting of gastric bypass history led to the suspicion of poor gastrointestinal absorption of oral medication. Overall, malabsorption presents a unique challenge in treating psychiatric conditions. In this poster, we discuss the changes in pharmacodynamics and pharmacokinetics of psychotropic medications after roux-en-y gastric bypass, and the availability of non-oral psychotropic medication formulations in clinical practice.

No. 37

An Innovative Psycho-Oncology Care Model: Qualitative Findings in Shared Medical Appointments With Concurrent Group Therapy

Poster Presenter: Anna Kostrzewsky, M.D.

Co-Authors: Mary Helen Davis, M.D., Crystal Labbato, D.N.P., A.P.R.N., Kathy Halloway, A.P.R.N.

SUMMARY:

Background: Group therapy allows for camaraderie, instillation of hope, and shared guidance between members. Analogous to this is the shared medical appointment (SMA), wherein patients with similar diagnoses receive concurrent medical care. This project shares observations on combining these two methods, in which patients meet for shared psychotherapy plus medication management in a group session. This model is particularly useful in the oncology population, a subset of patients often with challenging psychosocial needs. This qualitative study reports recurrent themes emerging during group sessions in a variety of oncology populations.

Methods: Patients in a Midwest community cancer center requiring psychiatric care were offered the option to enroll in combined group therapy and SMA. Sessions were one hour long, beginning with a personal statement from each member including updates on their disease state. The final third of the visit was dedicated to psychotropic medication management. Various groups were offered, allowing patients to be separated based on shared issues. Three such subgroups included 'long-term survivors with poor prognostic cancers,' 'young women,' and 'fatigue management.' Groups met virtually every 4 weeks and were led by a psychiatrist aided by a psychiatric APRN, with psychiatry residents observing some groups. Qualitative data was gathered over the

course of two years by the MD, APRN, and residents. Observations were discussed periodically to compare data. **Findings:** Varying themes unique to each subgroup emerged. The long-term survivors group revealed recurring themes of anxiety, eg hypervigilance and fear of cancer recurrence. This group also utilized "gallows humor" as a coping mechanism and embraced concepts of full force living. This was a closed group (n=9), meaning the same participants joined each month. Continuity allowed for a high level of trust between members, facilitating discussion of mortality and managing palliative care. The closed group fostered accountability which assured a high attendance rate. The young women group revealed themes relating to physical appearance, including body dysmorphia, as well as concerns regarding sexuality and intimacy. Discussions included struggles with mood, anxiety, cognition, and dealing with a "new normal." The fatigue management group, most who had post-COVID fatigue in addition to treatment-related fatigue, struggled with functional limitations. They expressed concerns related to family dynamics and role strain. Patients shared behavioral activation techniques. Both the fatigue and women's groups were open (n= 6), with new members joining periodically and stable patients following up every 2-3 months. **Conclusion:** Combining group therapy and SMA appears to be an effective means of delivering care to the psycho-oncology population. Common themes emerge when patients are divided into like subgroups, allowing the shared visit to be tailored to that group's unique needs.

No. 38

Do Executive Functions Mediate the Effects of Personality Traits on Quality of Life in Adults With ADHD? A Mediation Analysis

Poster Presenter: Chin Kuo, M.D.

Co-Authors: Yi-Lung Chen, Ph.D., Susan Shur-Fen Gau, M.D., Ph.D.

SUMMARY:

Background ADHD is associated with distinct personality traits in Cloninger's personality dimensions, such as high Novelty-Seeking and high Harm-avoidance. Prior studies indicated that personality characteristics in adults with ADHD may

be associated with their impairments in quality of life and executive functions. The current study hypothesized that real-world executive function mediates the effects of personality traits on the quality of life (QoL) in adults with ADHD. Objectives: 1) assess the differences in personality traits, real-world executive functions and QoL between adults with ADHD and non-ADHD controls; 2) determine if real-world executive functions mediate the association between personality traits and QoL in adults with ADHD. **Methods** 250 adults with ADHD and 255 non-ADHD controls were assessed with psychiatric interviews and self-administered reports on the Tridimensional Personality Questionnaire (TPQ), Behavior Rating Inventory of Executive Function (BRIEF), and Adult ADHD Quality of Life Scale (AAQoL). Data were analyzed with independent t-tests for differences in age, full-scale IQ, executive functions, personality traits, and QoL. In addition, we conducted mediation analyses and calculated mediation, indirect, and direct effects according to the suggestion by Preacher and Hayes. **Results** Adults with ADHD demonstrated higher Novelty Seeking and Harm avoidance in TPQ, lower global executive function in BRIEF, and poorer quality of life in AAQoL, compared with non-ADHD adults. In addition, real-world executive function exerted significant mediating effects on the associations between all three domains of TPQ (Novelty Seeking, Harm Avoidance, and Reward Dependence) and the QoL in adults with ADHD. **Conclusions** In adults with ADHD, high novelty seeking and high harm avoidance personality traits are associated with impaired real-world executive functions, leading to reduced QoL. Clinicians should be aware of the distinct personality traits associated with ADHD, evaluate the degree of functional impairments, and provide treatment that relieves core symptoms and improves patients' executive functions.

No. 39

Systematic Review: Safety and Efficacy of Electroconvulsive Therapy in Children and Adolescents

Poster Presenter: Henry Guajardo, M.D.

Co-Authors: Kanwal Ahmed, M.D., Nida Ahmed

SUMMARY:

Few studies have investigated the safety and efficacy of electroconvulsive therapy (ECT) in children and adolescents due to legislative limitations, consent difficulties, and ethical challenges. In 2004, the American Academy of Child and Adolescent Psychiatry (AACAP) issued practice parameters for the use of ECT in children and adolescents, supporting its use. Since that time, much additional evidence has been published. The present study is a review following PRISMA guidelines of studies published from Jan 2000-May 2021 which involve ECT use in children and adolescents with affective, schizophrenic, or psychotic disorders, catatonia, and neuroleptic malignant syndrome (NMS). Of 1,030 articles screened, 24 were included in this review [n=922]. The overall pooled response rate was 76.9% across diagnoses, with no deaths, and a mild to moderate side effect profile. Despite ongoing controversy surrounding its use in this patient population, our findings indicate that ECT is a safe, efficacious, and oftentimes life-saving treatment in children and adolescents.

No. 40

Mediating Effects of Attention Problems on the Link Between Parenting Style and Internet Gaming Disorder in Adolescents

Poster Presenter: Sungah Chung

Lead Author: Doug Hyun Han, M.D., Ph.D.

Co-Authors: Sun Mi Kim, M.D., Ph.D., Hyunchan

Hwang, M.D., Ph.D., Ji Sun Hong

SUMMARY:

Introduction Parenting behaviors are known to be associated with adolescents' emotion and problem behaviors. Also, several studies have suggested that parent-child relational problems in the family are related to internet use patterns in adolescents. Positive and negative parenting styles as well as psychiatric comorbidities including attention deficit hyperactivity disorder (ADHD) have been associated with internet gaming disorder (IGD) in children and adolescents. We hypothesized that ADHD and parenting style would be associated with IGD in adolescents. In addition, psychological status could mediate the link between parenting style and the severity of IGD. **Methods** From August 2016 to July

2020, patients who visited the IT and Human Research Center at Chung Ang University Hospital for the treatment of IGD were asked to participate in the current study. A total of 256 adolescents with IGD and 211 healthy internet game players and their mothers participated in current study. Demographic data, gaming pattern, and psychological status including ADHD were recorded for all adolescents. The parenting style of each adolescent's mother was assessed using the Maternal Behavior Research Instrument, Korean version. **Results** There were significant differences in the internet game play pattern, psychological status, and parenting style between the IGD group and healthy internet game players. The IGD group showed increased scores on the BDI-II, BAI, K-ARS, and BISBAS, compared with the healthy game play group. The scores for maternal affective attitudes and autonomous attitudes in the IGD group were significantly decreased compared with those observed in the healthy game play group ($t=-6.23$, $p<0.001$, $t=-3.29$, $p=0.001$). In the hierarchical logistic regression analysis, higher ADHD scores, less affective parenting styles, and less autonomous parenting styles, were significant predictors of IGD. In the mediation test, the ADHD score could mediate the association between affective and autonomous parenting styles and the severity of IGD. **Discussion** The IGD group showed differences in K-ARS scores, affective parenting styles, and autonomous parenting styles compared with healthy game play group. Attention problems could directly and indirectly mediate the relationship between positive parenting styles and the severity of IGD. **Keywords:** internet gaming disorder, attention deficit hyperactivity disorder, parenting style, mediation effect

No. 41

Establishing the "Phone Pal Program": Supportive Phone Calls From Medical School Students to Isolated or Lonely Seniors

Poster Presenter: Singi Weerasuriya

Co-Authors: Naomi Ambalu, D.O., Robert G. Stern, M.D., Melissa Calt, Alana Barofsky

SUMMARY:

The disproportionate effects of the COVID-19 pandemic have highlighted increased social isolation

and loneliness among the older adults, a quarter of whom were considered socially isolated prior to the pandemic (Wu 2020). Inspired and supported by the Columbia University "Friendly Calls to Seniors" program team (Nathanson et al. 2021), students at Hackensack Meridian School of Medicine (HMSOM) created a new HMSOM student club. The "Phone Pal Program" is aimed at supporting isolated seniors in the community. Such programs have been reported to have beneficial effects on both the participating seniors as well as the volunteering students (Office et al. 2020). Program setup required dedicated effort over six months with guidance from mentoring faculty members, HMSOM deans, advisers, and a series of approvals from student affairs and wellbeing leadership as well as legal review. Once the club received formal approval, older adults reporting isolation to their attending psychiatrist were presented with information about the HMSOM Phone Pal Program. Medical student volunteers were matched with an older adult (Phone Pal) and attempted to conduct regular weekly telephone calls with their Phone Pal over a period of three months in an effort to provide emotional and psychosocial support. Volunteers kept call logs and received feedback throughout the program. After the initial call for volunteers, thirty students joined the program group chat. Fourteen students joined the program's interest meeting, and thirteen committed to attending a training session. Four training sessions with faculty supervisors were held, and thirteen volunteers completed the training program. Twelve volunteers established and maintained contact with their assigned Phone Pals and conducted over 30 calls during the project period. All volunteers completed a satisfaction survey at the end of their three month long assignment. About two thirds of the Phone Pals agreed to complete a satisfaction survey. Survey results suggest that the majority of the students found the program beneficial in fostering connections and appreciated the flexibility of the program. The Phone Pals presented a mixed picture. Correlations between volunteer and Phone Pal satisfaction could not be explored due to the low n. The creation of the Phone Pal Program as a novel club at HMSOM required significant time and commitment from student leaders, faculty members and administrators over six months. Volunteer recruitment and training could be initiated only after

the club received full approval from the SOM. The initial project period was three months. It is hoped that the program will continue with a new set of volunteers. The data collected suggests that the majority of the students found the program beneficial. As the program grows, a more satisfaction surveys are analyzed, we hope to draw clearer conclusions regarding the Phone Pals experience and the correlation between volunteer and phone pal experience.

No. 42

Indigenous Population and Coal Transportation Railway as Lethal Means of Suicide

Poster Presenter: Anna M. Spector, M.D., M.P.H.

SUMMARY:

Objective. The purpose of this study was to evaluate the factors associated with suicide and suicidal behavior among the Wayuu population along the dedicated coal transport railway and propose an intervention. **Introduction.** The train transporting coal from the largest surface mine in Latin America divides this region, generating barriers and difficulties in the community. Collaborative quantitative and qualitative studies have found factors associated with suicide and suicidal behavior. **Methodology.** Epidemiological data on suicide and suicidal behavior was collected using national data bases available in Colombia, SIVIGILA, SISPRO, DANE and INMLCF as well as from the “Lifesavers” program. A literature review was carried out regarding suicide and suicide attempts on railways. Qualitative data was collected during field visits to 4 municipalities and surrounding villages using social mapping, interviewing, and community dialogue. Orienting and guiding questions were standardized. **Results.** Quantitative data shows the department of Guajira has suicide rates of 2-4 cases per 100,000 between 2009 and 2020, lower than most departments in Colombia. 625 cases of suicidal behavior were registered in the public health system, 66% of these were women and 34%, men, 24% were identified as “indigenous”. By age group, cases were highest in 19-26-year-olds (181 cases), 15-18-year-olds (156 cases), and 27-44 year-olds (154 cases.) Data from the “Lifesavers” program reported a total of 1,247 cases between 2009 and 2020 of lives saved

on the railway defined as rescues made along the tracks. Alcohol was the number one factor associated with a rescue incident, at 72.23%. Secondly was “careless behavior” at 17.9% and thirdly, suicidal behavior at 4.33%. Qualitative studies. Using NVIVO coding, the top four structural categories associated with suicide were: emotional issues, generalized violence including bullying, changes in the cultural model and cross-border fuel and contraband trading. The category of “reactivity to emotional issues” included loss of cultural identity. In the “generalized violence” category, violence within and toward the Wayuu community was prevalent in all groups held. Changes in the cultural model refer to the loss of indigenous and individual identity. Finally, the trade of fuel and contraband has given rise to corruption, poverty, and food insecurity. **Conclusions.** The study highlighted the deficits of surveillance and monitoring and evaluation programs for suicide culturally-adapted to the indigenous population, one of the major limitations of the study. The intervention plan includes strategies to reduce the use of alcohol, to evaluate the effectiveness of the Suicide Hotline, considering using texting apps popular in the region such as Whatsapp with bilingual operators in Spanish and Wayunaik languages, and to better integrate the “Lifesavers” program into the mental health gap action program of the country.

No. 43

Patients With Eating Disorders Insured by Medicaid

Poster Presenter: Ji Sung Jin, M.D.

Co-Author: Richard Lee, M.D.

SUMMARY:

Introduction: Eating disorders (ED) are difficult illnesses to treat, but socioeconomically disadvantaged patients with ED encounter more serious challenges because of their limited access to evidence-based treatments. For instance, public insurances, like Inland Empire Health Plan (IEHP), which is a top 10 largest Medicaid health plan in the United States offered in Southern California, does not cover higher levels of care (HLC) like residential, partial hospitalization, and intensive outpatient programs, which are often utilized for patients with ED². Moreover, most research regarding the efficacy

of ED treatments was completed in research-focused, academic settings where patients have access to well-trained therapists and specialized clinicians; the applicability of these treatments has not been well studied in community settings³.

Objectives: This study analyzed the demographic data of ED patients in community clinics in Riverside County, CA. More than 74% of these patients were on a locally managed Medicaid plan, IEHP, due to their financial limitations. In this study, we hoped to illustrate the need and urgency to improve Medicaid coverage for ED patients and facilitate policy reforms to increase ED research in publicly-funded settings.

Methods: (1) Patients with an ED diagnosis who were seen in any Riverside County outpatient clinic between the years 2017-2022 (n=324) were selected from ELMR, which is an electronic health records system for behavioral health clinics operated by Riverside County. (2) Patients were divided into two different groups: patients with a primary diagnosis of an eating disorder (n=76) and patients with a secondary and tertiary diagnosis of an eating disorder (n = 248). (3) Patients were categorized based on their age (4-18 (children and adolescents), 19-49 (adults), >50 (older adults)), and their ED diagnosis (avoidant restrictive food intake disorder (ARFID), anorexia nervosa (AN), bulimia nervosa (BN), binge eating disorder (BED), and other specified feeding or eating disorder (OSFED)). A percentage of each age group and each diagnosis group was calculated. **Results:** Among 324 patients, 76 patients had a primary diagnosis of an ED, and 248 patients had a secondary or tertiary diagnosis of an ED. Among 324 patients with a ED diagnosis, 52% was children and adolescents, 44% was adults and 4% was older adults. Among 76 patients with a primary diagnosis of an eating disorder, 29% had AN, 28% had OSFED, 22% had BN, 17% had ARFID, and 4% had BED. **Discussions and Conclusions:** There is a large number of patients who are suffering from EDs in publicly-funded settings, a majority of whom are children and adolescents. There is a need to improve Medicaid coverage for these patients as well as a need for more ED research to determine the effectiveness of evidence-based treatments in community settings, such as family-based treatment for AN, which is one of most prevalent EDs.

No. 44

Mental Health Services in Community: Innovation and Collaboration

Poster Presenter: Priti Arun, M.D.

SUMMARY:

An estimated 197.3 million people in India suffer from mental disorders, and the majority of the population has no or limited access to mental health services. Despite framing and implementation of various policies, programs etc. by Government of India, treatment gap continues to remain significantly high for both Common Mental Disorders and Severe Mental Illness even in urban settings. This warrants that services delivered need to adopt innovative approaches that suit the local needs and population. Public Private Partnership (PPP) model is one such approach that can promote the care, treatment and rehabilitation in the field of mental health in LAMIC countries and provide services that are approachable, affordable and accessible in the community. Department of Psychiatry, Government Medical College and Hospital, Chandigarh started working on PPP model in the year 2009 while collaborating with a Non Governmental Organization named ' Parivartan' to bring lasting and constructive changes in the lives of persons with mental illness. Since then Dept of Psychiatry and Parivartan together have been providing various community based mental health services viz. Crisis resolution and home treatment (CRHT) services, Voluntary Inducement Program (VIP), Rehabilitation at home & community treatment (RAHAT), Drugs and wellness for all indigence (DWAI), Door step oral screening and testing (DOST), services for destitute persons with mental illness etc. Some of the programs run under this coalition are unique as they are not only novel and distinct but are the only ones running in India for reducing treatment gap, burden of care besides serving many other objectives. The tie up has till now catered to approximately 600 persons with mental illness and their families and has been able to prevent extreme marginalization, isolation and exploitation of homeless mentally ill in the tri-city region (Chandigarh-Panchkula-Mohali). Overall, it has been able to sow the seeds of 'positive change' using 'innovative methods of delivery of care' by applying 'thinking outside the box' approach in the decade.

No. 45**Covid-19 Related Psychosis in a Young Patient With a History of Viral Encephalopathy**

Poster Presenter: Chun-I Jenny Yang

Co-Authors: Mason Chacko, M.D., Jimmy Feng, M.D.

SUMMARY:

COVID-19 psychosis is a growing observation in the medical community. This is the first case of psychosis in a COVID-19 patient that has a history of viral encephalopathy, indicating possible biological predispositions to psychosis secondary to viral infections in certain populations. Ms. P is a 31 year old female with a past psychiatric history of anxiety and ADHD and past medical history of viral encephalopathy who presented to the psychiatric consult service with new onset psychosis. Patient had tested positive for COVID-19 three weeks prior to admission and was taken to the hospital by her family for increased confusion, aggression, and paranoia. Although asymptomatic upon admission, the patient continued to test positive. Patient's MRI revealed no acute infarct but a small focus of signal abnormality in the left superior temporal lobe; normal EEG; and negative HSV, West-Nile and syphilis serologies. On initial evaluation, the patient was guarded, anxious, and restless with incoherent and illogical thoughts. Patient had persecutory delusions of being watched by hospital staff and cameras in her room. Patient, who was not religious, expressed hyper religious sentiments, asking others to pray with her and writing prayers. Per family, the patient had four episodes of viral encephalopathy in which she develops a fever and becomes delirious and incoherent. The first episode was in the 8th grade and self-resolved. However, her most recent one required ICU admission to be sedated and intubated, leaving a lasting lesion in the patient's temporal lobe. In the hospital, patient's home Lexapro and Vyvanse were held as she had been off both for a month. The patient was then started on Zyprexa 5 mg oral at bedtime. Patient's psychosis improved within a week on Zyprexa. However, three weeks after her initial infection, the patient continued to have moderate-severe cognitive deficits with poor attention, memory, and concentration demonstrated with serial MOCA scores of 20. Paranoia is a common

symptom among COVID-19 patients with psychosis. Neuropsychiatric symptoms may develop through CNS inflammation, ischemic-hypoxic brain injury, massive cytokines release, and overuse of certain medications. However, Ms. P had largely asymptomatic COVID-19 and was not started on any susceptible medications. She was also young, lowering her risk of microvascular disease causing hypoxic injury. Although she had a psychiatric history, the patient never had a primary psychotic episode, history of mania, or family history of psychosis. Patient's only risk factor was her repeated viral encephalopathies, indicating a biological disposition to psychosis and cognitive dysfunction that may be hyperresponsive to certain viral features of Covid-19. In this poster, we discuss COVID-19 induced psychosis and its connection with viral encephalitis. We also highlight the role of antipsychotics and serial mental status testing in managing this growing neuropsychiatric complication.

No. 46**Assessing Decision-Making Capacity in Patients With Post-Stroke Expressive Aphasia**

Poster Presenter: Victor Kekere

Co-Authors: Hanif Benoit, Tannaz Safari, Tasmia Sara Khan, Katherine Reyes

SUMMARY:

Decision making capacity is an ethical and autonomous component of informed consent in medical treatment. Patient autonomy and physician beneficence are two important considerations in treating patients. The principle of autonomy requires physicians to respect patient autonomy when present and protect patient when absent. There are several recommendation for assessing patient decisional capacity using a semi-structured interview with the expectation that patient can verbalize their understanding of the concepts. Traditional decisional capacity assessment tools are ineffective in patient with expressive aphasia, making them at risk of wrongful loss of autonomy. We present a case of decisional capacity assessment in a patient with post stroke expressive aphasia. Mr. S is a 52-year-old male with past medical history of poorly controlled hypertension and diabetes mellitus who developed a

stroke while on his way to the airport. Patient was treated and he recovered from the stroke but developed residual right sided hemiparesis and expressive aphasia. A psychiatric consult was requested for decisional capacity to sign out against medical advice and refuse treatment. Using a multidisciplinary approach, a decision was reached but there were several challenges. A collaborative multidisciplinary team approach using supported communication and functional capacity assessments may be essential for scaffolding the decision-making capacity of people with aphasia. We discuss the challenges and the need for research to help with compensatory measures of decision-making capacity in patients with communication impairments.

No. 47

A Report of Psychiatric Bias Potentially Limiting an Appropriately Broad Differential Diagnosis in a Case of Pediatric Delirium

Poster Presenter: Cassandra Mary Nicotra, D.O.

Co-Authors: Jason Seymour, Brian Kurtz, Samuel Vaughn

SUMMARY:

SN is a 17-year-old female with history of psychogenic nonepileptic seizures who presented to the inpatient psychiatry consult service for altered mental status. She had an increase in seizure-like activity without return to functional baseline in over 24 hours. On initial presentation, she was nonverbal and unable to write and had non-purposeful limb movements, posturing, rigidity, poor eye tracking, and labile affect. Differential was broad, including psychiatric diagnoses of catatonia and functional neurologic disorder; however, more likely and worrisome were epileptic seizures, infection, intoxication, and autoimmune encephalitis. Vital signs, head CT, MRI brain, and initial labs (blood, urine, CSF) were unremarkable. Video EEG captured two electroclinical seizures, generalized slowing, and inter-ictal epileptiform discharges. She was started on zonisamide for seizures and IV steroids and IVIG as empiric treatment of presumed autoimmune encephalitis. Her clinical presentation showed significant variation over the next several days, with persistent deficits in attention, consistent with

delirium. At no point in time was there evidence of an acute mood, anxiety, or psychotic disorder. She was ultimately discharged with minimal social support with plan to follow up with neurology in three months along with pending study results. Two weeks later, a pediatric epilepsy panel returned a pathogenic variant in TPP1 associated with autosomal recessive neuronal ceroid lipofuscinosis, a condition with progressive loss of mental and motor skills and seizures. As an additional complication in this case, no guardian was present and the treatment team had a difficult time contacting any family. Chart review provided very limited history, including uncertain premorbid functioning. Despite this, documentation of SN having “anxiety,” “claustrophobia,” and “conversion disorder” continued from note to note amongst several disciplines throughout her admission. This documentation appeared to have a negative impact on her care as evidenced by frequent use of physical and chemical restraints. Furthermore, despite EEG findings and lack of objective evidence of mood or psychotic disorders, there was continual deference to mental health diagnoses and multiple requests to transfer to inpatient psychiatry for ongoing care. Given the eventual diagnosis, this case primarily highlights the importance of maintaining a broad differential in pediatric delirium when there is limited collateral information and poor overall healthcare follow-up over lifetime. It was assumed by many that SN’s baseline was that of a typically developing 17-year-old despite conflicting reports from historical chart and sparse collateral. Another barrier to appropriate care of SN was her age, as she was to turn 18 within one month of her discharge, thus limiting resources available through a children’s hospital and revealing many difficulties inherent to management of transitional age youth.

No. 48

Prolonged Post Surgical Delirium and Psychosis Secondary to Single Dose Ketamine Used for Anesthesia

Poster Presenter: Robert Olson, D.O.

Co-Author: Sahil Munjal, M.D.

SUMMARY:

Introduction: JF is 56 year female who had an acute mental status change after orthopedic surgery of the right lower leg where ketamine was used for anesthesia. Her symptoms were characterized by hallucinations, paranoid delusions, disorganized thoughts and inattention. **Discussion:** The patient was admitted to surgery for a sudden right lower right leg fracture. Her MSE on initial presentation was notable for distress from her acute pain though no psychotic, manic or depressive symptoms were present. An open reduction internal fixation of the right lower leg was performed. Ketamine was used in anesthesia for a total of 50mg during the procedure. After surgery she was transported to the general medical floor for continued care with a plan to discharge the following day. Upon return from surgery to her room, she was immediately found to have altered cognition, aggression and refusing all medical interventions. Psychiatry was consulted for abrupt change in cognition. Her psychiatric exam was notable for hyperactivity, auditory/visual hallucinations, paranoia, disorganized thoughts, inattention and was unable to recognize family. A brain MRI, CMP, CBC and TSH were unremarkable. There was no concern for surreptitious drug use. A thorough psychiatric history was collected from family notable for a brief episode of visual hallucinations 12 years ago lasting 2 days. There was no delusional content, social dysfunction or distress noted during that episode. She had full recovery with no other reported episodes of mania or psychosis. Additionally, family suspected an intermittently depressed mood, though no formal diagnosis or treatment was known. Risperidone 1mg BID was started for psychotic symptoms. Full symptom resolution was achieved in 6 days with minimal residual impairment in her executive function. Risperidone was reduced with a plan to taper after discharge. Given her minimal psychiatric history, abrupt onset of psychosis, use of ketamine for anesthesia and rapid recovery, we concluded that ketamine was a contributing factor. Ketamine has shown to have psychiatric side effects of hallucinations and emergence agitation ^{1, 2, 3, 4}. Due to her psychosis, her hospital stay was prolonged an additional seven days, as well as the need for psychotropic medication and psychiatric follow up. This posed an additional medical, financial and

psychological burden on the patient, family and system with potentially prolonged sequelae. A thorough psychiatric history and awareness of ketamine's post anesthesia psychiatric symptoms could have possibly averted this situation. This is the first case we know of with such protracted psychosis much after the physiological effects of ketamine (t_{1/2}=45 min) ⁵. **Conclusions:** Given ketamine's history of psychoactive side effects, further large studies are needed to identify risk factors for post anesthesia psychosis or aggression. For patients at risk, an alternative anesthesia regimen could be considered.

No. 49**Pericardial Effusion in Patient With Long Term Clozapine Use**

Poster Presenter: Omaymah Al-Otoom, M.D.

Co-Authors: Karina Kowalski, Garima Garg

SUMMARY:

Background: Clozapine is a dibenzodiazepine antipsychotic often used in patients who fail to respond to other antipsychotics. It has shown great efficacy on positive symptoms, negative symptoms, and relapse rates in treatment resistant schizophrenia compared to first generation and most second generation antipsychotics (1). Although associated with lower rates of elevated serum prolactin, EPS, and tardive dyskinesia, clozapine is associated with multiple side effects, most notably sedation, weight gain, constipation, sialorrhea, seizures, orthostatic hypotension, and risk of agranulocytosis (2). It is also associated with cardiovascular side effects, such as myocarditis, dilated cardiomyopathy, and pericarditis. Pericardial effusion resulting from clozapine is rare (<1:10,000) however, can lead to life-threatening effects, such as cardiac tamponade, and therefore warrants discontinuation of treatment (3). Case report: A 55 year old female with past history of bipolar I disorder, developmental delay, and multiple sclerosis presented for shortness of breath, tachycardia, and hypoxemia. Home medications included Clozaril 150 mg and Depakote 750 mg (since 2001). Labs revealed mild leukocytosis, elevated ERP, and significantly increased CRP. Echocardiogram showed large pericardial effusion and tamponade physiology.

Patient underwent pericardiocentesis. Bilateral pleural effusions were seen on chest x-ray. Medical work-up, including autoimmune testing, was negative, however effusion remained. Patient's symptoms improved after discontinuation of clozapine, and patient was discharged home with close follow up. Echocardiogram two months after discharge revealed no evidence of pericardial effusion. Bilateral pleural effusions also resolved and CRP significantly decreased. Discussion: Several cases of clozapine-induced pericarditis have been seen in patients who have been on clozapine from weeks to years (2). Patients may present with nonspecific symptoms, including cough, shortness of breath, chest pain, and tachycardia, as well as pleural effusion and increased inflammatory markers. Such presentation was seen in our patient, who had been on clozapine for over twenty years. Medical work-up was unrevealing for other causes, and clozapine was discontinued, which led to resolution of patient's symptoms. In most cases of clozapine-related pericarditis published in literature, treatment with clozapine was immediately discontinued, leading to resolution of symptoms (2). Transthoracic echocardiogram should be repeated three months after discontinuation (3). Our patient was not rechallenged on clozapine, as pericarditis may recur and guidelines remain controversial. However, few cases in literature have demonstrated that it is possible to successfully challenge under very close monitoring (4). It is important to consider clozapine-induced pericarditis as a potential diagnosis to achieve appropriate resolution of symptoms and prevent further complications.

No. 50
Implementing Psychiatry-Psychology Collaboration on Consult-Liaison Services: Experiences of a Psychology Extern and the Role of Collaborative Care

Poster Presenter: Audrey D. Nguyen

Co-Authors: Osmara Medrano, Saba Syed

SUMMARY:

Background: Few institutions have incorporated psychologists into consult-liaison (CL) psychiatry services for the care of patients with medical-psychiatric comorbidities. To our knowledge, no

studies have explored embedded psychology collaboration on the CL psychiatry service.

Objectives: The primary aim is to highlight the experiences of a psychology extern on an adult CL psychiatry service in a public academic hospital. Our secondary aim is to conduct a brief literature review on collaborative care to provide recommendations on the implementation of psychology collaboration in adult CL psychiatry. **Methods:** A semi-structured qualitative interview was performed with the psychology extern to explore the practice setting, goals, and psychotherapeutic interventions. Next, a brief literature review was conducted on collaborative care in the delivery of mental healthcare. **Main Findings:** We highlight the experiences of a psychology extern, including her unique roles on the team, the structure of her patient interviews and therapy sessions, and the types of psychotherapeutic interventions used. We discovered that the extern sees diverse patients with a range of mood and psychotic disorders to identify psychosocial stressors and provide various evidence-based, psychotherapeutic interventions to improve coping skills. A brief literature review on collaborative care in mental health services further revealed that embedding a psychology extern within the CL psychiatry service follows the integrated model of collaborative care. Finally, we propose a novel integrated collaborative care model in which CL psychiatry services consist of a multidisciplinary provider team that aims to enhance clinical outcomes for acute inpatient adults. **Conclusions:** Leveraging the expertise of a psychology extern who is integrated into CL psychiatry teams presents a novel approach to healthcare delivery for patients with medical-psychiatric comorbidities. Though collaborative care models have been extensively studied in outpatient mental health settings, inpatient settings also have significant potential for collaboration. Future studies are needed to explore the efficacy of psychiatry-psychology collaboration on CL services in improving quality of care, patients' coping skills, and healthcare costs.

No. 51
Depression in Ulcerative Colitis: A Unique Approach to Studying the Interplay Between the Brain and Gut and to Exploring Treatment Options

Poster Presenter: Aditi Sharma, M.D., M.P.H.

Co-Authors: Vinod Sharma, M.D., Noha Hafez, M.D., Sanjay Chandragiri, M.D.

SUMMARY:

A 75 year-old male with no prior psychiatric history was seen in a psychiatry outpatient clinic for the first time, where he reported symptoms of depression, apathy and personality change. Interestingly, all the symptoms had started after he was diagnosed with ulcerative colitis (UC) two years prior, at the age of 73. He was prescribed adalimumab and corticosteroids to treat his ulcerative colitis. Initially, personality change was noted as his first symptom per his wife's observations. This personality change progressed to him struggling with severe depression in the 2 years that followed. A thorough neurological workup was performed and organic neurological etiology was ruled out. Different anti-depressants were prescribed in order to monitor the effects on his mood. These anti-depressants included bupropion, sertraline, duloxetine, amitriptyline, augmented with aripiprazole, but there was minimal to no response. The addition of the olanzapine with bupropion showed marked improvement in his symptoms. His Patient Health Questionnaire (PHQ9) scores were significantly lowered from 25 to 6 which showed a decrease in the severity of his depression. He was more active, functional and has decreased somatic symptoms. According to studies, the link between UC and depression is bidirectional. Inflammation can trigger depression and in turn depression can increase inflammation by releasing interleukin (IL) IL-1, IL-6, IL-12 and tumor necrosis factor (TNF) leading to flare ups for the UC [1]. Additionally, treatment modalities used for treating UC can also precipitate symptoms of anxiety and depression. Corticosteroids and adalimumab are known to increase the rates of depression whereas adding interferon therapy has a protective role [2]. In this specific case, trials of Selective serotonin reuptake inhibitors (SSRIs), serotonin and norepinephrine reuptake inhibitor (SNRIs), and tricyclic antidepressants (TCAs) failed and a positive response was only seen with olanzapine augmented with bupropion. Clinical case reports have shown that bupropion can decrease the activity of many diseases where inflammatory mediators are involved in pathophysiology by lowering TNF- α levels [3]. In this poster, we discuss the challenges of treating

patients struggling with comorbid depression and ulcerative colitis. Providers should be attentive and aware of differentiate symptom etiology due to major depressive disorder or due to underlying medical disorders and treat accordingly. Depression in UC provides a unique chance of understanding the interplay between the brain and gut in the pathogenesis of depressive symptoms of the whole population. Further properly conducted research with validated measures are required to determine the role and efficacy of antidepressants in those with UC.

No. 52

A Matched-Control Study on the Impact of Depressive Disorders Following Lumbar Fusion for Adult Spinal Deformity

Poster Presenter: Zenab Jamil

Co-Authors: Harriet Prior, B.S., Ariel Rodriguez, M.D., Afshin E. Razi, M.D.

SUMMARY:

INTRODUCTION: In recent years, depression rates have been on the rise, resulting in soaring mental health issues globally. However, despite this increased prevalence, there is paucity of literature about the impact of depression on commonly performed procedures, such as lumbar fusion for adult spine deformity. Thus, the purpose of this study is to investigate whether patients with depressive disorders undergoing lumbar fusion have higher rates of (1) in-hospital length of stay; (2) ninety-day medical complications; and (3) costs of care. **METHODS:** A retrospective study was performed using a nationwide administrative claims database from January 2007 to December 2015 for patients undergoing lumbar fusion for spine deformity. Study participants with depressive disorders were selected and matched to controls by adjusting for sex, age, and comorbidities. In total, the query yielded 3,706 patients, with 1,286 who were experiencing symptoms of depressive disorders, and 2420 who served as the control cohort. Pearson's chi-square and logistics regression analyses were utilized to calculate ninety-day medical complications while Mann-Whitney *U* test was used to acquire the significance for in-hospital length of stay and costs of care. A *p*-value less than 0.003 was considered

statistically significant. **RESULTS:** The study revealed that patients with depressive disorders had significantly higher in-hospital length of stay (6.0 days vs 5.0 days, $p < 0.0001$) compared to controls. Study group patients were also discovered to have higher incidence and odds of ninety-day medical complications (10.2% vs 5.0%; OR, 2.50; 95% CI, 2.16-2.89; $p < .0001$). Moreover, patients with depressive disorders had to deal with significantly higher episode of care costs (\$54,539.2 vs \$51,645.2, $p < 0.0001$). **CONCLUSION:** This study illustrated that even after controlling for factors such as sex, age, and comorbidities, patients with depressive disorders had higher rates of in-hospital length of stay, medical complications, and costs of care. Thus, this study can aid orthopedists to better treat and inform vulnerable patient populations in order to avoid potential adverse effects.

No. 53

A Case Study: Esketamine Combined With Psychotherapy for Severe Treatment-Resistant Depression After Failure of Intravenous Ketamine

Poster Presenter: Katherine Heflin

Co-Authors: Melissa Blanock, Psy.D., Zachary Herrmann, D.O., Mohamed Elsayed, M.D.

SUMMARY:

Treatment-resistant depression (TRD) is a profound cause of disability with limited therapy options. Evidence supports that racemic ketamine and its (S)-enantiomer esketamine both rapidly ameliorate TRD including in those with suicidal ideation; yet no real-world comparative studies between these isomer mixtures exist. It is also unknown if non-response to one corresponds with expected efficacy of the other. Moreover, even as many effective depression regimens include concomitant psychotherapy and pharmacology, the combination of psychotherapy with esketamine specifically has not been well studied. We present a 34-year-old woman with a recurrent episode of Major Depressive Disorder and three instances of serious suicidal behavior in the past year related to social stressors and intractable temporal lobe epilepsy. This was her second psychiatric hospitalization in a 3-month period. She did not respond to more than two months each of standard treatments of several oral antidepressants,

oral atypical antipsychotics, and an inpatient trial of three doses of intravenous ketamine treatment (with no psychotherapy). She also attempted a 6-week trial of lithium (at therapeutic levels: 0.75 on day 14); due to tremor, this was switched to a lower dose of extended release and subsequently discontinued due to the patient finding the side effect of xerostomia intolerable. She was not a good candidate for electroconvulsive therapy because of cognitive impairment secondary to a lobectomy for temporal lobe epilepsy. In addition, she did not respond to two weeks of standalone inpatient intensive psychotherapy. Given her multiple previous failed attempts at standard therapies, esketamine combined with psychotherapy was started. She received a total of thirteen doses of intranasal esketamine twice weekly (56mg for the first two doses, then 84mg thereafter). Psychotherapy sessions were performed approximately two hours after the administration of esketamine. The therapist incorporated components of Acceptance and Commitment Therapy and Cognitive-Behavioral Therapy. Despite the patient's previous non-response to ketamine, the response to esketamine in combination with psychotherapy was rapid and marked. Her Beck Depression Inventory (BDI) steadily decreased from 42 to 28 in the first two sessions. After thirteen treatments, her BDI had decreased to 23 (a 45% reduction of severity). Her Suicide Ideation and Behavior Assessment Tool (SIBAT) responses also showed consistent improvement. The patient consistently indicated a mild mystical experience in her responses to the mystical experience questionnaire and the 5-Dimensions of Altered States of Consciousness following each therapeutic session. In conclusion, our case suggests that ketamine enantiomers can induce different responses in a single patient. Furthermore, the addition of individual psychotherapy to esketamine, even if not of the psychedelic assisted therapy modality, treatment can potentiate its efficacy in TRD.

No. 54

Presence of Psychiatric Comorbidities Does Not Affect Behavioral Health Outcomes for Patients With Depression Receiving Ketamine Infusions

Poster Presenter: Jamarie Ann Geller, M.D., M.A.

Co-Authors: Christian Smith, Katherine Keith, Nicholas Mischel, M.D., Ph.D.

SUMMARY:

Background: Intravenous racemic ketamine infusions can rapidly and safely reduce symptoms of depression, and there are now hundreds of clinics offering this treatment across the United States.^{1,2} However, the financial and time investment patients are asked to make is significant, there are undesirable side-effects³, and there is risk of relative harm if the treatment is not likely to benefit individual patients. Therefore, there is an urgent need to identify patient-level factors that may contribute to potential response for patients who are often facing severe and/or treatment-resistant depression. **Methods:** This retrospective analysis included 129 patients with a diagnosis of major depressive disorder (MDD) who received ketamine infusions from a community clinic. Baseline patient characteristics, number and type of other psychiatric diagnoses including generalized anxiety disorder (GAD), post-traumatic stress disorder (PTSD), obsessive-compulsive disorder (OCD), and attention deficit hyperactivity disorder (ADHD), and PHQ-9 results were abstracted from chart data and analyzed. Patients were categorized as responders, defined by a final score of less than 10 or over a 50% reduction in score on the PHQ-9 after the index course of infusions, or non-responders. Analyses of variance were also analyzed. **Results:** 35% of patients analyzed carried a diagnosis of MDD only, 39.5% MDD plus one psychiatric comorbidity, and 25.5% with MDD plus two comorbidities. Of those who carried a diagnosis of MDD only, 44.4% were responders, compared to 52.9% with one psychiatric comorbidity, and 60.6% with two. The differences in response between MDD alone and any comorbidity, and MDD alone and two comorbidities were not significant ($p = 0.4$ and $p = 0.37$, respectively). However, there was an association between a greater number of comorbidities and larger reduction in PHQ-9 scores that trended toward significance ($p = 0.07$). The reduction in mean PHQ-9 scores after treatment in patient with only an MDD diagnosis did not differ significantly from that of the group of patients with MDD and any comorbidities ($p = 0.66$) nor was number of comorbidities associated with a significant mean change ($p = 0.9$). A higher

percentage achieved remission in all comorbidity categories than those with MDD alone, except those with MDD and PTSD, and those with MDD, GAD, and OCD. **Conclusion:** Preliminary results indicate that a higher burden of comorbidities may not limit the effectiveness of ketamine in MDD.

No. 55

Does Adjunctive Psychotherapy Predict Reduction in Symptoms for Patients Receiving Ketamine Infusions for Depression?

Poster Presenter: Jamarie Ann Geller, M.D., M.A.

Co-Authors: Katherine Keith, Christian Smith, Cynthia Arfken, Ph.D., Nicholas Mischel, M.D., Ph.D.

SUMMARY:

Background: The availability of ketamine-based treatments for patients with depression and other psychiatric conditions is rapidly expanding. Ketamine and derivatives like esketamine have been studied a variety of contexts, with various routes of administration, and including varying levels of medical and psychological support.¹ It is clear that many patients receive substantial benefits from receiving ketamine as a purely psychopharmacological intervention.² As a novel treatment with many models of administration, discussion continues about the role of psychotherapy in symptom reduction and recovery maintenance for patients with depression.³ This study aims to further our understanding of the role of psychotherapy, offered between infusions sessions, in treatment outcomes. **Methods:** This retrospective analysis includes patients with a diagnosis of major depressive disorder who received ketamine infusions at two connected community clinics in Michigan. Baseline patient characteristics and psychotherapy received were abstracted from chart data and analyzed. Therapy was either provided by on-staff or psychotherapist outside the clinic, after the first infusion of the index course. Patients were categorized as responders, defined by a score of less than 10 or over a 50% reduction in score on the PHQ-9 after the index course of infusions, or non-responders. **Results:** We plan to primarily analyze the difference in response after an index course of treatment (6-8 infusions) between patients who received psychotherapy between sessions, and those

who did not. We will also investigate whether the provision of a preparatory session before the first infusion affect depression outcomes. **Conclusion:** These results will aid in conceptualizing the importance of adjunctive therapy in patients receiving ketamine infusions for depression. They may help guide clinical practice strategies as we continue to investigate various treatment models in community practice settings using ketamine for this novel purpose.

No. 56

Socio-Demographic and Clinical Descriptors of Service Users of a Nascent Gender Clinic: A Cross-Sectional Clinical Audit

Poster Presenter: Ganesh Kudva, M.B.B.S.

SUMMARY:

Background: Transgender individuals seek mental health services for an initial psychiatric assessment to be deemed suitable to subsequently receive gender affirming care. This assessment is often the first time Transgender individuals may be coming into contact with medical care and speaking about their condition. A pilot clinic was opened in early 2022 within a specialist psychiatric center in the Western region of Singapore aiming to conduct assessments for these individuals and address their mental health needs. There is limited data in the Asian sphere of the socio-demographic and clinical descriptors of these individuals, and hence this clinical audit serves to offer an insight into these facets. **Methods:** Socio-demographic data namely assigned gender, identified gender, age, race, and employment status were collected as part of the clinical interview. Beck's Anxiety Inventory (BAI) and Beck's Depression Inventory (BDI) scores were also collected. Qualitative feedback from patients about their lived experience as a Transgender person was also collated. **Results:** Based on our preliminary findings, most participants reported being assigned the male gender at birth and identified as female. All were either in education or employment. Almost all participants satisfied the criteria for Gender Dysphoria. Most also reported low scores on the BDI and BAI. Most participants were referred on for gender affirming hormone therapy. Patients also reported the difficulties they faced in coming out to

friends and family and gaining acceptance from their loved ones in embarking on their transition.

Conclusion: Our preliminary findings suggest that participants seeking psychiatric assessments prior to gender affirming care are mostly high-functioning and report low levels of anxiety and depressive symptoms. It is however noteworthy that a selection bias may exist, in that participants who attend such services may be less impaired functionally and less distressed as those who are unable to attend such services. Further study on a larger sample is thus required. However, this study offers a rare insight into a group that is understudied and underserved in the Asian context.

No. 57

Delayed and Recurrent Presentation of Acute Dystonia in an Adolescent After Single Dose of Haloperidol

Poster Presenter: Seyma Sevinc, M.D.

Co-Authors: Dante Durand, M.D., M.B.A., Raul Poulsen, M.D.

SUMMARY:

Patient is 16-year-old caucasian male with no previous medical history and a past psychiatric history of cannabis and cocaine use disorder, transferred to Child and Adolescent psychiatry (CAAP) inpatient unit after presented to the emergency room (ED) due to violent behavior under a 72 hour hold. Patient was initially brought to the ED by his parent due to agitation and violent behavior towards family members. Pt was noted continue vaping while in the ED and attempted to elope before the medical evaluation. Pt received an emergency treatment order (ETO) haloperidol 5mg, lorazepam 2mg and diphenhydramine 50mg intramuscularly (IM) while in the ED. After medical evaluation was completed and he was given IV hydration, patient was transferred to the CAAP ED for further psychiatric evaluation. On the initial evaluation patient was alert, oriented but guarded, minimizing his substance use. He didn't show any signs or symptoms of psychosis or mood abnormalities and denies Suicidal Ideation/Homicidal Ideation and he was preoccupied about discharge to home. Although the urine toxicology was positive for cannabis, cocaine and benzodiazepines (the last one

likely due to recent ETO), patient continued to deny other substance use except vaping cannabis. During inpatient rounds the patient was found with severe acute cervical torticollis and truncal spasm which resolved with IM Benadryl. His symptoms developed during exercise about 33 hours after the administration of haloperidol. Patient subsequently admitted to CAAP unit for further monitoring due to concerns for possible recurrent dystonia including laryngeal spasms. Pt was placed on diphenhydramine 50 mg. Forty-two hours later initial ETO patient had 2nd dystonic reaction with cervical torticollis which resolved with IM diphenhydramine. Lab work repeated and Creatinine phosphokinase found elevated with a level of 1300 and patient was transferred to the Pediatric emergency room due to concerns for rhabdomyolysis in context of recurrent dystonia. Being that acute dystonia is a medical emergency, patients with risks factors should be monitor carefully in appropriate settings. As we know, that earliest extrapyramidal symptom is acute dystonia which is seen after antipsychotic drug administration. Acute dystonia usually observed within a few hours of dopamine receptor-blocking drugs administration. As per literature we should keep in mind that especially following parenteral administration, dystonia may appear after a delay of several hours to a few days*. A detailed history gathering, and medical work up can help elucidate the risk factors. In this poster, we discuss the challenges and importance of monitoring patients with acute dystonia with risk factors such as recent cocaine use, male gender, young age and dehydration.</p>

No. 58

A Case of Gambling Disorder and Impulsivity During the Treatment of Restless Leg Syndrome

Poster Presenter: Seyma Sevinc, M.D.

Co-Author: Daniel Maass, M.D.

SUMMARY:

A 72-year-old woman with no significant psychiatric history and a medical history of restless leg syndrome (RLS) and hypertension presented to the psychiatric emergency room involuntarily for aggressive behaviors. She was admitted to the inpatient geriatric psychiatry unit due to acute onset

self-injurious behavior and impulsivity. The patient reported being under psychosocial and financial stressors that led to worsening irritability and, ultimately, cutting her wrists with a razor. She expressed regret regarding the suicide attempt and otherwise denied having any depressive symptoms or history of self-injurious behavior. When asked further about her history of impulsive behaviors, she reported starting to gamble about 3 years ago. Her gambling was so severe that she would spend thousands of dollars in minutes at the casino and frequently spent all the money in her bank account. She was prescribed carbidopa-levodopa 25-100 4 times daily by her primary care provider for chronic restless leg syndrome coinciding with the onset of her gambling disorder (GD) and impulsivity. Rotigotine 4mg dopaminergic patch at bedtime was also added to her regimen. This led to concern for possible dopaminergic medication induced impulsivity, irritability, and suicidal behaviors in a patient with no prior psychiatric history. Neurology was consulted and her dopaminergic medications were tapered down and then discontinued; in lieu of this, gabapentin and melatonin were initiated for RLS and she was discharged with outpatient follow up. As per the literature, it is well known that dopamine agonist therapy can induce GD which is characterized by the failure to resist gambling impulses despite severe personal, family, or occupational consequences resulting in reduced quality of life. In this case report, we hope to increase awareness of the potential relationship between dopamine agonist therapy and rare but serious side effects such as impulsive behavior and GD.

No. 59

Stress, Sleep, and Substance Use - the Covid-19 Pandemic's Trifecta of Challenges Faced by Essential Workers in America: An Update

Poster Presenter: Palak Atul Fichadia, M.B.B.S.

Co-Authors: Shirish Patel, M.D., Ivanshu Jain

SUMMARY:

The COVID-19 pandemic was officially declared in 2020 and saw the start of a global paradigm shift in how people live and interact daily. Two years later, even as viable vaccines, treatments, and policy changes have curbed the devastating impact of

COVID-19, the pandemic continues to expose further weaknesses in the American healthcare system. Regarding delivering and accessing mental healthcare services and resources, these areas have seen unprecedented uptake in their demand and usage by all patient populations. People with mental health diagnoses who already face barriers continue to struggle with access and positive outcomes despite greater awareness within America. During the pandemic, many people are at a greater risk of experiencing adverse mental health and substance abuse issues, including people experiencing job loss, parents and children, communities of color, and essential workers. This poster outlines an update on the current prevalence of stress, sleep, and substance use disorder in essential workers through the lens of social determinants of mental health and the impact of the COVID-19 global pandemic within the past two years in the United States of America. As a result of the implications for social workers, we are also encouraged to enhance team collaboration, leading to improved overall team performance and mental health for them. Since these interventions emphasize leadership as a dynamic, interactive group phenomenon rather than the responsibility of just one 'hero' leader, they may reduce the rate of sleep disorders and substance abuse disorders in this population. Additionally, the COVID-19 pandemic provides opportunities for peri/post-traumatic growth for the general population, not just essential workers, throughout the pandemic period. Further analysis is also presented on a causal link between COVID-19 survivors and increased substance use disorders and insomnia rates.

No. 60

Mental Health and Unemployment After Covid-19: Based on National Mental Health Survey in South Korea

Poster Presenter: Ah Rah Lee

Co-Authors: Haelim Lee, Jong-Woo Paik, Sangmin Lee, Jihyun Lee

SUMMARY:

Ah Rah Lee, Jihyun Lee, Haelim Lee, Jong-Woo Paik, Sang Min Lee* *Corresponding author: Sang Min Lee, MD, PhD Department of Psychiatry, Kyung Hee University School of Medicine, Seoul, Republic of

Korea Background: Mental health has deteriorated since the COVID-19 pandemic. The economic crisis caused by COVID-19 has made people lose their jobs. The purpose of this study was to investigate the relationship between mental health and unemployment after the COVID-19 pandemic. We also investigated the other mediating factors between unemployment and mental health.

Methods: 1364 people aged 19 years or older who were economically active before COVID-19 did the nationwide survey: Coronavirus Disease-19 National Mental Health Survey in Korea. Unemployment after COVID-19 and mental health problems such as depression and anxiety were evaluated by the self-reported scales. In addition, sociodemographic factors such as age, gender, education level, marriage, income, working status, and the presence of disease were investigated to analyze the characteristics of subjects. Logistic regression was conducted to find the mediating factors between unemployment and mental health. **Results:** People who had been unemployed after the COVID-19 pandemic ($n=309$, 22.7%) were more likely to have mental health problems: depression and anxiety (All, $p<0.001$). We observed a significant relationship between unemployment after COVID-19 and depressive symptoms (OR=1.63, 95% CI=1.16-2.29) and anxiety symptoms (OR=1.92, 95% CI=1.28-2.88) in the low-income group, while no significant mediation effects in the high-income group. The level of perceived social support had significant mediating effects on the association between job loss and mental health status. **Conclusions:** Unemployment after COVID-19 caused mental health problems like depression/anxiety, especially in low-income groups. The Social economic state is the mediating factor between mental health and job loss after COVID-19. So countermeasures should be prepared to provide social support to those losing jobs during the pandemic. **Acknowledgment:** This research was supported by a grant from the Korea Health Technology R&D Project through the Korea Health Industry Development Institute (KHIDI), funded by the Ministry of Health & Welfare, Republic of Korea (grant number: HC19C0307).

No. 61

Conversion of a Skilled Nursing and Rehabilitation Facility into a Satellite Hospital: An Innovative Response to a COVID-19 Surge

Poster Presenter: Tina Vu, D.O.

Co-Authors: Samantha Hayes, M.D., Theresa Jacob, Ph.D., M.P.H., Abraham Taub, D.O.

SUMMARY:

Background: New York City was among the earliest and hardest hit areas during the COVID-19 pandemic. Prior to the peak of the surge in April 2020, a makeshift hospital was opened to address the growing need of overflow beds in Brooklyn, New York. A rehabilitation center was converted into a satellite hospital with a capacity of up to 425 patient beds in 10 days. Design-Build Approach: Our institution worked in coordination with larger hospital systems and state and local governments, which allowed for a rapid lease of an underutilized structure, influx of supplies, and personnel. Hospital staff were voluntarily redeployed from their assigned services based on reduced need. Outcomes: A total of 204 COVID-19 patients were accepted for transfer to the facility between April 6, 2020, and May 11, 2020. There were no major adverse outcomes and no deaths at the facility. Lessons Learned: When a surge of patients is projected to outnumber the available beds in a hospital, such as during a pandemic, it may become necessary to establish a satellite facility. Creativity with existing spaces, health care infrastructure, and reallocation of available resources, as well as having all stakeholders on board, is imperative. Providing mandatory emergency planning and response trainings to hospital staff and leadership can improve preparedness. By leaning on revised protocols established at the satellite facility during the initial surge, the hospital was able to lease and convert another nursing facility and make it patient-ready in less than one week during the second surge of COVID-19 patients.

No. 62

Better Equipped, Better Care: Empowering Nurses of Today by Fostering Safe Environments Through Improving Mental Health Education and Training

Poster Presenter: Tracey Li Mun Wing

Co-Author: Rochelle Kinson

SUMMARY:

Background Nurses are at the forefront of providing care to individuals with mental illness in various healthcare settings. However, worldwide surveys found that many nurses are inadequately equipped to deal with aspects of mental health and have limited mental health training. We have identified specific resources that can help to enhance nurses' knowledge regarding their responsibilities toward psychiatric patients and to ensure that appropriate patient education regarding their mental health is provided. Method Woodlands Health is a new hospital in Singapore that is in the process of opening in 2023. Psychiatrists, together with nursing and allied health worked together to develop a curriculum for nurses and allied health professionals who would come into contact with patients with psychiatric care needs. The curriculum includes competency frameworks and learning outcomes such as being aware of the acute management of an agitated or suicidal patient, as well as to develop an understanding and management of the basic important psychiatric conditions. It is hoped that through the learning, there would be development of confidence and sensitivity when dealing with such patients. A mental health education survey was conducted anonymously to establish the training requirements. Examples of questions asked included whether staff felt competent managing patients with specific mental health conditions, the types of mental health training they had received in the past, and what type of mental health training they would like to receive. The survey was targeted at nurses and occupational therapists currently working with patients with psychiatric care needs. Results There was a total of 23 responses to the survey, 78.3% of whom were nursing staff. Only 47.8% of staff reported any previous training in mental health. Interestingly, 87% of staff reported an interest to further develop training in mental health, and less than 30% of staff felt competent managing agitated or suicidal patients. Based on the survey responses, we plan to create Tier 1 modules that must be completed by the relevant staff who rotate through the medical psychiatric care unit. Examples of these modules would include suicide risk assessment and management of dangerous and violent behaviour.

Tier 2 modules are modules that have been identified as important to know, such as learning about schizophrenia or bipolar disorder. Modules would be taught via an electronic online platform. In order to enhance the learning of staff, competencies were defined as a combination of skill, abilities, and knowledge needed to perform a specific task. Psychiatrists also plan to conduct regular case discussions in person, to further develop competencies of nurses, and to address any difficulties nurses may face when handling patients with increased mental health needs. Other aspects of evaluation would include online quizzes as well as satisfaction surveys on their current learning.

No. 63

Outcomes of a Community-Based Wellness Screening Tool Administered by Mental Health Professionals and Religious Leaders in the Ketu South in Ghana

Poster Presenter: Rick Peter Fritz Wolthusen, M.D.

Co-Author: Paul Andrä

SUMMARY:

Introduction Ghanaian community members with mental health conditions are usually not identified until their families cannot handle their care at home anymore. Mistrust in medical institutions and (mental) health professionals and an emphasis on institutionalized care, compared to community-based care, are two of the contributing factors. From community-based and global mental health research, we know *why* we should act (for example, early interventions improve the treatment outcomes) and *what* we should do (for example, task-sharing in community settings). *How* any of these activities can be implemented on the community level to decrease the delay of access to evidence-based care remains unclear. **Methods** We used a human-centered design approach to tackle this challenge in the Ketu South Municipality in Ghana. We invited 80 mental health professionals, religious leaders, and service users to participate in this exercise. The participants innovated the so-called *Brain Spirit Desk*, which builds collaboration between mental health professionals and religious leaders. The participants also designed a 9-question wellness screening tool, including four validated screening questions in

Ghana: PHQ-2, GAD-2, one question about suicidality, and CAGE-AID. The participating religious leaders were trained to use this screening tool and administer it by themselves or allow mental health professionals to administer it in their respective institutions. Referral pathways were established for community members who screened positive on the wellness screening tool. **Results** 1065 community members (787 females and 278 males, mean age: 32.42 years) were screened using the wellness screening tool over five months (January to May 2022); 215 of these community members were already connected to mental health clinics in hospitals. 60 community members out of 203 who screened positive on the PHQ-2 were not receiving treatment at the time of screening and were referred for further assessment and treatment. Another 52, 53, and 142 community members were referred for further evaluation and treatment based on their answers to the GAD-2, suicidality, and CAGE-AID screening questions, respectively. **Conclusion** Our activities explored how the delay in access to evidence-based mental health care in the Ketu South Municipality in Ghana can be decreased through a collaborative effort of mental health professionals and religious leaders. The process was guided through principles of a human-centered design approach and enabled the innovation of the Brain Spirit Desk, through which a wellness screening tool was developed. The screening tool identifies potential cases of mental health conditions and refers community members based on the screening results. Importantly, religious leaders' involvement and endorsement built trust in the activities and may allow for timely access to evidence-based mental health care.

No. 64

A Space for Cross-Cultural Learning in Global Mental Health and Social Innovation

Poster Presenter: Rick Peter Fritz Wolthusen, M.D.

SUMMARY:

Introduction In 2018, the Lancet Commission on Global Mental Health (GMH) stated that "all countries can be considered as developing countries in terms of mental health." This statement testified that the treatment gap across mental health

conditions remains unacceptably high regardless of how much money was spent or how many trained mental health professionals offered mental health care in any given country. While this finding had numerous implications, some critics felt that the “business as usual” mentality in terms of teaching (global) mental health to learners might not reduce the treatment gap. Non-traditional ways of creating spaces of empowerment towards mentally healthier communities, focusing on curiosity, thinking outside the box, including non-medical stakeholders, and cross-cultural learning, have been explored recently.

Methods The German-based NGO On The Move e.V. developed the “GMH meets Social Innovation: the HOW matters” curriculum. The European Union funds this program. It enables staff members and students from higher academic institutions in Ghana, Kenya, and Germany from all fields to participate in an 8-week-long annual exchange program. The curriculum enmeshes topics from the GMH and social innovation spaces; each block ends with assignments that are reviewed by experts and peers. All learning objectives are tailored to the product of the exchange program, which is the design of a community-based mental health intervention tailored to the specific mental health need of a self-chosen community. Feedback about the curriculum and the program was collected from 22/25 participants (via online questionnaire: n = 13/16, via online interview: n = 9/9) at the end of the program; 3/25 participants decided not to participate.

Results Our survey results indicate that the participants appreciated the following elements of the program the most: Working with team members from Ghana, Kenya, and Germany (with numerous cross-cultural learning opportunities for all participants) Collaborating with team members from the (non-)health field diversified the perspectives (which is highly important in social innovation) Engaging in meaningful assignment production (e.g., cumulatively, the participants recorded 100+ YouTube videos on diverse topics around mental health, social determinants of health, and culture), and The enmeshment of GMH components with social innovation techniques (which streamlined the implementation of learnings).

Conclusion The program creates spaces for cross-cultural hands-on learning by connecting GMH topics and social innovation approaches. It has the potential to

empower diverse community members to improve the status quo of mental health in their respective communities. Therefore, the educational program may contribute to overcoming some of the barriers in existing mental health systems to reduce the mental health treatment gap through innovative, tailored solutions and advocacy work rooted in communities.

No. 65

The Spell Has Been Broken: 5 Year Long Paranoid Delusions Disappear After Curing UTI

Poster Presenter: Malini Singh

Lead Author: Mohini Gadre

Co-Authors: Bruce Fox, Vijayabharathi Ekambaram

SUMMARY:

Introduction: UTIs have been described in the setting of neuropsychiatric conditions such as delirium, dementia, psychotic and mood disorders. A systematic review found that 88% of articles in this area showed a positive association between UTIs and neuropsychiatric disorders. One hypothesis is that the inflammatory response from infection causes sustained cytokine release that may damage dopaminergic neurotransmission leading to psychosis. This is a case of a geriatric patient with a 5 year history of paranoid delusions whose treatment was unnecessarily delayed due to late identification and treatment of a UTI.

Case Description: Ms. G is a 68 year old Caucasian female with no known psychiatric history admitted on a Grave Disability hold after an arrest for entering strangers’ homes, paranoid and grandiose delusions that she was an FBI agent, and auditory hallucinations. MSE showed impaired memory, attention, and language. Collateral revealed Ms. G’s mental health had steadily declined since 2012 due to suspected abuse in her marriage. Ms. G had a 5 year history of self-neglect, bizarre behavior, delusions and auditory hallucinations. Her decline in memory, increased paranoia regarding her estranged husband and inability to complete ADLs began 3 months prior to her arrest. Prior to last year, Ms. G had intermittent psychosis with depressive episodes and no memory issues between. ED workup including TSH, CT Head, and MRI. UDS showed UA with Leukocyte esterase. ED did not treat her UTI despite testing showing

Coagulase negative Staph infection or perform B12, Free T4, Syphilis, or HIV testing. She began Risperidone 0.5 mg po BID and Mirtazapine 7.5 mg po QHS. Ms. G refused psychiatric medication and was ordered by a judge to involuntarily take IM Olanzapine for each refusal of oral Risperidone, per California Reize. After her IM Olanzapine was increased to 10 mg BID, Ms. G complied with her UA which showed turbid urine, large amounts of leukocyte esterase, Urine WBCs 8 per HPF, and positive for *Pseudomonas aeruginosa*. After receiving IM Olanzapine backups for 5 days, Ms. G took oral Risperidone. During hospitalization, Ms. G showed limited improvement in her delusions with continued refusal of antibiotics. After her Risperidone was increased to 3 mg BID, she agreed to take Levofloxacin and appeared more lucid, pleasant, and no longer delusional. She was started on LAI Invega and discharged. Discussion: This case shows the importance of proper neuropsychiatric evaluation prior to psychiatric admission. Without additional resources to address patients' underlying neurological comorbidities and lack of standardized ED neuropsychiatric screening for the geriatric population, patients may have poorer outcomes, delayed care, and prolonged length of stay. Ms. G may have improved due to her antipsychotics, UTI treatment or both. Here we discuss the challenges of determining the underlying etiology for chronic psychosis in geriatric patients.

No. 66

SSRI/SNRI Induced Reversible Cerebral Vascular Syndrome Causing Subarachnoid Hemorrhage: A Case Report

Poster Presenter: Rastriyata Bhandari

Co-Authors: Syed Amir Shah, Olivia Dahl

SUMMARY:

SSRI/SNRI-induced Reversible Cerebral Vasoconstriction Syndrome (RCVS) represents a group of conditions characterized by reversible multifocal narrowing of the cerebral arteries. Clinically, RCVS typically manifests as an acute-onset thunderclap headache lasting 1-3 hours, with an average of four episodes before resolution three weeks after the initial episode. Dysregulation of cerebral arterial tone can lead to neurological

deficits as strokes, seizure, and reversible cerebral edema are also seen in RCVS. We report the case of a 50-year-old female with a psychiatric history of MDD, anxiety disorder, and nicotine use disorder, and a medical history of migraines (worsening over the preceding 6-12 months despite treatment with galcanezumab and sumatriptan), HTN, asthma, diabetic neuropathy, COPD (on 3L of domiciliary oxygen), and hypothyroidism, who presented with RCVS attributed to SSRI and SNRI-induced serotonergic excess. This patient initially developed a bilateral frontal headache with nausea and chest pain on 8/29/2022. On 9/1, she was transferred to our hospital for worsening, diffuse headache, newly accompanied by blurry vision, photophobia, and nuchal rigidity. At the time of presentation, the patient denied any head trauma and endorsed adherence to sertraline, duloxetine, aripiprazole, pregabalin, estradiol, and levothyroxine; she was not taking any anti-platelets or anti-coagulants. The angiogram indicated likely RCVS, revealing multiple areas of arterial irregularities with mild dilatations of the distal branches of the bilateral MCA and ACA. Her head CT evidenced one of the more catastrophic sequelae, a diffuse SAH. When more common causes of SAH were excluded and lumbar puncture ruled out vasculitis and meningitis, RCVS was suspected and attributed to multiple serotonergic medications: sertraline, duloxetine, and sumatriptan. This patient's sertraline and duloxetine were discontinued to avoid worsening serotonergic vasoconstriction. For treatment of MDD, aripiprazole and pregabalin were continued. Within 2 days of discontinuing duloxetine and sertraline, the patient's symptoms resolved, and she was discharged one week after she'd been transferred for treatment. This case illustrates the need to exercise caution when prescribing multiple serotonergic agents, such as SSRIs, SNRIs, and sumatriptan. It also highlights the need for heightened clinical suspicion for RCVS. A 2016 study estimates the incidence of RCVS hospitalizations of three per one million adults (3), although the true incidence of RCVS is likely much higher, since this is a diagnosis of exclusion infrequently included in medical curricula (4). This case report adds to the still-limited body of evidence describing serotonergic-induced RCVS leading to SAH, and outlines the successful management of RCVS by discontinuing SSRI/SNRI treatment while

continuing an adjunctive antipsychotic and pregabalin.

No. 67

Inpatient Hospital Course and 3 Month Follow-Up of Anti-NMDA Receptor Encephalitis: A Case Report and Literature Review

Poster Presenter: Harman Deol

Lead Author: Harman Deol

Co-Author: Nancy Kerner, M.D.

SUMMARY:

Ms. A is a 23-year-old female with no significant prior psychiatric history and medical history significant for Raynaud's disease. She was at her usual state until she experienced headaches progressing in intensity and frequency for 6 months. She then developed a severe headache and was found disoriented and wandering in the street 10 hours later. Ms. A underwent neurologic evaluation at a local hospital and was ultimately psychiatrically admitted. She was discharged on a regimen of aripiprazole, clonazepam, benzotropine, and hydroxyzine. Five months later, she was brought back to an emergency department (ED) at an academic medical center. In the ED, Ms. A exhibited decreased speech output, blank staring, grandiose delusions, disorganized thought, intermittent agitation, and cognitive deficits whereas her neurologic workups were unremarkable. Again, Ms. A was psychiatrically admitted and placed on 1:1 close observation for her unpredictable risk behaviors. She was started on a regimen of olanzapine, chlorpromazine, valproic acid, and lorazepam to manage her complex psychiatric symptoms and behaviors. Laboratory results showed positive serum and CSF anti-NMDA receptor antibody and she was transferred to the neurology unit with a diagnosis of anti-NMDA receptor encephalitis. CT abdomen/pelvis was negative for teratoma suggesting primary autoimmune etiology. Patient received IVIG and IV methylprednisone for 5 days with some improvement in behavioral symptoms, however, continued to show fluctuations in mental status, developed dysautonomia, and intermittent agitation. Rituximab infusion was performed with improvement in mental status and autonomic stability. She was discharged on tenofovir, valproic acid 1750mg total daily dose, and lorazepam

1mg nightly with plan for a second rituximab infusion 2 weeks after discharge and psychiatric follow up. Patient presented for outpatient clinic intake 3 months later with complaints of visual hallucinations, anxiety, panic attacks, depressive symptoms, and memory issues. Anti-NMDA receptor encephalitis is a relatively newly discovered neuropsychiatric illness. The current literature, majority case reports, focuses on recognizing the complex clinical presentation of the disease, a combination of psychiatric and neurologic symptoms, to reduce time to diagnosis and treatment. While immunologic treatment is generally effective, the long term neuropsychiatric sequelae of the disease, especially psychosis, perception disturbances, and mood symptoms, have not been studied longitudinally. From the case described above, it is evident that neuropsychiatric symptoms can persist greater than 3 months following initiation of immunologic treatment. The recurrence and relapse rate after the initial treatment remains unclear, which warrants clinical and research attention to study neuropsychiatric symptom persistence and effective neuropsychiatric treatment regimen for anti-NMDA receptor encephalitis.

No. 68

Mail Order Mania: An Induction of Mania While Seeking Gender Affirming Care Online

Poster Presenter: Max Rubenstein, D.O., M.P.H.

Lead Author: Samuel Polhemus

SUMMARY:

"D" is a 19 yo AMAB (assigned male at birth) (they/them/he/him) person with a past psychiatric history of depression and gender dysphoria who presented to the inpatient psychiatric unit with new onset mania and psychosis, in the context of self-medicating with online supplements (unknown ingredients, advertised to be feminizing) in an effort to facilitate his own gender transformation. While inpatient his psychiatric symptoms initially improved without medications (likely due to the cessation of exogenous supplement use) but then plateaued, requiring a 9-day hospitalization on a regimen of lithium, risperidone and mirtazapine for full stabilization. Whether the supplements induced a manic episode or unmasked an underlying bipolar

disorder remains unclear: what is clear is that his efforts to transition discreetly and independently led to an extreme and potentially dangerous outcome. He reported his main barriers to care being a general lack of resources and social deterrents from societal norms. Thus, his treatment plan was adjusted to bolster his support network and delineate clear and available treatment options for his transitional needs. In this poster we explore the challenges and importance of gender affirming care and its impact on mental health in the setting of ever-growing restrictions.

No. 69

Evaluating the Association Between the Covid-19 Pandemic and Catatonia Diagnoses: A Retrospective Analysis

Poster Presenter: Lucille Schiffman, D.O.

Co-Authors: Max Rubenstein, D.O., M.P.H., David Matuszewski, Nicholas Sloan, Corey Wasser

SUMMARY:

Background: Catatonia is a complex neuropsychiatric syndrome characterized by a constellation of motor and behavior disturbances. Contributing factors include primary psychiatric disorders, underlying medical conditions, acute medical illness and stress. There are several potential biological pathways that infections with SARS CoV-2 could contribute to the development of catatonia. We hypothesize that there was an increase in the incidence of catatonia diagnoses during SARS CoV-2 pandemic. **Methods:** A retrospective chart review of patients at HCA Healthcare facilities to find the incidence of catatonia from January 2020 to June 2021 (pandemic) versus January 2018 to June 2019 (pre-pandemic) by searching EMR for inclusion of ICD 10 codes for catatonia diagnoses. **Results:** Retrospective patient records were collected for incidence of catatonia within the aforementioned dates from 152 facilities utilizing the HCA data warehouse. A total of 5,458 patients met diagnostic criteria. Of those, 978 were excluded due to positive toxicology screenings leaving 4,480 patients. Admissions with a positive toxicology screen for amphetamines, cocaine, hallucinogens, opioids or ICD coding for drug or alcohol use disorder were excluded from the final sample reported in this study in order to try to limit

the cases to those that could be COVID related. While symptoms of catatonia can be associated with the use of psychoactive substances, there is concern for confounding of diagnosis in the presence of intoxication and withdrawal symptoms. Of the 4,480 patients, 1,676 fell within the pre-pandemic time frame and 2,804 were within the pandemic time frames. The data collected in this retroactive chart review suggests that catatonia diagnosis during the pandemic increased by approximately 77% (1.77 (1.67-1.88) p-value = <0.01; table 4), in a population whose demographics were simultaneously found to be largely unchanged. The incidence increased from 6.98 to 12.35 per 100,000 patients during the pandemic. **Conclusion:** Catatonia is an under-diagnosed phenomenon in part due to the multitude of overlap in presentation with other diagnoses. An accurate diagnosis is particularly important as the appropriate treatment regimens are often contradictory between the various conditions, and improper treatment can have dangerous sequelae. If widespread rates of COVID-19 infection - alongside increasing social isolation and diminished access to care associated with the pandemic - are subsequently increasing the incidence of catatonia, it is imperative that we take measures to improve the validity and reliability of the approach to evaluating and addressing these presentations in the clinical setting.

No. 70

A Case of Late Onset OCD After an Upper Respiratory Infection

Poster Presenter: Michael Nadeem Kandalaft, M.D., M.S.

Co-Authors: Jordan A. Shull, M.D., Kristin Nicole Budd, M.D.

SUMMARY:

Background: There is evidence suggesting the immune system has a role in the development of obsessive-compulsive disorder (OCD) after a respiratory infection in children, specifically known as pediatric autoimmune neuropsychiatric disorders associated with streptococcal infections (PANDAS) or pediatric acute onset neuropsychiatric syndrome (PANS). Late/adult-onset OCD is relatively rare and despite the link between inflammation and child

onset OCD, there are limited studies on adult-onset OCD after respiratory infections. Here we present a case of late-onset OCD occurring after an upper respiratory infection (URI). Case Presentation: A 35 year old Caucasian female with a history of hypothyroidism, vitamin D deficiency, bipolar disorder, and anxiety disorder presented to a large psychiatric facility on a voluntary basis due to worsening mood lability, obsessive thoughts, repetitive mannerisms, and dangerous behavior despite adequate psychiatric follow up in an outpatient setting. Her symptoms began 4 months prior after a URI successfully treated with antibiotics. She had been tested twice for COVID-19 and was negative both times. Her outpatient psychiatric medication regimen included citalopram 20 mg/day, risperidone 2 mg/day, and mirtazapine 15 mg/day. Since the URI, the patient reported recurrent obsessive thoughts, for example the reported thought of "I need to go on a drive with my mom", as well as associated compulsive rituals such as grabbing the steering wheel while her mother was driving. The patient denied having current or past tics. She denied persistent depressed mood except in association with her distressing OCD symptoms. Standard medical workup and MRI brain with and without contrast were noncontributory. Neuropsychological testing showed impairments in visuospatial skills and visual memory and executive dysfunction, suggesting frontal, parietal, and temporal lobe involvement. The patient was started on escitalopram 20 mg po qAM for OCD along with N-acetyl cysteine 600 mg po qAM and qHS for OCD augmentation. Risperidone 1mg po qAM and qHS was continued for mood stability and OCD treatment augmentation. Her symptoms improved with this regimen and she was discharged after five days in the hospital. She reported improvement in her symptoms with her medication regimen and was discharged after five days in the hospital. She was also given recommendations for additional autoimmune antibody workup including anti-DNAse B. Conclusions: This case demonstrates the potential for adult-onset OCD following infection and the value of a complete medical history during psychiatric hospitalization. With the relative rarity of adult-onset OCD, further studies are warranted to determine the treatment and mechanism of pathology. Further neuroimaging research and characterization of this

patient and others may help to elicit the answers towards the mechanism of pathology and the optimal medication and treatment regimen for late-onset OCD.

No. 71

Comorbid Opioid Use Disorder in Body Dysmorphic Disorder

Poster Presenter: Jeffrey Kim, M.D.

Co-Authors: Gurtej Singh Gill, M.D., Souparno Mitra, M.D.

SUMMARY:

Body Dysmorphic Disorder (BDD) is a severe and common disorder that consists of distressing or impairing preoccupation with nonexistent or slight flaws in one's physical appearance. People with BDD typically describe themselves as looking ugly, unattractive, deformed, or abnormal, whereas in reality they look normal or even very attractive. Mr. X is a 31 year-old male with history of Opiate (heroin, oxycodone) use disorder currently on maintenance (Buprenorphine-Naloxone) treatment. On admission, urine toxicology was positive for opiates and other drugs. CIWA score was 11. He was started on Lorazepam taper, Mirtazapine, Fluoxetine, and was started on Suboxone soon after. His cravings decreased and he was admitted for Rehab. He reports that anxiety associated with his "body image" related to ears, shape of head, eyebrows since he was in high school which made him "feel uncomfortable" going to school and concentrating in his classes. His coping mechanism was covering his head with hats, shaving eyebrows, substance use, and receiving an otoplasty. According to Houchins et al (2019), alcohol is the predominant substance used in BDD. It is interesting to note that only 6% of BDD patients had Opioid Use Disorder, but as this case demonstrates, can be a debilitating comorbidity that raises the risk for suicidality or hospitalization. However, little research has been done on the treatment of OUDs in patients with BDD or on the treatment of BDD in patients with an SUD, and this is an area of research that could benefit the modern population greatly.

No. 72

The MSBI Psychiatry Residency Burnout Study: Assessment of Burnout Rate and Contributing Factors Across PGY1 and PGY2 Years

Poster Presenter: Alexa Rivera, M.D.

Co-Authors: Quentin J. Reynolds, M.D., Daniel Safin, M.D.

SUMMARY:

Background: The Maslach Burnout Inventory (MBI) can be a useful tool in determining burnout in resident trainees¹ but translating the identified burnout scale to actionable items has been a challenge for residency programs². The purpose of the IRB-approved, Mount Sinai Beth Israel (MSBI) Psychiatry Residency Burnout Study is to assess for burnout themes through quarterly focus groups about burnout over the course of the academic year in conjunction with associated aggregated MBI scores by cohort (PGY1 and PGY2), with the hopes of developing potential actionable items to combat burnout. The hypotheses of this branch of the study aims to 1) evaluate if themes are translational across the academic years, and 2) compare average rates of burnout between PGY1 and PGY2 classes³. Methods: From July 1, 2022 to June 1, 2023, PGY1 and PGY2 residents from the MSBI Psychiatry Residency were asked to complete self-administered MBI over the span of the academic year at quarterly intervals. The residents who completed the MBI would participate in a cohort specific 45-min focus group on burnout led by co-investigators which were repeated in the same quarterly intervals. The series of questions included how they identified burnout with specific examples and perspectives⁴, their definition of burnout, and topics similar to themes expressed in the self-administered MBI. The focus groups were audio-recorded and analyzed for thematic analysis. Results: Data collection and analysis is ongoing. MBI completion and subsequent participation in the first focus groups by PGY class: PGY1, n=10, 76.9%; PGY2, n=11, 84.6%. The results of the MBI were compared by individual question and domain: Occupational Exhaustion (OE), Depersonalization (DP) and Personal Accomplishment (PA), and by PGY-level. Both cohorts (PGY1 and PGY2) met criteria for Moderate levels of burnout based on the averaged scoring with no statistically significant differences across the individual questions or domains. Textual

data from the first focus groups of recordings were analyzed and classified into three primary themes: General Maslach themes, Positive Maslach themes and Actionable themes. On analysis, PGY1s unprompted, more readily denied feeling burnt out despite the results from the MBI. In the Maslach themes, occupational exhaustion and lack of professionalism were brought up more frequently in the PGY1 group, while the PGY2 group more readily identified feelings of helplessness. In both focus groups, the same Positive Maslach themes of increasing patient interaction and positive reinforcements from staff and supervisors were voiced as reasons that lead to fulfillment. Conclusion: The rates and severity of burnout are consistent across cohorts, however the specific themes expressed in focus groups were different in comparison to the MBI scores. Positive themes were consistent across both cohorts which could lead to possible actionable items to address burnout longitudinally.

No. 73

Self-Reported Physical Health Ratings and Psychiatric Symptoms in an Outpatient Cardiology Sample

Poster Presenter: Mayur Patel, M.D.

Co-Authors: Meghan Oswald, M.D., Aatman Makadia, M.D., Joanna Stanczak, M.D.

SUMMARY:

Background: Research has shown that personality factors show a link with patients' physical health (Srivastava & Das, 2015). There is also a growing collaboration between medicine and mental health as many believe that medical outcomes are affected by mental health issues and vice versa. For our study, we investigated this relationship within a cardiology outpatient clinic (non-psychiatric) sample. Methods: 184 patients waiting to be seen in an outpatient cardiology clinic completed SPECTRA: Indices of Psychopathology, a broad-spectrum measure of psychopathology and a rating of their own general physical health. They completed an item asking them "In general, would you say your health is currently..." and they could answer in Likert-style format ranging from 1 (excellent) to 5 (poor). Results: Results show that better self-reported ratings of physical health

were related to healthier scores on the SPECTRA's psychosocial functioning and lower scores of depression, anxiety, social anxiety as well as the SPECTRA's general psychopathology index. Conclusion: These results show the link between psychiatric symptomatology ratings and how non-psychiatric patients rate their own general physical health. The results indicate the need to assess underlying psychiatric problems when treating patients for potentially chronic cardiovascular problems.

No. 74

Symptoms Related to Psychological Distress in the Work Environment During the Pandemic

Poster Presenter: Helen Gomez

Co-Author: Armando Camino, M.D.

SUMMARY:

Background: The COVID-19 pandemic significantly affected fundamental aspects of people's well-being, such as income, employment modality, access to education, and emotional state. Individuals who continued to carry out work activities presented alterations at the mental level such as anxiety, stress and sleep disorders. **Method:** An observational, cross-sectional, descriptive and analytical study design was carried out in order to identify patterns of present symptoms related to psychological discomfort in the work environment during the pandemic in workers of a company in the city of Quito. The evaluation of present symptoms related to psychological distress was performed using the Derogatis' Questionnaire (SCL-90-R). 161 patients participated (51.6% male and 48.4% female.) The descriptive analysis of the quantitative variables was carried out using measures of central tendency and dispersion, in the case of qualitative variables, frequencies and percentages were used. Inferential analysis was performed using Pearson's Chi square. Similarly, the Odds Ratio was used as a measure of risk association between dichotomous variables. **Results:** When comparing the means between the male and female genders, a significant difference was observed ($p=0.03$), with the score being lower in the male gender than in the female gender, with a difference of 0.14 points in the index of symptomatic discomfort (IMSP). When comparing the means

between the male and female genders, a significant difference was observed ($p=0.02$), with the score being lower in the male gender than in the female gender, with a difference of 0.18 points in the global severity index (ISG). Regarding symptoms, it was found that 31.7% ($n=51$) registered positive symptoms for phobic anxiety, the remaining 68.3% ($n=110$) did not present this symptom. Of the total number of interviewees, 13.7% ($n=27$) were positive for somatizations and 86.3% ($n=139$) were not. When comparing the means of the global severity index (GSI) by work area, no significant differences were found in the compared groups ($p=0.78$). Regarding the comparison of means of the Total Positive Symptoms (TSP) by work area, no significant differences were found ($p=0.94$) when comparing the groups. **Conclusions:** In the present study, it was found that phobic anxiety and somatization were the symptoms with the highest percentage in the study population. Like similar investigations, significant differences were found in ISG, TSP and IMSP between males and females. In relation to the variables level of education, marital status and area of work in the company, no differences were found.

No. 75

Ethics and Allyship in LGBTQ+ Healthcare: Reducing Disparities Through Innovative, Inclusive Practices

Poster Presenter: Zachary Mark Simpson, M.S.

Co-Author: Britta Ostermeyer

SUMMARY:

Lesbian, gay, bisexual, transgender, and queer (LGBTQ+) patients have been historically underserved by the United States healthcare system and are resultingly disproportionately affected by mental health and substance use concerns. Disparities in the incidence of mental health problems in this population require inventive solutions, but clinicians must be aware of the unique mental healthcare needs of this population in order to implement them. Clinicians have a responsibility to educate themselves on best practices for LGBTQ+-affirming care; the central tenets of medical ethics can be used as a conceptual framework for thinking about and subsequently implementing innovative and inclusive mental health

practices for this patient population. For the initial literature review, OVID Medline was used as a search engine; search terms focused on items related to sexual and gender identities as well as healthcare delivery. Results are summarized in five tables and cover the following overarching domains: using appropriate terminology, understanding LGBTQ+ health disparities, implementing inclusive intake forms, visible and non-visible displays of allyship, and eliciting a sexual history. Inclusive strategies to promote and display LGBTQ+ allyship and support within healthcare environments is a critical component to recalibrating medicine's relationship with this marginalized patient population and can help improve health outcomes and reduce systemic disparities in healthcare. Reducing healthcare disparities requires institution-level as well as practice-level interventions as well as individual clinician resolve to implement appropriate changes. The chief aims of this poster are as follows: 1) educate mental health providers on the health disparities in the LGBTQ+ population; 2) provide clinicians with research-based tools to enhance healthcare delivery to LGBTQ+ patients; 3) provide an overall ethical framework that providers can use to conceptualize the need for innovations in healthcare delivery and subsequently implement inclusive strategies into their practices. The strategies discussed herein represent a culmination of innovative ideas gathered from cross-disciplinary studies on healthcare delivery for LGBTQ+ patients, providing mental health clinicians with consolidated resources to enhance their respective practices and work to reduce health disparities for this patient population. </p>

No. 76

Association Between Total Sleep Time and Depression: Findings From a Community Health Survey

Poster Presenter: Jihyung Lee

Co-Author: Seung-Chul Hong

SUMMARY:

Background and Objective This study aimed to investigate the correlation between total sleep time and the Patient Health Questionnaire (PHQ-9), total sleep time and Body mass index (BMI), total sleep

time and income. **Methods** We used data from the Community Health Survey conducted by the Korea Center for Disease Control and Prevention in 2018. A total of 228340 participated in this nationwide survey. Total sleep time was divided into 4 groups and one-way analysis of variance (one-way ANOVA) was used to compare the mean values of PHQ-9 of each group. **Results** In total, 223334 respondents were included in the study. Based on a one-way ANOVA, the PHQ-9 score was lowest in the group of total sleep time of 7 to 9 hours and highest in the group of total sleep time less than 5 hours. The BMI score generally decreased as the total sleep time increased. However the difference between the BMI score of the group of total sleep time less than 5 hours and 5 to 7 hours was not statistically significant. ($p=0.994$) When the household income was compared between groups, the income was highest in the group of total sleep time 5 to 7 hours and the lowest in the group of total sleep time less than 5 hours. **Conclusions** PHQ-9 score tends to decrease with increasing total sleep time but when the total sleep time was more than 9 hours PHQ-9 score increased instead. Several factors including depression, psychosocial factors may contribute to the correlation between PHQ-9 score and the total sleep time. BMI decreased with increasing total sleep time. Household income was higher with the total sleep time within 5 to 9 hours than the total sleep time less than 5 hours and more than 9 hours.

No. 77

Mirtazapine-Induced Nightmares in a Middle-Aged Female

Poster Presenter: Parveen Kaur Dhillon, M.P.H.

Lead Author: Nicholas Kotsyubko, M.D.

Co-Author: Sara Abdijadid, D.O.

SUMMARY:

Introduction: Mirtazapine is an atypical antidepressant that works as a presynaptic alpha 2 receptor antagonist, upregulating serotonergic and noradrenergic transmission, as well as postsynaptic 5HT₂, 5HT₃ blockade, and antagonism at H₁ receptors. It can improve sleep in depressed patients by reducing sleep latency, increasing total sleep time, and specifically increasing rapid eye movement (REM) sleep. Nightmares occur during REM sleep.

Therefore, if mirtazapine can increase REM sleep this could increase the likelihood of nightmares in certain patients. Prolonging the amount of time spent in this stage of sleep may increase patients' probability of experiencing a nightmare. Here, we describe a case of a middle-aged female who developed frightening nightmares shortly after she began taking low-dose mirtazapine, ultimately leading to discontinuation of the medication, which quickly led to the resolution of her nightmares. Case Description: Patient is a 45-year-old Caucasian female with a history of severe major depressive disorder, unspecified anxiety, and cannabis use disorder who had been stabilized on high dose venlafaxine 225mg QAM and 150mg QHS for depression and trazodone 100mg. In early 2022, the patient's appetite, sleep, and mood worsened due to exacerbating psychosocial stressors. Patient was agreeable to a trial of mirtazapine 7.5mg P.O. QHS to address her depressive mood and insomnia, working in synergism with venlafaxine. Shortly after starting mirtazapine, the patient reported severe, distressing, hypersexual nightmares which occurred nightly. Results: Patient was asked to discontinue the scheduled mirtazapine 7.5mg P.O. QHS, after which the nightmares gradually improved and on the third day of cessation, the nightmares had completely resolved. Discussion: The acute onset of nightmares after starting mirtazapine, daily recurrence of nightmares, and the subsequent cessation after medication discontinuation, indicates potential temporal relationship between the two. There are five other cases of mirtazapine-induced nightmares that have been previously discussed in the span of 15 years (2006-2021). While this case is not a novel occurrence, it is still quite rare and there is still much to be learned about this phenomenon. In four of these cases, patients reported nightmares at a dose of mirtazapine 15mg, whereas in the 5th case, the patient was taking 7.5mg mirtazapine, which is also the dose our patient was on when the nightmares began. This demonstrates that nightmares are likely a dose-independent effect of mirtazapine. Further studies should explore the mechanism of action of mirtazapine in relation to these experienced nightmares. One thought is that it could be related to increasing REM sleep as in bupropion, which has a well-known side effect of vivid dreams and nightmares. It is important to determine a cause of this unique phenomenon as disturbed sleep could

lead to medication noncompliance, further exacerbating mental illness.

No. 78

The Effect of Intervention Using an Emotional Recognition Coaching Companion Robot on the Elderly People With Depression

Poster Presenter: *Kyungmim Kim*

Co-Authors: *Haran Jung, Jye Heon Song, Yuran Jeong*

SUMMARY:

Background: During the COVID-19 pandemic, care for the elderly in the community was greatly limited. Accordingly, the demand for alternative community care have increased to cope with changing situations. In this study, we tried to find out whether the companion robot improved mood state and related problem in depressive or isolated community dwelling elderly. **Methods:** For 186 community dwelling elderly who have received social welfare service due to depression or social isolation, we provided companion robot that could support their daily living and allow them enjoying entertainment. The robot was equipped with special program that could recognize and respond to the participant's own emotion. It was part of behavioral activation techniques which is one of powerful treatment for depression. The self-report questionnaires were used to measure changes in cognitive function, depression, suicidality, loneliness, resilience and satisfaction of life. Outcomes were measured before using companion robot and after 3 months, and we compared them. **Results:** The elderly using companion robot for 3 months showed improved cognitive function (45.7% to 30.1%), depression (10.29±2.71 to 9.05±2.86, p<0.001), suicidality (15.52±6.19 to 9.25±6.24, p<0.001), and loneliness (51.73±11.38 to 49.81±10.26, p=0.033) in the self-report questionnaire. Resilience (15.89±5.82 to 16.04±4.56, p=0.749) and satisfaction of life (14.59±6.89 to 15.13±5.93, p=0.246) were also improved but not reached significance. **Conclusion:** These findings showed that the use of companion robot with emotional recognition coaching program could help improve depression, cognitive function, loneliness and suicidal ideation. In particular, this effect was also useful for those who were diagnosed with depression. Also if we can put more techniques

of behavioral activation programs into robot, it could be useful in community care for depressive and isolated elderly.

No. 79

The Effect of Covid-19 Pandemic on Depression and Suicidal Ideation in Korean Community Dwelling Elderly

Poster Presenter: Kyungmim Kim

Lead Author: Bo-Hyun Yoon

Co-Authors: Haran Jung, Hyunju Yun

SUMMARY:

Background: The impacts of the coronavirus disease of 2019 (COVID-19) pandemic on mental health have been relatively severe. This study examined the influence of the COVID-19 especially on depression and suicidal ideation in community-dwelling elderly in Korea. **Methods:** Data were employed from a survey on elderly mental health in Jeollanam-do (southwest province in Korea). A total of 2,423 elderly were recruited from 22 counties in Jeollanam-do between April and October 2021. We used self-reported questionnaires, including sociodemographic factors, COVID-19 related stress, suicidal ideation, Geriatric Depression Scale-Short Form Korean Version (GDS-SF). Logistic regression was performed to examine the factors on depression and suicidal ideation. **Results:** Of the 2423 subjects, 622 (25.7%) reported depressive symptoms and 518 (21.4%) reported suicidal ideation. The multivariate logistic regression analysis revealed that living alone, poor perceived health status, the worry of COVID-19 infection and restriction of daily activity due to COVID-19 pandemic were significantly associated with depression. Male sex, poor perceived health status, disability in house chores and depressive symptom are risk factors for suicidal ideation. **Conclusion:** These findings showed that increased risk factor for depression and suicidal ideation in community dwelling elderly during COVID-19 pandemic. We confirmed that feelings of isolation and negative perception of health were risk factors on depression in community dwelling elderly in the context of the COVID-19 pandemic. Also male, poor self-perceived health status, difficulty of independent living and worry and depression are

increased the risk of suicidal ideation among the elderly.

No. 80

Virtual Care for Anxiety Reduction: E-Health After Covid-19 Pandemic

Poster Presenter: Vidal Ripalda Fernandez

Co-Authors: Carmen Moraga de la Torre, Manel

Montserrat Martínez, Marta Domínguez Del Campo

SUMMARY:

Anxiety disorders are one of the most prevalent psychiatric disorders worldwide. According to the latest WHO report published in March 2022 there has been a significant increase in anxiety and post-traumatic stress symptoms resulting from the Covid-19 pandemic. An increase in symptoms such as: low mood, insomnia, stress, anxiety, anger, irritability, emotional exhaustion, depression and post-traumatic stress symptoms related to the Covid-19 pandemic has been observed. In Spain, most cases of anxiety are first detected in primary health care. Several studies agree that currently more than 30% of consultations in primary health care are related to anxious symptomatology. As a non-pharmacological treatments for anxiety control specific interventions are used, such as: [5820] Anxiety reduction; [6040] Relaxation therapy. In recent years, due to the Covid-19 pandemic, face-to-face nursing interventions have had to be modified to virtual sessions. On the other hand, the facilities that this modality can generate could be an advantage for some sectors of the population. For this reason, the need to evaluate the equivalence of both modalities arises. The aim is to compare the equivalence, in terms of effectiveness, of an anxiety management program in virtual modality with respect to the face-to-face modality in people attending in Primary Health Care. This study is a quantitative study of equivalence, by means of a randomized controlled experimental pilot study, carried out in a sample of the population attended at Parc Sanitari Sant Joan de Déu, a reference center in mental health care in Spain. Among the variables extracted, the "anxiety level" will be evaluated through the Hamilton Anxiety Rating Scale and complementarily with specific Nursing Outcomes Classifications; the consumption of Benzodiazepines will be evaluated through the Defined Daily Doses

(DDD) of Benzodiazepines. The intervention consists of 5 sessions lasting 1.5 hours in which different relaxation techniques will be used: Diaphragmatic breathing; Jacobson's progressive muscle relaxation; Schultz's autogenic relaxation; and, finally, Mindfulness. At the end of the group program, the variables mentioned above, as well as satisfaction with the intervention, will be reevaluated during the following three months.

No. 81

Combining a Stellate Ganglion Block With Prolonged Exposure for PTSD: A Nonrandomized Clinical Trial

Poster Presenter: Jennifer Hein, M.D.

Co-Authors: Alan Peterson, Casey Straud, Alexander Kaplan

SUMMARY:

Intro: Trauma-focused therapies such as Prolonged Exposure (PE) and Cognitive Processing Therapy (CPT) have become first-line treatment approaches for veteran and active duty populations with Posttraumatic Stress Disorder (PTSD). However, both PE and CPT are often associated with high dropout rates, limited tolerability, and temporary symptom exacerbation. Stellate ganglion blocks (SGBs) as monotherapy have been used for the treatment of PTSD with promising results. SGBs are thought to reduce symptoms by temporarily blocking sympathetic arousal and physical reactivity associated with trauma reminders (Lipov et al., 2013; Summers & Nevin, 2017). Since PE deliberately encourages patients to approach feared trauma reminders, the greatest potential for SGB may be to pair it with trauma-focused psychotherapy. Method: The aim of this nonrandomized clinical trial was to evaluate the potential safety and benefits of an SGB combined with massed PE for the treatment of PTSD. Massed PE consists of daily 90-minute sessions over the course of 2 weeks and is considered non-inferior to typical spaced PE (Foa et al., 2018). A single SGB (with 6.5 mL of 0.5% ropivacaine) was given between sessions one and two to ensure that it was provided after the treatment rationale and prior to beginning exposure therapy. Eligible participants were active duty or retired military members who met the diagnostic criteria for PTSD based on the Clinician

Administered PTSD Scale for *DSM-5* (CAPS-5). The primary outcome measures were the CAPS-5 and the PTSD Checklist for *DSM-5* (PCL-5) administered at baseline and 1- and 3-month follow-up points. Results: Twenty participants were screened for eligibility, of which 12 active duty service members were enrolled, and 11 (91.7%) completed the treatment protocol. Clinically significant change on the PCL-5 (≥ 10 -point reduction) occurred for 90.9% of participants at the final treatment session, and 80% and 87.5% of participants at the 1- and 3-month follow-ups respectively. Additionally, at the 1- and 3-month follow-ups 50.0% and 87.5% respectively no longer met diagnostic criteria for PTSD based on the CAPS-5. Adverse events reported for the combined treatment were consistent with those previously reported for SGB and PE monotherapies. Conclusion: The results of this trial provide initial support for the safety (no serious adverse events), feasibility (91.7% completion rate), and benefits (90.9% demonstrated clinically significant change). This combination also appears to have large additive benefits. As monotherapy, recent studies have reported a 13-point reduction of symptoms with SGB and a 14-point reduction of symptoms with massed PE based on the PCL-5 (Rae Olmsted et al., 2020; Foa et al., 2018). In this trial, combined SGB and massed PE resulted in a 32-point reduction on the PCL-5. By reducing psychophysiological reactivity, the SGB may have helped participants remain in the exposures longer and engage more deeply with trauma memories.

No. 82

Diagnostic Utility of Four Abbreviated Versions of PTSD Checklist for DSM-5 in Adult Psychiatric Outpatients

Poster Presenter: Sohn Boyoung

Co-Authors: Seungwon Cho, M.D., Kyung Seu Yoon

SUMMARY:

Background: The PTSD Checklist (PCL)-5 includes 20 questions corresponding to the DSM-5 PTSD Criteria. Abbreviated versions were developed in prior studies. We tested diagnostic utility of four brief scales from the Korean translation of PCL-5: two four(S4, A4)-, one six(A6)-, and two eight(A8)-item versions among treatment-seeking adults at a

psychiatric outpatient unit of a university-affiliated hospital in South Korea. Methods: The sample comprised treatment-seeking adults diagnosed with PTSD (n = 97) and other psychiatric disorders (n = 130). The NSESSS-PTSD(National Stressful. Events Survey PTSD Short Scale), the PTSD Checklist-5 (PCL-5), the Beck Depression Inventory-II (BDI-II), and the Beck Anxiety Inventory (BAI) were used to determine validity and ROC curve analyses of the brief versions of PCL-5. Results: Each version had excellent convergent validity with NSESSS-PTSD (range of r = 0.76-0.83, all p < 0.001). Optimal cut-off scores of each version include 6 for S4 (specificity 0.89, sensitivity 0.81); 8 for A4(specificity 0.85, sensitivity 0.83); 11 for A6 (specificity 0.88, sensitivity 0.86); 16 for A8 (specificity 0.87, sensitivity 0.87) Conclusion: This study confirmed excellent diagnostic utility of four abbreviated

Poster Session 6

No. 1

Evaluation of a Novel Integrated Care Model for Individuals Experiencing Chronic Homelessness, Chronic Medical Conditions, and Co-Occurring Disorders

Poster Presenter: Bradford Unroe, M.D.

Co-Authors: Maria Correa, M.S., Lexie Grove, Ph.D., Justin Benzer, Ph.D.

SUMMARY:

Background: In 2019 the Mobile, Medical and Mental Health Care (M3) Team, with its explicit integration of primary care services with mental health and housing stability services, was created to improve the outcomes of individuals experiencing chronic homelessness with chronic medical conditions and co-occurring disorders, i.e., serious mental illness and substance use disorders. As a part of program evaluation, this observational, retrospective analysis evaluated emergency department (ED) use by M3 clients. Methods: Primary data (i.e., demographics, patient-reported outcomes, etc.) were collected as part of M3 program evaluation between 8/13/2019 and 2/28/2022 and at least every six months, starting at M3 enrollment (baseline). Secondary administrative data (i.e., ED data) were collected from a regional health information exchange. Two

outcomes were assessed: a binary measure of any ED visits and a count of ED visits at 6- and 12-months pre- and post-enrollment. Comparison of pre- and post-enrollment ED use was performed using multi-level mixed-effects generalized linear models in Stata 17. Results: Among M3 clients with complete utilization information available in the 6 months pre- and post-enrollment (n=48), 71% had any ED use in the 6 months pre-enrollment, and 52% had any ED utilization in the 6 months post-enrollment. Mean number of ED visits decreased from 3.15 (SD=5.11) in the 6-month pre-enrollment to 1.46 (SD=2.32) in the post-enrollment period. M3 clients' predicted probability of having an ED visit decreased by 18.7 percentage points (SE=8.6, p<0.05) from the 6 months pre- enrollment to the 6 months post-enrollment, controlling for model covariates. M3 clients also experienced a decrease of 1.713 (SE=0.520, p<0.05) in the predicted number of ED visits in the 6-month follow-up period, as compared to the 6-month pre-enrollment period. Among M3 clients with complete utilization information available in the 12 months pre- and post-enrollment (n=43), the mean number of ED visits decreased from 4.86 (SD=7.28) in the 12-month pre-enrollment period to 2.65 (SD=3.52) in the 12-month post-enrollment period. In the 12 months pre- and post-enrollment, clients' predicted probability of ED use did not change significantly. However, the number of predicted ED visits in the 12 months post-enrollment decreased by 2.332 visits (SE=1.051, p<0.05), compared to the 12 months pre-enrollment. Conclusion: M3 is associated with a decrease in ED visits by its clients. We suspect this is the result of explicit integration of primary care services with mental health and housing stability services. Further program evaluation is needed to evaluate this association.

No. 2

Personalized Digital Treatment and Its Current Use in Mental Health

Poster Presenter: Aidaspahic S. Mihajlovic, M.D., M.S.

Co-Authors: Shifa Khan, Krishna Shah, Nicholas West, Lily Yan

SUMMARY:

As technology is improving it opens more opportunities for it to be applied to healthcare in innovative ways. One example of this is in the field of virtual reality (VR) which uses technology to temporarily simulate new 3D environments enabling patients to experience brand new realities without actually having to be there. Studies show that VR can be just as effective as in vivo exposure therapy in treating various anxiety disorders without the burdens associated with in vivo exposure therapy. Because VR can be done in the office, it offers the patient a sense of safety and is under the physician's control. A case demonstrating: Ms. D is a 58 year old female with history of depression, PTSD and anxiety currently on lorazepam, sertraline and risperidone presents to clinic as a new patient. Patient has been on this drug regimen for 6-7 years. After initial evaluation, patient's depression symptoms were in remission however anxiety symptoms were worsening e.g. experiencing difficulty sleeping and inability to drive. Verbal consent was obtained by patient to participate in VR therapy using the Within app and Youtube VR videos. Ms. D enjoyed VR therapy and returned to clinic for an additional 3-4 sessions. After 6 months of successful self-paced VR therapy, patient started to drive again and reported improved sleep. She purchased her own headset to continue VR therapy at home to overcome specific phobia of driving. Patient was able to eventually drive on her own without overwhelming feelings of anxiety. VRET (virtual reality exposure therapy) is an innovative and safe, new technological way to treat patients with anxiety disorder spectrum with a wide array of benefits. It is just as effective as traditional exposure therapy. More research is needed on the implementation of VR therapy at different points of patient's presentation. Depending on the course of their disease state, VR therapy may have different effects at different points in time. VRET provides patients with effective, affordable and equitable care which may be applied to vast psychiatric disorders such as PTSD, MDD and/or specific phobias.

No. 3**Identifying Suicide Predictors Among Patients Hospitalized at a Single-Center, Inpatient Psychiatric Facility: A Retrospective Investigation**

Poster Presenter: Charlotte Ritchie

Lead Author: Haley Schuster

Co-Authors: Albert Dickan, M.D., Michelle Roley-Roberts, Ph.D.

SUMMARY:

Background: Risk for suicide is particularly high within the first few months following discharge from psychiatric hospitalization.¹⁻³ One meta-analysis found that the post-discharge suicide rate was approximately 100 times greater than the global suicide rate within the first three months.¹ Previous studies have identified male gender, middle-age, low income, living alone, unemployment, having mental or physical health comorbidities, substance use, and prior history of a suicide attempt are risk factors for suicide.⁴ However, a recent meta-analysis suggested that these risk factors have a limited ability in helping providers predict suicide.⁵ Here, we examine factors purported to increase suicide risk in patients who were stabilized in inpatient psychiatric hospitalization and discharged into the community. Methods: Demographic, social, and psychiatric factors were queried from the Electronic Health Record of all 10,253 adult patients aged 18 – 89 who were admitted to an inpatient psychiatric unit from 2014 to 2022. Specifically, characteristics of interest included age at admission, number of subsequent emergency department (ED) visits, number of subsequent suicide attempts, and death by suicide. Descriptive statistics via SPSS were utilized to examine factors associated with suicide attempts and death by suicide. The data on number of suicide attempts and death by suicide were square-root transformed to better fit a normal distribution for the assumptions of these statistical tests. Results: Over an eight-year period, 1.6% of all patients died by suicide after discharge. There was a statistically significant difference in mean length of hospital stay ($t(155.5)=2.245, p=.026$). The mean age of those who died by suicide was older compared to those who did not, ($t(10250)=-9.694, p<.001$). ED visit count was associated with number of suicide attempts ($r=.207, p<.001$), but did not predict death by suicide ($t(6105)=-.256, p=.798$). There was not a significant correlation between number of suicide attempts and death by suicide ($r=.032, p=.332$). Conclusion: Rates of death by suicide were lower in our sample compared to the national average. Average length of stay was predictive of eventual

death by suicide as was age at first admission. In our study sample, those who were 35-years old or older at time of their first inpatient admission were more likely to die by suicide than those who were 34 or younger at their first hospitalization. These results are similar to the national average and suggest that older adults are more likely to die by suicide than younger adults. In summary, these results suggest that severity of psychiatric symptoms or extenuating socioeconomic circumstances resulting in longer lengths of stay may increase risk for suicide. Additionally, these findings implicate the need for discharge planning focused on ameliorating socioeconomic and interpersonal stressors, particularly for older adults with limited means and social support.

No. 4

A Therapeutic Framework for Post-Suicide-Attempt Family Meetings: A Case Study

Poster Presenter: Adriana Kavoussi

Co-Authors: Kira Panzer, Julie B. Penzner, M.D.

SUMMARY:

Background: Patients presenting for medical care following suicide attempt often have psychological, social, and interpersonal needs that remain unmet after the event. As such, a post-suicide-attempt hospitalization represents a key point in time for intervention by the psychiatric team to direct future outcomes. Suicide safety planning includes family involvement, commonly in the form of a family meeting, which plays an important role in risk mitigation and supporting a patient's loved ones. Here we present a case study that illuminates the importance of a family meeting in a patient's care following a suicide attempt. Ms. G is a 65-year-old white woman with a past psychiatric history of bipolar 1 disorder and post-traumatic stress disorder with 3 prior suicide attempts who presented to the emergency department (ED) with altered mental status following intentional overdose of acetaminophen and alcohol. She reported her suicide attempt occurred amid feelings of despair in the setting of lithium discontinuation several months prior. The patient was found down at home by her husband and received medical management in the ED and on a medical floor. Once stabilized, she was

transferred to the inpatient psychiatric unit and reinitiated on lithium, with self-reported improvement in her thoughts of suicide and increased hope for her future. On the patient's 10th day of admission, her psychiatric team convened a post-suicide-attempt family meeting with Ms. G and her husband. The meeting's purpose was to provide the patient an opportunity to examine her interpersonal relationships and ability to tolerate distress in the safety of the inpatient setting. As part of risk mitigation, an additional goal was improvement of communication between Ms. G and her husband. Lastly, the team sought to offer holistic care and support for the patient's husband. During the meeting, the team set clear goals for the family discussion and requested that both Ms. G and her husband address one another directly. They were encouraged to express a range of emotions, including anger and frustration, while discussing the circumstances that led to the suicide attempt. Finally, the team invited the patient's husband to describe how he would feel if Ms. G died by suicide. The aims of these efforts were four-fold: 1) to open an honest dialogue between the patient and her husband; 2) to encourage exploration of previously internalized emotions contributing to the patient's recent psychosocial distress and suicide attempt; 3) to increase the likelihood of Ms. G asking her husband for help in the future; and 4) to enhance her husband's receptivity to responding in an adaptive manner. In this poster, we describe the therapeutic framework utilized by the treatment team during this family meeting. We highlight techniques described in the literature that promote mutual understanding, improve future orientation, and restore hope for patients and their loved ones following a suicide attempt.

No. 5

WITHDRAWN

No. 6

Manifestations of Adjustment Disorder and Separation Anxiety in a Pediatric Patient

Poster Presenter: Crystal Nguyen

SUMMARY:

Adjustment disorder and separation anxiety disorder are common phenomena in pediatric patients that may be precipitated by significant life stressors that cause a maladaptive stress response and excessive anxiety about separation from attachment figures, causing impaired functioning, school avoidance, and familial frustration. A 6-year-old Hispanic female patient presents to the clinic with her mother because of school refusal due to increased feelings of sadness and crying spells. The patient also reported physical symptoms such as sore throat, stomachache, headache, shortness of breath, and weakness in the lower extremities. On examination, the patient did not have findings consistent with the reported physical symptoms. Upon further questioning, it was discovered that these symptoms only occurred when the patient was away from her family at school or at the end of the weekend when she was expected to return to school the following day. These constellation of symptoms began about 1 month after the patient transitioned from kindergarten into the first grade and after her older sister, whom the patient maintains a tight knit relationship with, moved out of their family home to live with her partner. In this case report, we will discuss how changes in life events can be perceived as minor stressors, but they can significantly affect the pediatric population and manifest through psychosomatic symptoms and mood disturbances. Physicians have a large responsibility to help family members recognize this mental health issue so that their children receive support from mental health professionals early on to help them better understand the effects of their stressors, increase behavioral pattern recognition, and learn healthy coping skills to prevent adverse mental health outcomes from developing in the future.

No. 7

WITHDRAWN

No. 8

Body Dysmorphic Disorder in Young Adult With Opioid Use Disorder: A Case Report

Poster Presenter: Ahmed Elsayed

Co-Authors: Gurtej Singh Gill, M.D., Stephane Wassim, Ravipal Singh Ghatoura

SUMMARY:

Body dysmorphic disorder in Young Adult with Opioid Use disorder: A case report Body dysmorphic disorder (BDD) is a preoccupation with one or more perceived defects or flaws in physical appearance that are not observable or appear slight to others. BDD is not the result of a single impairment, but it is rather the manifestation of multiple biological, psychological, and sociocultural factors. Patients with BDD are more likely to show more comorbid psychiatric issues such as anxiety, obsessive compulsive disorder, attention deficit hyperactivity disorder, and substance use disorder (SUD). Alcohol use disorder was found to be most prevalent (50% prevalence) in patients with BDD. The particular relationship between BDD and Opioid use disorder has not been studied widely but available data suggest that comorbid BDD and Opioid use disorder range from 2-6% in smaller studies to 25-30% in larger studies. It is also possible that the relationship between BDD and SUDs is more complex (e.g., that they share the same causal factors) or that there is no causal relationship between them. There have been two hypotheses. The first is the Self-medication hypothesis, and the second is the presence of a lifetime SUD that contributes to more severe BDD symptoms. The following case is discussing a 31-year-old patient with a history of BDD comorbid by opioid use disorder.

No. 9

Intrinsic and Extrinsic Motivating Factors on Why Physicians Choose to Pursue Psychiatry Residency Training at University of California, Riverside

Poster Presenter: Charity Hall

Co-Authors: Takesha J. Cooper, M.D., M.S., Austin Nguy

SUMMARY:

Background: There is an increasing scarcity of psychiatrists in the United States, especially exacerbated by COVID-19 and a series of upcoming retirements of older psychiatrists.^{1,2} Understanding prospective medical students' motivational interests in choosing a specialty in psychiatry is crucial for recruitment, to meet this mental health demand of the US population. Large multi-centered studies in

Canada³, Singapore⁴ and China⁵ showed that addressing mental health stigma was a motivating factor to choose psychiatry, however, negative attitudes to psychiatry drew applicants away. A recent US study by Russo et al in 2020 featuring 6 medical schools (N=21) examined and identified five domains (Concern, Control, Curiosity, Confidence and Contribution) that were valued by Generation Z in choosing a career in psychiatry.⁶ However, little is known about the interests in choosing psychiatry residency in less under-served and under-resourced areas such as the Inland Empire of California, with a physician shortage of less than half than recommended (39 physicians per 100,000 residents).⁷ In our study, we examine and measure the extrinsic and intrinsic motivational factors that influenced psychiatry residents' decision to choose psychiatry and to choose University of California, Riverside for residency. UCR serves the Inland Empire, here representing an underserved area of California and the United States. **Methods:** IRB approval was obtained through UCR IRB. UCR interns up to PGY-4 and fellows were recruited via UCR Psychiatry Department email listservs. For responses, we used a seven scale likert scale ranging based on agreement to question prompts from strongly disagree to strongly agree. Respondents were able to identify how strongly their opinions matched to 39 questions that encompassed several career domains based on Russo et al and in addition assessed topics ranging from telehealth and COVID-19. Respondents were asked to respond based upon their motivations in applying to psychiatry residency as MS4s. **Results:** We achieved a total of 24 respondents. Mean scores correspond to likert scaling (1-7), '4' scales corresponding to "neither agree nor disagree." Of note, motivating factors included low burnout (mean=5, SD=2), addressing mental health stigma (mean=6, SD=1). Negative attitudes of psychiatry persisted in our study from perceptions from family and community. COVID-19 was a neutral motivating factor (mean=4, SD= 1). Telemedicine opportunities were appealing (mean=6, SD=1). **Conclusion:** Overall arching themes from our study suggested that better work-life balance (with less call schedules), increasing diversity of psychiatric experiences and faculty involvement in medical students education, and including a holistic, biopsychosocial education were related to piquing interests in psychiatry. This

investigational analysis can further advance how residency programs recruit students and provide further traction towards students choosing psychiatry.

No. 10

Record High Psychiatry Resident Applications, but Why?

Poster Presenter: Dustin Wong

Co-Authors: Christina Spoletti, Maria Martinez-Baladejo

SUMMARY:

Background: In addition to the ongoing mental health provider shortage, there is an expected continued decrease in the number of psychiatrists through 2024 [1]. Despite the drought, there has been an increasing number of psychiatry residency spots, number of applicants, and a record high 99.8% fill rate in 2021 [2]. In attempts to explain why there has been a steady increase in the last few years of individuals choosing psychiatry, we investigated factors which influenced residents to pursue this field. **Methods:** Using 6 questions from the Attitude Towards Psychiatry (ATP-30) questionnaire [3] and 13 questions from Galeazzi et al. Italian Study [4], a 33-question survey was created. To explore current trends, we added questions regarding recent world events, use of technology, and personal factors such as quality of life. The survey was emailed to Resident Directors and Program Coordinators to be distributed to current active and incoming psychiatry residents. Results were conducted and recorded on the online platform, REDCap. Residents could select if a factor was "Extremely Influential," "Very Influential," "Somewhat Influential," "Not Influential," or "Unsure." We used descriptive statistics to report the outcomes and data analysis was completed using SPSS version 28 [5]. **Results:** The analysis included 146 psychiatry resident responses. Most of the respondents had 1 (49.3%) or 2 months (27.4%) of clinical psychiatry exposure, and 1 (50.3%) or 3 months (24.8%) of a behavioral health curriculum during their medical school years (excluding electives). Responses showed a general trend that treating patients with psychiatry illnesses (73.3%), satisfaction of working as a psychiatrist (91.1%), development of rewarding relationships with

patients (78.8%), emphasis on the patient as a whole (78.1%), curiosity about mental health (75.3%), and interest in unraveling the causes of mental illness (74.7%) to be “Very” or “Extremely Influential.” Factors that were found to be “Not Influential” included growing up in a technologically centered environment with less social interactions (62.3%), national event exposures (e.g. mental health crisis, COVID-19, 9/11) (74.7%), and the respect of psychiatry within the medical field or society (82.8% and 80.8%). **Conclusions:** Current psychiatry residents seem largely influenced by personal interests and high satisfaction, and less influenced by ongoing national events or how the field is perceived by the public or community. Also, contrary to previous studies where participants were influenced by the psychiatry curriculum design including length of psychiatry training, most of our respondents stated this was “Not influential” (58.2%) [6, 7]. With the growing demand for more psychiatrists, establishing and then promoting the top influencing factors on why an individual would pursue psychiatry, could encourage more people and allow more opportunities to create future psychiatrists.

No. 11

Decreasing Episodes of Violence Toward Staff on an Inpatient Psychiatric Unit

Poster Presenter: Michael J. Chen, M.D.

Co-Authors: Ralph Primelo, Brian Chilcote, Laurence Karper, M.D., Edward R. Norris, M.D.

SUMMARY:

Abstract Background: Unfortunately, aggression from patients on an acute inpatient psychiatric hospital setting is common. This quality improvement projects introduced various interventions to the Psychiatry Department at the Lehigh Valley Health Network (LVHN) to reduce the amount of violent events (violence to person, violence to environment, and verbal threats) on the behavioral health unit (BHU). **Methods:** Over the last year, senior leadership of the Psychiatry Department at the LVHN noted an increase in episode of violence on the BHU. A multidisciplinary team was assembled in April 2022 to address this concern. The following interventions were initiated: Identification of potentially aggressive patients in the Emergency

Department and initiating antipsychotic treatment prior to admission to the BHU Working with pharmacy to ensure that staff has access to appropriate pro re nata or standing medications for potentially aggressive patients in the BHU . High Risk Rouding: working with nursing leadership to create standardized huddles to ensure proper handoffs between providers and nurses. Interventions went initiated in May of 2022. Episodes of violence before and after initiation of interventions were reviewed. Episodes of violence on the BHU at LVHN were identified via review of safety reports and attendance of safety committee meetings. **Results:** Analysis of data demonstrated that there was a total of 147 episodes of violence between December 2021 and July of 2022. This was further categorized into 61 episodes of violence to persons, 40 episodes of violence to environment, and 46 episodes of verbal threats. Of note, 91.8% of the total violent episodes were from patients with a diagnosis of psychosis (135 out of 147). Further analysis of data demonstrated a significant improvement in BHU safety with initiation of interventions. Pooling the data into monthly averages before and after interventions showed a decrease of violent episodes to persons by 65.1%, a decrease of violent episodes to the environment by 81.8%, and a decrease of verbal threats expressed by 62.5%.

No. 12

Comparison of Social Cognitive Profiles Among Clinical Subtypes of Schizophrenia: A Cross-Sectional Study

Poster Presenter: Seung Ho Lee

Co-Authors: Sihyun Baek, M.Sc., B.Sc., Malik Ekhdoura, B.Sc., Naista Zhand, M.D.

SUMMARY:

Introduction: Schizophrenia is a heterogeneous illness encompassing a diversity of clinical trajectories, in which patients express differential levels of response to conventional antipsychotics. Three subtypes of schizophrenia may be distinguished based on clinical response—treatment-responsive (TRpS), treatment-resistant (TRS) and ultra-treatment-resistant (UTRS). However, there exists a dearth of literature surrounding prognostication, treatment trajectory, and

contributing factors among different subtypes. Among the features of schizophrenia are social cognitive deficits, which could be associated with poor clinical outcomes. In this study, we compared the social cognitive profiles along with other clinical factors of patients with schizophrenia clinical subtypes. **Methods:** English-speaking patients (age \geq 18) with known schizophrenia were recruited from an outpatient schizophrenia clinic to complete the Ambiguous Intentionality Hostility Questionnaire (AIHQ), where the self-reported Blame Score (BS) in Ambiguous and Accidental scenarios was used as a measure of social cognitive deficits. Relevant clinical data, including demographics, substance use, age of onset of illness, comorbidities and current medications were extracted from the electronic medical record. TRpS, TRS, and UTRS were defined according to the treatment received, which corresponded to non-clozapine antipsychotics, clozapine monotherapy, and clozapine with another therapeutic modality (i.e., other antipsychotic(s), anticonvulsant(s), or ECT), respectively. Furthermore, the Clinical Global Impression scale (CGI-SCH) was completed by treating psychiatrists to control for symptom severity. **Results:** The study involved 85 participants (mean age=45.2; 70.6% male) including 5 incomplete questionnaires for which the analysis was omitted. Participants' Ambiguous BS ranged from 3.0-13.8 compared to the literature-reported range of 5.1-5.4 in the general population. Participants with UTRS (n=18; mean age=41.1; 66.7% male) demonstrated a mean Ambiguous and Accidental BS of 7.38 and 6.62, respectively, as compared to participants with TRpS (n=58; mean age=45.5; 74.1% male) for whom the mean Ambiguous and Accidental BS were 7.27 and 5.941, respectively (all $p < 0.05$). Participants with TRS (n=4; mean age=55; 50% male) were excluded from comparative analysis owing to the small sample size. **Conclusion:** Blame biases are more likely to occur in Ambiguous than in Accidental situations for adult patients with schizophrenia. Further, patients with UTRS exhibit higher overall blame biases than their TRpS counterparts, suggesting distinguishable pathophysiology in the socio-cognitive domain. This study is unique for using a larger sample size than previous studies, which may shed light on inconsistent findings and provide a foundation for future research.

No. 13

The Hidden Dangers of Supplements: A Case of Substance-Induced Psychosis

Poster Presenter: Ritambhara Wadhwa, D.O.

Co-Author: Briana Tillman, D.O.

SUMMARY:

According to the Food and Drug administration, dietary supplements are regulated as food rather than as drugs, but many of them have strong biological effects or even contain drugs under false marketing (Office of Dietary Supplements). Over 18% of Americans use herbal or nutritional therapies as part of their health regimen (Tindle, Davis, Philips, & Eisenberg 2005). However, many such over-the-counter therapies have been found to exhibit psychotropic effects (Sarris 2018), and many more are purported to impact mental and physical health with little to no scientific research into these claims or potential side effects. Phenylethylamine (PEA), the decarboxylation product of phenylalanine, for example, is sold widely as a nutritional supplement and marketed variously for weight loss, mood, and focus (Irsfeld, et al) For over thirty years, PEA has been understood to act as a natural amphetamine and to play a role in neuropsychiatric issues (Wolf & Mosnaim 1983). It interacts with the same receptor ligand that responds to amphetamine and related compounds such as methamphetamine and MDMA, the genetic coding for which is located in an area of DNA consistently associated with schizophrenia: chromosome 6q23.2 [Fibure B] (Zucchi, Chiellini, Scanlan & Grandy 2006). While the mechanisms and details of these interactions remain poorly understood, this case represents an important glimpse into the potential psychoactive properties of this readily available nutritional supplement. This is the case of an otherwise healthy 27-year-old male with no psychiatric history who suffered a psychotic break after ingesting phenylethylamine, which he had purchased off the internet with the purpose of improving his performance at a high-stress job.

No. 14**Treatment Resistant Schizophrenia With Prominent Capgras Delusions in a Young Female With Early-Onset Schizophrenia**

Poster Presenter: Poojajeet Khaira, M.D.

Co-Authors: Ahmed Kadhim, M.D., Elizabeth DeOreo, M.D., Lendita Haxhiu-Erhardt, M.D.

SUMMARY:

INTRODUCTION: Capgras Delusions are a rare but serious delusional subtype wherein a person believes those around them have been replaced by imposters. **CASE REPORT:** Ms. B is a 23 year old African-American female with a past psychiatric history of schizophrenia presenting to the emergency department with homicidal ideation toward her mother and siblings believing they were imposters. Upon admission to the psychiatric unit, Ms. B endorsed ideas of reference, thought insertion, thought broadcasting, Capgras and paranoid delusions. Ms. B was diagnosed with schizophrenia at ten years old and has had multiple hospitalizations and trials of antipsychotics. Past medical workups for autoimmune, metabolic and inflammatory disorders were negative and Ms. B has no traumatic brain injury nor neurodegenerative disorder history. Neuropsychological testing had also been performed. In periods of relative stability, Ms. B had graduated from mainstream high school and attended some college. Her periods of stability were gained on Risperdal LAI as a teenager and Prolixin decanoate as an adult. She was medication non-adherent for the year prior to this admission thus her delusions had worsened demonstrably. The most significant piece of Ms. B's psychiatric history is a previous eight month admission at the state psychiatric facility after attempting to stab her mother to death believing her to be an imposter. During hospitalization at our facility, Ms. B continued to have bizarre delusions, disorganized behavior, and perceptual disturbance. The majority of her delusions were regarding her family, her identity and identity of staff and doctors on the unit. While Ms. B tolerated medication without significant side effects, her psychosis failed to improve despite several medication trials. Trials included Abilify, Risperdal, Prolixin, Haldol, and Clozaril; all of which had stabilized the patient in the past. Due to the length of hospitalization, Ms. B also received multiple long-

acting injectables including Invega Sustenna, Haldol decanoate, and Prolixin decanoate. Ms. B displayed the most improvement taking daily intramuscular Prolixin but this was discontinued due to nationwide IM Prolixin shortage. Switching to oral Prolixin resulted in rapid decompensation attributable to cheeking/spitting medications and/or self-induced vomiting. Clozaril was initiated and at therapeutic dose little improvement in the patient's psychosis was seen. The patient was eventually transferred to the state hospital for an anticipated longer stay. **DISCUSSION:** Prior literature has shown Capgras delusions to be relatively rare and most often associated with major psychotic and/or neurodegenerative disorders. Capgras delusions carry a significant risk of aggressive and violent behavior as was in Ms. B's history. Increased risk of violence in this population makes these patients uniquely different for treatment (both medical and psychological) and long-term management considerations.

No. 15**Proposed Protocol for Psychogenic Polydipsia Management Based on Weight Gain for Inpatient Hospitalization**

Poster Presenter: Sofia Quiroza, D.O.

Co-Author: Gregory Unfried

SUMMARY:

Psychogenic polydipsia (PPD) is a multifactorial disorder associated with significant morbidity and mortality for the patient affected. The occurrence is between 6% to 20% of psychiatric patients, primary seen in those with schizophrenia. The disorder produces a change in the production or release of antidiuretic hormone, which leads to polydipsia and polyuria, resulting in hyponatremia in 2%-5% of patients. Cases can range in severity, with severe cases causing life threatening seizures, coma and death. Treatment of psychogenic polydipsia is challenging, given the limited treatment guidelines and protocol for weight gain and correlating water restriction for patients. The proposed protocol uses AM weight as the base weight, with 3 subsequent weights taken throughout the day, and as the weight fluctuates, each protocol is implemented for patients with psychogenic polydipsia disorder. The protocol

ranges from Stable Stage of less than 5 lbs weight gain over morning weight which allow for 6 eight (8) oz drinks with water fountain access up to Stage 3 of gain of 10 lbs since morning weight with fluid restriction of 2,000mL per day, round the clock 1:1 supervision, weight and blood pressure every hours, rating scale every 2 hours and acute hospitalization if required. This poster will discuss in more detail the proposed guidelines for patient's with psychogenic polydipsia for water restriction based on morning weight gain and its current implementation at the Evansville State Hospital.

No. 16

Advancing Collaboration, Education and Tools to Identify & Address the Socio-Cultural Blindspot in Mental Health

Poster Presenter: Trisha J. Chau

Co-Authors: Elizabeth Sokolowski, Riva Shah, Whitney Black

SUMMARY:

Background Racism is a public health problem.¹ Yet, the impact of our patients' racial and discriminatory experiences are not fully understood due to numerous barriers including a lack of resources and education to assist clinicians in these conversations.²⁻⁵ Inquiring about cultural backgrounds and racial experiences through a standardized, trauma-informed screening question could facilitate the detection of these experiences, referral to culturally appropriate resources, and drive future service development.⁶ Purpose This project aimed to train psychiatry residents in an ambulatory setting to utilize a standardized, trauma-informed screening question and related documentation templates to screen patients for racial trauma. Methods To address this issue, the authors developed a 45-minute educational training. The initial 45-minute training was provided to psychiatry residents at the authors' institution in February 2022. This training reviewed the implications of racial trauma, barriers to inquiry in the clinical setting, the introduction of a standardized screening question*, documentation templates, and a culturally sensitive, community-based resource guide for patients.^{7,8} Trained residents were asked to incorporate the screening question and documentation template into their

clinical practice, and to offer the resource guide to all patients answering the question. Forty-two new intake encounters were completed by the trained clinicians between March-July 2022. A retrospective chart review of these encounters evaluated utilization of the recommended documentation template, patients' responses to the screening question, and whether the resource guide was offered. Results The documentation template was utilized in 71.4% (30/42) of these encounters, but the specific screening question was removed in 6 of the encounters. The resource guide was not offered in another 6 of the encounters. Ten patients endorsed experiencing racism. Of the 10 responding patients, one declined to share details. The resource guide was offered to all patients who answered the screening question. 3.3% (1/30) accepted the resource guide. Discussion Despite growing knowledge about the impacts of racism and discrimination on health outcomes, clinicians often lack a standard screening process. Through training, it may be possible to improve rates of detection and subsequently develop appropriate interventions to address this important healthcare issue. Conclusion Inquiring about race-based trauma can be difficult for clinicians. Offering education and standard screening tools may facilitate the detection of our patients' experiences of racism while improving diagnostic acuity, enhancing therapeutic relationships, and driving more precision-based treatments and services. * The authors want to acknowledge that the standardized screening question utilized in this project was developed by and used with permission from Dr. Aisha James and colleagues at MGH.

No. 17

My Best Friends Are Kpop Stars. a Case Report on the Importance of Cultural Awareness in the Psychiatric Evaluation

Poster Presenter: Jeffrey Kim, M.D.

SUMMARY:

One of the most significant changes to society came with the advent of social media, and with it a cultural shift in whom people consider their actual friends. The cultural influence of entertainment figures is not a new phenomenon; however, there has a revolution

in the way celebrities interact with their fans, specifically in the Korean Pop (Kpop) industry. In contrast with musicians who release an album and then disappear into mysterious obscurity, Kpop stars constantly interact with fans through meet and greets, live streams, variety tv shows, and most importantly, through social media. With a concomitant rise in parasocial interactions and relationships, Kpop blurs the line between what constitutes pathological delusions and healthy fan activity. Ms. X is a 19 year-old Hispanic female with a Past Psychiatric History of Bipolar Disorder, who was brought in by EMS due for agitation and disorganized behavior. Patient presented manic, labile, and her delusions extended to beliefs that the Kpop group EXO has been communicating with her through morse code in their videos, and that certain members would wink at her through the computer screen in real time. The patient's BMI at the time of admission was 15.4, and she continued to compare her own body to Kpop idols. Patient shared a lifetime mix of both shame and trauma concerning her eating habits, with multiple incidents that may have contributed to her fear of eating, and simultaneously into her becoming obsessed with the Kpop group ("2018 and COVID were a miracle for me. I got closer to EXO"). With social isolation growing due to the pandemic, online parasocial relationships are becoming an increasingly normal part of people's lives. We discuss a case where an unhealthy obsession with Kpop contributed to body dissatisfaction, and the precipitating factors that lead to these circumstances, as well as the challenges that are present in helping these adolescents and young adults in coping with social media use. As such, it is important to discuss the challenges faced by psychiatrists who must be sufficiently aware of the ever-changing face of contemporary cultural landscape when forming an accurate diagnosis.

No. 18

Understanding Gender-Race/Ethnicity Influences on Tobacco Cessation Among People With Severe Mental Illness

Poster Presenter: Hamzah M. Alghzawi, Ph.D., M.S.N., R.N.

SUMMARY:

Introduction: Although people with severe mental illness (SMI, i.e., schizophrenia, major depressive disorder, and bipolar disorders) have as much intention to quit smoking as those in the general population, their smoking cessation rates are lower by 10-20%. A lack of knowledge exists regarding the time, probability, and correlates of smoking cessation among people with SMI by gender-race/ethnicity groups (i.e., Hispanic males, non-Hispanic Black males, non-Hispanic other males, Hispanic females, non-Hispanic Black females, and non-Hispanic other females). **Objective:** To examine gender-racial/ethnic differences in smoking cessation among people with severe mental illness (SMI) who had a history of intention to quit. **Design:** A descriptive correlational design was applied in this study. **Methods:** A population sample of 3914 American lifetime adult smokers with SMI and a history of having the intention to quit were identified in a limited public use dataset of the 2012-2013 National Epidemiologic Survey on Alcohol and Related Conditions (NESARC-III). Smoking cessation was defined as not smoking in the past year. Survival analysis was used to examine the time, probability, and correlates of smoking cessation by gender-race/ethnicity groups. The analysis took into account the complex sampling design and controlled for possible confounders (i.e., sociodemographic characteristics) and covariates (i.e., exposure to stress, social support, smoking-related factors, and comorbidity with another mental illness). **Results:** The vast majority (85.2%) of smokers with SMI had a history of intention to quit. Out of those smokers with SMI who had the intention to quit, 31.7% had not smoked in the past year. The average duration (years) of smoking involvement in non-Hispanic Black males was the longest (50 years, 95% CI: 45.55, 53.49), whereas the average duration of smoking involvement in Hispanic females was the shortest (36 years, 95% CI: 33.57, 38.94). The probability of smoking cessation was higher for Hispanic females (HR=2.07, p<.05) compared to other gender-race/ethnicity groups. The correlates of smoking cessation also varied across gender-race/ethnicity groups. **Conclusion:** The time, probability, and correlates of smoking cessation differ by gender-race/ethnicity groups. **Clinical relevance:** Psychiatric nurses should consider gender-race/ethnicity

differences when designing and implementing smoking cessation programs for those with SMI.

Keywords: severe mental illness, smoking cessation, gender, race, ethnicity, stress, social support, comorbidity. **Acknowledgments:** NESARC-III was funded by the National Institute on Alcohol Abuse and Alcoholism (NIAAA) with support from the National Institute on Drug Abuse and the National Institutes of Health.

No. 19

Esketamine as Adjunct Therapy in OCD, Depression, and Suicide Prevention: A Case Study

Poster Presenter: Margarita Aulet-Leon, M.D.

SUMMARY:

Ms. Q is a 27-year-old woman who was admitted to our inpatient psychiatric unit following a violent and pre-meditated suicide attempt in the setting of greater than 10 years of inadequately treated OCD. She was started on fluvoxamine and adjunctive aripiprazole for OCD and depression. Due to ongoing suicidal ideation with active planning, intranasal esketamine was added after 2 weeks. Symptoms of OCD, depression, and anxiety were tracked using the Obsessive-Compulsive Inventory, Beck's Depression Inventory, the PHQ-9, and the GAD-7. We observed a significant treatment response soon after initiating esketamine which was reflected in the psychometric scales. Symptom burden decreased by 62-85% after one week in all five scales and was sustained over the remainder of the patient's course. First-line OCD management involving SSRI administration in combination with exposure and response prevention therapy has been shown to achieve remission in only 42-65% of patients, and can take months to show full effect (Sharma, 2014). The intranasal use of esketamine has been FDA-approved for treatment-resistant depression as well as MDD with suicidal ideation. While the available evidence supports the use of racemic ketamine in OCD, the literature is lacking in regards to the role of the S-enantiomer and more potent NMDA-receptor antagonist, esketamine in this population. In this poster we will further describe the details of the case as they relate to psychopharmacologic management of OCD and suicide with a focus on the role of glutamatergic neurotransmission and the activation of the striatal-

thalamais circuits involved in OCD (Martinotti, 2021). OCD significantly impairs patients' quality of life and is commonly comorbid with depression and suicidal ideation. Therefore, our clinical community needs to explore more effective and faster-acting interventions to serve this patient population.

No. 20

Clozapine Acting as an Insulin Secretagogue: A Case of Improved Glycemic Control in a Previously Insulin-Dependent Diabetic Patient on Clozapine

Poster Presenter: Natasha Kasulis, M.D.

Co-Authors: Chenique Z. Teixeira, M.D., Arham Ahmad

SUMMARY:

Introduction: Clozapine has been well known to cause hyperglycemia and in some cases diabetic ketoacidosis. However, the mechanism by which clozapine effects glucose metabolism is largely unknown. Inversely, few reports have documented clozapine to be associated with lowering blood glucose levels. One study found that clozapine increased mean levels of blood glucose, insulin, and C-peptide. It is possible these results illustrate a phenomenon where clozapine acts as an insulin secretagogue effectively increasing endogenous insulin secretion. Case Report: We report the case of a 28-year-old woman admitted to inpatient psychiatry for acute decompensation of psychiatric symptoms with a history of schizophrenia who was initiated and maintained on clozapine, and insulin-dependent diabetes mellitus with a prior episode of diabetic ketoacidosis (DKA). After the initiation of metformin, she subsequently presented with multiple episodes of tightly controlled blood glucose levels. Clinical exam revealed no pertinent findings associated with hypoglycemia. Serum studies revealed a hemoglobin A1c of 9.5 on admission which trended downwards to 8.9 and finally 7.8 approximately 2 months into admission. She additionally had daily point-of-care fasting glucose readings trending in the low 100s mg/dL. For the safety of the patient, less stringent blood glucose control was desirable which necessitated removal of sliding scale insulin, and long acting insulin overnight. The patient was maintained on 500 mg of metformin twice daily and has henceforth demonstrated appropriate glycemic control on her

clozapine regimen. Discussion: Smith et. al discusses the well-known impact of second generation antipsychotics causing derangements in glucose metabolism and discusses proposed mechanisms for the effect. Previous studies illustrate this is in fact not due to an increase in insulin resistance. Clozapine was shown to significantly increase glucose-associated insulin secretion in addition to blocking glucose-associated reductions in glucagon secretion. With the addition of metformin in this patient, we noticed well controlled blood sugar even while clozapine was continued and insulin was discontinued following uncontrolled glucose levels. Metformin has a known effect of inhibiting glucagon activity. If clozapine is acting to increase endogenous insulin while also inhibiting glucagon activity, we would expect lower blood sugars in a patient treated with metformin concomitant to clozapine administration, which was seen in this patient. Conclusion: Psychiatrists and clinicians prescribing clozapine should be aware of the clinical manifestations associated with clozapine treatment, which include a return to normoglycemia when maintained on metformin following necessity of an insulin regimen. Future studies could seek to measure levels of insulin and c-peptide both prior to clozapine administration and during treatment to further characterize this relationship.

No. 21

Valproic Acid Induced Cervical Tremor in a Pediatric Patient

Poster Presenter: Meghan Schott, D.O.

Co-Author: Marissa Firlie

SUMMARY:

Valproic acid is a pharmacological agent used in the treatment of many neurologic and psychiatric conditions, ranging from epilepsy, migraines, and seizures to bipolar, mood, and anxiety disorders¹. With utility in the pediatric and adult populations, the safety profile of Valproic acid has been studied to characterize its major adverse effects. The drug is accompanied by a black box warning for life-threatening hepatotoxicity, teratogenicity, and pancreatitis, and indicates that patients in the pediatric population are at an increased risk of developing such complications¹⁻². As with other

psychopharmacologic agents, such as lithium and antidepressants, a drug-induced tremor has also been associated with Valproic acid³. Studies suggest that chronic Valproate use induces an enhanced physiologic tremor in about 10% of patients, with most of these tremors appearing within a month of Valproic acid initiation⁴⁻⁵. One study aimed to prove an association between plasma Valproate level and tremor severity, suggesting tremors may be more apparent with dosages of Valproic acid exceeding 750mg daily⁵. There have been repeat studies to establish the relationship between Valproic acid and tremors, yet it is still poorly understood⁶. This case report concerns a cervical tremor that emerged after initiation of Valproic acid in a pediatric patient, a group more susceptible to medication side effects, and that ceased only with discontinuation. Many is a 17 year old male with a past psychiatric history of bipolar 1 disorder who frequently presents after marijuana usage. During this admission, an isolated head tremor was noted without extremity tremors. There was unclear cause of head tremor. Benztropine was tried with minimal response. As his long-term medication regimen consisting of lithium and paliperidone did not appear effective in managing his mania, Valproic acid was started. More traditional routes to control his mania like increasing antipsychotic dose were not pursued as he is sensitive to medications, evidenced by his history of neuroleptic malignant syndrome one year prior. Valproic acid was tapered down which was accompanied by gradual improvement in his head tremor. It is well documented that Valproate is associated with dose-dependent side effects, like thrombocytopenia. Although there is a well-known relationship between Valproic acid and tremors, medical literature has not yet clarified the character of the tremor in relation to the prescribed dose, with studies lacking particularly within the pediatric population. This case study aims to prove that Valproic-acid induced tremors are dose-dependent. With limited medical literature regarding this phenomenon, there is a need to further characterize the tremor associated with Valproic acid pharmacotherapy to better identify at-risk populations, clarify appropriate medication dosages, and understand the implications of chronic therapy with a medication that works so potently on the nervous system.

No. 22

Changing Practice Parameters in Primary Care Providers

Poster Presenter: Emma Cooper, M.D.

Co-Authors: Glen Xiong, M.D., Ariel Neikrug, Ph.D., Shutong Huo, Ph.D., Robert M. McCarron, D.O.

SUMMARY:

Background: Approximately one quarter of individuals in the United States experience a psychiatric condition in a given year, with a lifetime prevalence of about 50%.¹ Many patients with psychiatric conditions have limited access to specialty behavioral health services and as a result, up to 74% of mental health care is delivered in the primary care setting.^{2,3} Despite this demand, many primary care providers (PCPs) feel that they do not have adequate training in this topic and there is evidence to suggest that mental health concerns are not adequately addressed by PCPs. In fact, 50-70% of major depressive disorder episodes are not being appropriately diagnosed or treated in primary care setting.⁴ To manage this, researchers and educators at the University of California, Irvine developed the Train New Trainers (TNT) Primary Care Psychiatry Fellowship, a year-long clinical education program for primary care-oriented trainees and providers who wish to receive advanced training in primary care psychiatry. This study aims to evaluate practice parameters and prescribing patterns (i.e., prescription rates of antidepressant, opioid, and benzodiazepine) of PCPs before and after TNT training. Methods: This study included forty primary care who completed the TNT fellowship along with 152 providers who never attended the training between 2017 to 2021 (i.e., control group). The average prescription of antidepressants, benzodiazepines, and opioids for patients per year were calculated. Linear regressions were used to compare the prescriptions of patients before, during, and after the provider participated in TNT training. Results were controlled for gender, age, housing status, location, health risk, and ethnicity, which were used as covariants in the model. Results: Patients received 0.258, 0.844 and 0.846 greater antidepressants prescriptions per year before, during and after TNT providers attended the program

compared to patients of non-TNT providers. The patients received 0.028, 0.079 and 0.117 fewer benzodiazepine prescriptions per year before, during and after TNT providers completed the program compared to patients of non-TNT providers. The patients received 0.164, 0.222, and 0.232 fewer opioid prescriptions per year before TNT providers attended the program compared to patients of non-TNT providers. Conclusions: Preliminary results suggest that following TNT training, participants demonstrated increased antidepressant prescriptions per patient, decreased opioid prescriptions per patient, and decreased benzodiazepine prescriptions per patient. The need for adequate mental health care delivery by PCPs is essential. The TNT Fellowship addresses this need by providing PCPs with psychiatric clinical knowledge. The preliminary data presented here suggests that this type of intervention can inform clinical practice and directly impact patient care. </p>

No. 23

Factors in Psychiatric Recidivism: University Medical Center, New Orleans

Poster Presenter: Marcus Wright

Lead Author: Leslie Miller

Co-Authors: Kathleen Hughes, Jessica Epere

SUMMARY:

Background: In the psychiatric inpatient setting, recidivism is defined as readmission to a care facility after discharge. Up to 40% of patients admitted into psychiatric inpatient units are readmitted within 1 year of discharge. Studied factors influencing recidivism include poor treatment adherence, substance abuse, psychiatric diagnosis, and various social factors. In New Orleans, LA, readmission has potentially been exacerbated by fewer available psychiatric beds after the destruction of Charity Hospital, following Hurricane Katrina. This study identifies risk factors predicting patient recidivism, in order to work towards better identifying and caring for patients at increased risk for readmission. **Methods:** A retrospective chart review was conducted including 22 patients who had at least 5 admissions to the University Medical Center Behavioral Health inpatient psychosis unit. Randomization was performed by selecting 3

admissions between initial and last admission for data analysis. All admissions were included in initial data entry and later selected for randomization. Spearman Correlation, Linear Regression Analysis, and ANOVA were used to analyze. **Results:** Age of first admit, methamphetamine use, opioid use, and active medical problems had a weak positive correlation with the total number of admits. Alcohol use, history of sexual abuse, age of last admit, and substance use total also had a moderate positive correlation with total number of admits. Cocaine use had the strongest correlation and relationship with the total number of admits relative to all other variables analyzed. Mean length of stay, and THC use had the weakest correlation with the total number of admits. Age of first admit (older), age of last admit (older), and cocaine use when combined were most predictive of the total number of admits. Schizophrenia was associated with the highest rates of recidivism. **Conclusion:** This study supports cocaine use, a schizophrenia diagnosis, as well as age of first and last admit as important risk factors affecting rates of inpatient psychiatric readmission. The results of this study can be used to flag patients at higher risk for recidivism and emphasize treatment of substance abuse, as well as further integration of care for schizophrenic patients.

No. 24

Proposing a Multifactorial Staging Model for Bipolar Depression Based on Treatment Response

Poster Presenter: Hiroe Imai Hu, D.O.

Lead Author: Carlos Zarate

SUMMARY:

Background: For many patients with bipolar disorder, the depressive episodes are more pervasive and debilitating than manic or hypomanic states and tend to be more treatment-resistant than manic or hypomanic episodes. Approximately one third of patients with a diagnosis of major depressive disorder (MDD) fail two or more trials of antidepressants and are considered to have treatment-resistant depression (TRD). Multiple staging models exist in an effort to create systematic ways to evaluate the severity of an individual's TRD, including the Maudsley Staging Model (MSM), which grades the severity of TRD largely based on the

number and types of failed psychotropic and neuromodulation trials. TRD is commonly defined as failure to respond to adequate trials of two antidepressants, which have little evidence in successfully treating bipolar depression. We propose a model for staging treatment-resistant bipolar depression (TRBD) that is better supported by the literature with regard to pharmacologic treatment of BD. Treatment-resistance in our model was operationalized based on failed trials of atypical neuroleptics and mood stabilizers, in order to effectively extrapolate the definition treatment-resistant (TRUD) to TRBD. **Aim and Methods:** We conducted a review of the literature on existing staging systems for unipolar depression, treatment guidelines for BPD and other studies pertaining to TRUD and TRBD. We aimed to propose a preliminary staging model similar to the MSM based on prior psychotropic medication trials, but with appropriate hierarchical organization of evidence-based psychotropic agent trials tailored specifically to bipolar depression based on the existing guidelines. Three existing major guidelines were consolidated and reconciled with evidence levels for available psychotropic and neuromodulation treatment for bipolar depression. **Results:** We developed a preliminary staging model for bipolar depression that stratify patients with BD from Stage 0 to 4 based on previous treatment response. **Discussion and Future Directions:** Beyond predicting longevity and severity of depressive episodes, virtually no studies have examined the relationship between scores on TRD staging models and the efficacy of therapeutic strategies for TRD. If such a relationship existed, these staging models could help clinicians to appreciate the importance of early identification and predicting treatment response along the course of illness trajectory, particularly when a disorder enters the "treatment resistance" stages. This would particularly be useful for TRBD. This model will also be used for correlating illness stages with potential biomarkers using an existing database of TRD patients to further differentiate fundamental biological differences between the treatment-resistant unipolar depression and TRBD.

No. 25

Thalamic Strokes Mimicking Extra-Pyramidal Symptoms After Long-Acting Injectable Antipsychotic Administration in a Young Veteran

Poster Presenter: Caleb Cheatham, M.D.

SUMMARY:

Mr. T., a 33-year-old African American male with past medical history of PTSD, bipolar disorder, cannabis dependence, alcohol dependence, and a pontine arteriovenous malformation (AVM) status post stereotactic radiosurgery 8 months prior presented to the Memphis Veteran's Affairs Medical Center in May of 2022 for mental and physical status changes that occurred 4 days after receiving his monthly 156mg paliperidone long-acting injectable (LAI). The patient was brought to the hospital by his sister, who is his conservator, and she endorsed concern that the neuroleptic injection caused these new onset changes. Mr. T. had been previously stable on his LAI for one year but missed two monthly doses immediately prior to the injection that potentially precipitated his symptoms. On exam, the patient had a flattened affect, increased speech latency with a monotonous dysarthria, psychomotor retardation, significant ataxia requiring assistance to stand and walk, a right arm resting tremor, and poor memory for recent events. The initial differential included dystonic reaction, Parkinsonism, catatonia, and new stroke deficits. The patient was given 2mg oral benztropine in the emergency department, and received an Ativan challenge with 1mg oral lorazepam assessing for improvement after 20 minutes, but both failed to improve his symptoms. Neurology reviewed a head CT obtained on admission which redemonstrated a stable 2.4cm pontine AVM and showed up to four previously missed bilateral thalamic infarcts. They recommended obtaining an MRI, CT angiogram, and starting the patient on aspirin 81mg daily. Further imaging confirmed multiple subacute to acute thalamic strokes and extensive FLAIR signal throughout the pons that was correlated with radiation-induced inflammation consistent with prior radiation treatment. In collaboration with Neurology, it was concluded that these findings explained the acute onset symptoms that the patient was experiencing and were merely coincidental with the recent administration of the paliperidone LAI. Mr. T.

was treated with physical therapy and dexamethasone 2mg with a planned taper. He stayed on the inpatient psychiatry unit for a total of 36 days to monitor his progress and out of concern for precipitating a steroid psychosis or mania given that he was taken off all neuroleptics and mood stabilizers on admission. Mr. T. was discharged to inpatient physical rehabilitation, and has returned home and continues to improve. In this poster, we discuss the challenges of differentiating stroke deficits from EPS symptoms and stress the importance of collaboration with other specialties in providing comprehensive care to patients with histories of psychiatric illness.

No. 26

Psilocybin in Treatment for Bipolar Disorder: A Systematic Review and Call to Action

Poster Presenter: Sofia Jezzini-Martinez

Co-Authors: Alfredo Bernardo Cuellar-Barboza, Francisco Barrera, Sofia T Lozano-Díaz

SUMMARY:

Introduction:?? Psilocybin is a psychoactive compound found in several mushrooms; is believed to express most of its effects through direct 5-HT_{2A} agonism.¹ This psychedelic compound has been previously studied as a treatment for Major Depressive Disorder (MDD), showing improvement for this mood disorder when compared with the first line of antidepressants². Unfortunately, the latest clinical trials have excluded individuals with a history of bipolar disorder or individuals with the condition itself on account of concern for precipitating a manic episode.³ Our aim was to conduct a systematic review to synthesize the current evidence to understand state-of-the-art available and ongoing research. **Methods:** Peer-reviewed articles published in English were eligible if they met the following inclusion criteria: 1) included participants with DSM-IV or DSM-V5 bipolar disorder (BD); 2) participants treated with or ingested psilocybin. We assessed the quality of selected studies using the checklist developed by Joanna Briggs Institute Checklist for Case reports Critical Appraisal tool in an independent and duplicated manner.⁴ **Results:** Initially, six hundred articles were found, and eleven were selected for full-text review and three articles meet

the inclusion criteria. The first case report presents a 21-year-old American female identifying woman with a history of treatment resistant depression, with anxiety and a history of PTSD, suicidality and one hospitalization. She had a family history of bipolar disorder (BD). After consuming a “substantial amount” of psilocybin cubensis mushrooms, she presented pressured speech, irritable mood, 2-3 hours of sleep each night, and began feeling sexualized by others. She reported the feeling of special powers as reading minds, telepathy and feeling other people’s energies. She was hospitalized and diagnosed with BD type I. The second case report presented a 30-year-old man with bipolar disorder type I previously diagnosed with non-adherence treatment, drug abuse and opioid dependence history. He “filtered” psilocybin mushrooms and administered them intravenously, which resulted in septic shock and organ failure. The last study included a cross-sectional study composed of experience reports collected from several data sources, such as erowid.org, shroomery.org, and reddit.com, where the users self-reported the coadministration of stabilizers and psychedelics. Six users reported the administration of lithium and the oral ingestion of psilocybin mushrooms; two (33%) reported seizures after the intake. Another ten users reported the administration of lamotrigine and oral ingestion of psilocybin mushrooms to relieve their symptoms without describing the afterward response. **Conclusions:** Further research is necessary to determine if psilocybin can be used safely with bipolar patients and if the same antidepressant effect is conferred in bipolar depression as has been demonstrated in unipolar depression.

No. 27

Attitudes Towards Mental Health Treatment and Access Among Healthcare Providers

Poster Presenter: Audrey T. Summers, M.D.

Co-Authors: Ali Farooqui, M.D., Tara Tamton, D.O.

SUMMARY:

Background: Physicians and other healthcare providers are at equal, and in some cases greater, risk for mental illness compared to the general population. Barriers, both tangible and perceived, prevent physicians and other healthcare providers

from pursuing mental health treatment. There is legitimate concern that if the providers’ mental illness were to be exposed, peers and patients alike will judge them and see them as less capable. We hypothesize that mental illness in healthcare providers is underreported due to professional concerns, and a lack of awareness of resources available for this cohort. We surveyed providers via our state’s professional organizations about their mental health concerns (diagnosed or undiagnosed), whether or not they have pursued mental health treatment, and about biases and stigma towards their peers with mental health concerns. In addition we asked about knowledge of resources available for mental health and substance use treatment, and their familiarity with practice licensing laws surrounding mental health and substance use.

Methods: An anonymous survey was sent out to various provider organizations throughout the state of Kentucky. The survey includes questions on the following: demographic information, mental health diagnoses, substance misuse, history of suicidal ideation, mental health treatment or reasons they have avoided treatment, biases toward mental illness in providers, familiarity with available resources in the community, and familiarity with practice licensing laws surrounding mental health and substance use. **Results:** The results are currently preliminary and will be reported once all data has been collected and analyzed.

No. 28

Parenting With a Fetal Alcohol Spectrum Disorder: Effects on Recognition of Child Trauma and Neurobehavioral Health Problems

Poster Presenter: Michael Wang, B.S.

Co-Authors: Julie Kable, Ph.D., Gaby Ritfeld, M.D., Ph.D.

SUMMARY:

Objective: Data on parenting abilities of individuals with Fetal Alcohol Spectrum Disorder (FASD) and effects on their offspring are lacking. The aim of this study is to investigate whether FASD affects the ability to recognize offspring trauma and neurobehavioral health problems. We hypothesize that affected parents underrecognize trauma and mental health problems in their children, and that

this is associated with poorer neurobehavioral health outcomes. **Methods:** Parents were recruited from a group of mostly African American, disadvantaged individuals whose mothers were recruited while they were *in utero* to participate in a prospective longitudinal study on the impact of heavy prenatal alcohol exposure, a cohort which contains both alcohol-affected individuals and nonexposed controls. Parents were asked to participate with their eldest child between ages 5-17. 41 parent-child dyads were recruited to date (n=23 offspring of alcohol-exposed parent and n=18 offspring of unexposed controls) and were assessed using the NIH Toolbox Cognition Battery, Traumatic Events Screening Inventory-Parent and Child Report, Child Behavior Checklist, Vineland Comprehensive Interview Form, and clinical interview. **Results:** Traumatic childhood events were underrecognized by parents with FASD compared to control parents, with controls underrecognizing 0.2 (s=3.1) child-reported traumatic events, whereas parents with FASD underrecognized 3.7 (s=4.0) child-reported traumatic events (2-tailed t-test, p=.006). A significant correlation existed between increased underrecognition of trauma and decreased reported child and family mental health problems ($r(28) = -.40$, $p=.03$). Underrecognition of trauma and mental health problems was not associated with poorer neurobehavioral health outcomes in the children; both groups showed below average child IQ (m=80.8, s=15.2 in FASD offspring and m=79.5, s=15.2 in control offspring), adequate Vineland scores (m=91.8, s=15.4 in FASD, m=94.3, s=12.2), and normal CBCL. Despite similar impairments in neurocognitive functioning in both groups, 39% of children in the control group had an Individualized Education Plan (IEP) per parent-report vs. only 13% of children of FASD-affected parents (not statistically different: ($\chi^2(1, N = 40) = 3.37$, $p = .067$)). **Conclusion:** Data shows parents with FASD underrecognize child trauma, child and family mental health problems and possibly the need for an IEP compared to socioeconomically matched controls. Possible explanations for this include known impairments in adaptive functioning in individuals affected by FASD which may translate into parent-child communication problems, lack of insight into neurobehavioral problems, and lack of advocacy skills. Our study highlights the need to identify and

support parents with FASD to optimize their parenting abilities in the setting of their specific impairments.

No. 29

The Prevalence of Vitamin D Deficiency in Children and Adolescents With Major Depressive Disorder During the Covid-19 Pandemic

Poster Presenter: Oluwatomiwa Babade, M.D., M.P.H.

Lead Author: Sulaimon Adebimpe Bakre, M.D., M.P.H.

Co-Authors: Kritika Chugh, M.D., Abhishek Reddy, M.D., Anita Kablinger

SUMMARY:

Objectives: COVID-19 pandemic resulted in major lockdowns all around the world. This led to schools closing and subsequently students schooling from home. The pandemic also resulted in restrictions on people leaving their homes. We started noticing low vitamin D levels in children and adolescents diagnosed with major depressive disorder who were admitted into inpatient psychiatric unit at Carilion Clinic during this period. Carilion Clinic is also a catchment area for patients in the Appalachian region. We examined the prevalence of vitamin D deficiency in children and adolescents diagnosed with major depressive disorder (MDD). In addition, we raised awareness of vitamin D deficiency in the Appalachian region. **Methods:** Data was collected from EPiC medical records using TriNetx. It included all patients aged 6 to <18 with psychiatric diagnoses and Vitamin D level admitted into inpatient psychiatry unit from March 18, 2020 (Start of the Pandemic) to June 30, 2021. Excluded cases were vitamin D ordered prior to diagnosis date. Included were only the first occurrence of each diagnosis a patient could have had that also recorded a vitamin D result. We arrived at a total of 599 unique patients. Vitamin D deficiency was categorized as patients whose vitamin D level was <30 ng/mL. **Results:** Out of 599 unique patients, 275 patients had a diagnosis of MDD. Out of 275 patients with MDD, 228 (82.91%) were females and 47 (17.09%) were males. The number of patients with MDD who were vitamin D deficient were 226 patients, which amounts to a prevalence of 82.18% (95% C.I. = 77.66, 86.70).

Conclusion: This study reveals that there is a high proportion of children and adolescents with MDD who were deficient in vitamin D during the COVID-19 pandemic. We suspect that the vitamin D deficiency may be related to these patients being home and not exposed to sunlight. One limitation is this being a prevalence study our patients could have been deficient in vitamin D prior to the beginning of the study. Further studies would be needed to explore the association between MDD and Vit D deficiency, especially in the context of the pandemic.

No. 30

Perseverance in Recovery: A Remote Drama Therapy Program for People With Serious Mental Illness in the Clubhouse Setting

Poster Presenter: Clara Cabot

Co-Authors: Amy Cheung, Marko Stojcevski, Xiaoduo Fan

SUMMARY:

People with serious mental illness (SMI) face debilitating adverse effects from standard pharmacological therapy that can affect how they navigate their daily lives. There has been a search for more holistic approaches to mental health care, such as with complementary therapies like drama therapy. Rehabilitative day programs, including clubhouses, help to integrate aftercare services by providing opportunities for social skills development and community connection. Given emerging evidence that drama therapy promotes personal growth and interpersonal relationships, we aimed to explore whether drama therapy offered to individuals with SMI in the clubhouse setting plays a synergistic role in improving quality of life. Here we present findings from a 12-week remote drama therapy program using the co-active therapeutic theater model that cumulated in an online public performance themed around perseverance. Six individuals with SMI were recruited from a local mental health rehabilitation clubhouse and completed the program. Four quantitative surveys were administered pre- and post-program including the Brief Psychiatric Rating Scale (BPRS), Theater Impact Scale (TIS), Quality of Life Enjoyment and Satisfaction Questionnaire (Q-LES-Q-SF), and Perceived Stress Scale (PSS). A post-performance focus group was conducted. Even

though no significant differences were seen in the quantitative measures, four themes were identified from the focus group: 1) decreasing stigma and improving self-esteem; 2) unique nature of expressive arts as therapy; 3) forming close-knit communities through the collaborative nature of theater; 4) encouraging self-expression and empowerment. In collaboration with community mental health organizations, drama therapy has the potential to promote recovery of individuals with SMI and increase public awareness of the lived experience of SMI.

No. 31

A Systematic Review on Changes in Completed Suicide in Pediatric Population After the Start of Covid-19 Pandemic

Poster Presenter: Gloria Lee, M.D.

Co-Authors: Diana Durand, Nathan Zou, Jeffrey Hom, M.D., M.P.H., Ricardo Caceda, M.D., Ph.D.

SUMMARY:

Introduction: The COVID-19 pandemic has resulted in restrictive measures such as social distancing and quarantine, which led to increased mental health issues.¹ Children are vulnerable as a majority of nations have had school closures associated with COVID-19 pandemic.² Our objective is to systematically summarize the primary data literature on how completed suicide in pediatric populations has changed with the COVID-19 pandemic. **Methods:** A search was conducted in Pubmed, PsychInfo, and EMBASE with the terms: “(COVID) AND ((suicide) OR (self-harm)) AND ((child) OR (pediatric) OR (adolescent)) on April 8th 2022. Articles with primary data on completed suicide of individuals under age 20 that occurred before and after the start of COVID 19 pandemic were included. **Results** The search returned 552 unique entries. Ten articles met inclusion criteria.³⁻¹² All ten papers used baseline data from 2019, two from the first months of 2020, and five also included data from previous years. All papers compared this baseline data with rates during 2020. Four studies were from Japan, two from the US, and the rest were from Ecuador, England, India and China. Two articles reported increase in children suicide rates following the pandemic in females and decrease in males. Three

articles reported increase, one reported decrease, and four reported non-significant changes in children suicide rates. Increase in children suicide rates were reported in one study from Japan, one from the Guangdong province in China and one US study, while Ecuador showed a decrease in children suicides. No changes in children suicide rates were noted in England, India, one American and one Japanese study. Conclusion: Half of articles do not find an increase in children suicide with the COVID-19 pandemic, while the other half described increase in children suicide at the population level or only in females. Our results need to be seen in the light of reports of no changes in pediatric mental health admissions with the pandemic.¹³ The effect of pandemic on suicide seems to vary among different nations, and may be sex-specific. Data on completed suicide in children beyond the first year of pandemic is still lacking. Further studies on how suicide rate has changed with school reopening may further the knowledge of the pandemic in children suicide. </p>

No. 32

Positive Predictive Factors of Transcranial Magnetic Stimulation Efficacy in the Treatment of MDD in Adolescents

Poster Presenter: Patrick Arin Bidkhanian, D.O.

SUMMARY:

Objectives: Since its approval for the treatment of depression in 2008, transcranial magnetic stimulation (TMS) and its clinical uses have been widely researched in the adult population. To date there are only a few clinical trials highlighting the safety and efficacy of TMS in children and adolescents. The goal of our literature review was to understand if certain variables such as age, gender, or treatment duration can serve as positive predictive factors for the efficacy of TMS use in Major Depressive Disorder (MDD) in adolescents. **Methods:** We conducted a systematic literature review consisting of open-label or randomized control trials (RCTs) that report on TMS use in adolescents with MDD on three databases: Embase, PsychInfo and PubMed using the PRISMA guidelines of Systematic review and Meta-analysis. Efficacy was measured by changes in Hamilton Depression (HAM-D) Rating Scale or Children's Depression Rating Scale

(CDRS-R) and analyzed against moderators including age, gender, race, total number of sessions, and duration of treatment (weeks). Results: Out of 1560 articles found in these databases, 7 studies met the inclusion criteria (5 open label, 2 RCTs). These studies reported on the use of TMS in adolescents with MDD (Total n = 166, mean age = 16.8 (10-24), male = 43.7%). Mean effect size for CDRS-R was 21.53 ($p < 0.05$) and for HAM-D was 10.513 ($p < 0.05$). In meta regression analysis of CDRS-R, statistical significance was found with total number of sessions ($r = 0.83$, $p = 0.03$). A positive correlation was found with duration of treatment, and negative correlation with age and number of males, however these results did not reach statistical significance. **Conclusions:** TMS has proven to be a safe and effective treatment for depression in adolescent and adult populations alike. Our results show a higher total number of TMS sessions correlate with greater improvement in CDRS-R scores. They also suggest that TMS may have better outcomes in females and in younger children, however further studies are required to investigate this relationship. Overall, more studies are needed to understand positive predictive factors of TMS in order to guide more effective treatment outcomes in the adolescent population

No. 33

Motivational Interviewing Technique as a Means of Decreasing Vaccine Hesitancy in Children and Adolescents During the Covid-19 Pandemic

Poster Presenter: Patrick Arin Bidkhanian, D.O.

Co-Author: Bibiana Susaimanickam

SUMMARY:

Objectives The aim of our study is to determine whether motivational interviewing techniques can be used as an effective tool to educate patients and their families about the benefits of vaccination against COVID-19 and increase vaccinations rates. In our urban community hospital-based child and adolescent psychiatry outpatient clinic, we found a high level of vaccine hesitancy among our patient population. As motivational interviewing is an evidence-based approach to addressing ambivalence and behavior change, we sought to engage parents with this approach. **Methods** This is a quality

improvement project where chart review of all pediatric patients currently enrolled in our clinic was performed to determine which patients are unvaccinated for COVID-19. Telephone contact was made to reach parents to obtain verbal consent and to deliver the intervention consisting of standardized motivational interview techniques followed by brief educational points about the vaccines. Follow up calls were made one week later to determine whether there was any change in readiness to consider vaccination on a scale from 1-10. We reached a total of 29 parents on initial outreach, and 11 parents during the follow up phase. Many were lost to follow up due to unavailability or refusal to participate further. Results Parents ($N = 11$, 5- African American, 6- Hispanic) reported on their decision to have their child (mean age=12.2, 55% Female) receive the covid-19 vaccine. Preliminary findings show an increase in readiness on a scale from 1-10 to receive the vaccine following a one week interval post intervention ($t(10)=2.096$, $p=.06$), with the most common barriers that subjects endorsed being fear of side effects, skepticism regarding the speed at which the vaccines were developed, and wanting to allow their children to decide for themselves. Conclusions We found that there was an overall improvement in vaccine hesitancy following our intervention, though it did not cross the threshold of statistical significance. We also identified common reasons given for hesitancy within our community. Motivational interviewing is a promising intervention to address vaccine hesitancy. Further study is warranted as expanding the reach of such interventions could lead to more robust data as well as broader vaccine acceptance.

No. 34

Increased Resilience With Grief-Enhanced Trauma-Informed ED-Intervention in Youth With Covid-19-Related Posttraumatic Stress Disorder With Grief

Poster Presenter: Maayan Epstein

Co-Author: Naser Ahmadi, M.D., Ph.D.

SUMMARY:

Background: The COVID-19 pandemic has been a major public health concern since 2020 and is associated with major adverse health outcomes. There has been an increasing prevalence of youth

admitted to the Psych ER with symptoms of COVID-19-related posttraumatic stress disorder (PTSD) and grief. Mental resilience has been linked to a positive response to PTSD intervention in the ED. This study explores the impact of enhancing mental resilience in response to grief-enhanced trauma-informed ED intervention with change in PTSD and grief symptoms in youth with COVID-19-related PTSD and Grief. **Methods:** Sixty-two consecutive adolescents (ages 14 ± 4 years, 60% female) with COVID-19-related PTSD and grief with SI received reminder-focused positive psychiatry with suicide prevention (RFPP-S) in addition to the standard of care Safe Alternatives for Teens and Youths (SAFETY-A) at a PER. RFPP-S consisted of a) 10 minutes of RFPP-S twice daily for 2-consecutive days and b) one 10-minute RFPP-S parent psychoeducation session. The resilience, UCLA Brief COVID-19 Screen for Child/Adolescent PTSD, the UCLA PTSD Reaction Index for DSM-5 (RI), and the Persistent Complex Bereavement Disorder Checklist (PCBD) were measured. **Results:** There was a significant relationship between an increase in resilience and a reduction in PTSD and grief symptoms ($r = .074$, $p=0.001$). Suicide ideation reduced significantly after intervention (4 ± 1 vs. 1.5 ± 0.75 , $P=0.001$). A 142% increase in Resilience score in response to RFPP-S was noted. Each standard deviation increase in resilience was associated with a 101% and 250% reduction of PTSD and grief symptoms, respectively ($p=0.001$). **Conclusion:** The findings of this study show enhancing resilience through grief-enhanced trauma-informed intervention is associated with a significant decrease in PTSD and grief symptoms of youth with COVID-19-related PTSD and grief, which has been more robust with grief symptoms. This highlights the importance of enhancing resilience as a significant factor in improving the wellbeing of youth with COVID-19-related PTSD and grief, warranting further study exploring the possible role of enhancing resilience with long-term clinical outcomes.

No. 35

Justice System Requirements Lead to Suicidal Crisis and First-Time Psychiatric Hospitalization for Adolescent

Poster Presenter: Katelyn Cserjes, M.D.

Co-Author: Luis Carlos Isaza, M.D.

SUMMARY:

Patient was a 15yo female with past psychiatric history of PTSD, anxiety, self harm and depression. She was admitted to the inpatient unit for worsening depression, self harm and suicidal ideation. There was no history of drug use or misconduct. There was one prior suicide attempt via overdose on medications five months prior. Patient had multiple superficial cuts to her arms, described as attempts to relieve emotional distress. She and her mother reported worsening depression after an alleged sexual assault two years prior, perpetrated by her biological father. Patient reported worsening suicidal ideation when they were told she would be forced to face her father in court in 3 months as required by state laws supporting rights of the accused. There was no prior history of hospitalization, although patient had been seeing an outpatient therapist. Patient was continued on her outpatient regimen of fluoxetine while her buspirone was discontinued and prazosin 1mg PO QHS was initiated for nightmares. Melatonin 6mg PO QHS was also started for short-term support of severe insomnia. A 1992 study concluded that children who testify experienced increased emotional/behavioral distress, especially if there was lack of corroboration, no maternal support, and/or were required to testify multiple times, vs those who did not testify. Even the Supreme Court does not clarify how it would be best for a child to testify. The federal government recommends that a primary goal should be to reduce the potential trauma to child victims and witnesses from the court system/process. The American Academy of Pediatrics also urges courts to do whatever is possible to prevent psychological harm to the child victim/witness. Despite this, rules and regulations for State court requirement vary. For instance, Tennessee requires the child to testify either "in chambers" or in an empty courtroom. Virginia and Kentucky, however, have age restrictions below age limits for other activities requiring capacity to engage in complex judgment. Kentucky states that the child must be 12yo or younger while Virginia states that the child must be 14yo or younger at the time of the offense. Should there be some uniformity? Multiple sources agree that the victim's mental health should be heavily considered. With evidence that testimony does increase the

stress of the witness, perhaps there should be federal regulations that go beyond mere recommendations.

No. 36**A Detailed Description of Complex Visual and Auditory Hallucinations in an 11 Year Old Patient With a History of Sexual Abuse: A Case Report**

Poster Presenter: Ximena Cors

Co-Author: Regina Leal

SUMMARY:

Introduction: Hallucinations can be unimodal or multimodal and may present in a wide array of clinical conditions, including psychosis, PTSD, delirium, dementia, seizure disorders and migraines.¹ They can be classified as simple (elementary or non-formed) or complex (formed). Simple visual hallucinations include lights, colors, lines, shapes, geometric designs, while complex ones can incorporate images of people, animals, objects or scenes.² Auditory hallucinations may also use this classification, simple ones being elementary sounds and complex spoken phrases, sentences and dialogue.³ There have been several studies linking childhood abuse to the development of psychotic disorders presenting with hallucinations.⁴ Case summary: R. is an 11-year old girl with a history of sexual and physical abuse, who presented to the center with acute psychotic symptoms, including disorganized conduct, aggressive behavior, self-harm threats and suicidal ideation. On interrogation, she referred to a visual hallucination as "Luz" (light in Spanish), and claimed that this figure wanted to harm others and herself. On Game-Based Psychological Assessment, she stated: "When she carries me in her arms, she treats me well. When I fall she tells me to harm myself and others". Afterwards, the aggression towards others escalated, attempting to harm other children in the center. Upon initial stabilization with antipsychotic medication, on subsequent days she started to talk more about "Luz", and incorporated it into her playing time. She continued to present hallucinatory behavior, and got increasingly agitated as this figure "told her to kill her sister". On one occasion, she drew Luz as this strange creature with 6 limbs, 8 eyes and a serpent shaped tongue. Discussion: This case

illustrates a unique multifactorial and multimodal presentation of acute psychosis with both visual and auditory complex hallucinations. Foremost, her sociocultural and family background is complicated, having experienced abuse starting at an early age. A cohort study indicated that up to 40% of individuals with a psychotic disorder report childhood sexual abuse, which is more than twice the prevalence observed in the general population.⁵ Furthermore, she describes the hallucinations in a vivid and dynamic way, leading to significant distress. It is hypothesized that childhood trauma affects the reactivity of the hippocampus, causing the release of stress hormones and leading to the development of perceptual alterations.⁶ Conclusion: This clinical presentation illustrates psychotic manifestations in children, specifically with a history of childhood trauma and abuse. In this particular case, the patient presented with combined visual and auditory hallucinations, which she could describe and illustrate with detail. It is important to consider the factors that might contribute to the presentation and severity of psychotic symptoms, such as family history and environmental stressors.

No. 37

WITHDRAWN

No. 38

Heteroaggressive Behaviors, Hyperphagia and Sleep Disorders in Pediatric Patients With Sellar Tumors: Therapeutic Challenges

Poster Presenter: Corina Ponce

Lead Author: Corina Ponce

Co-Author: Leonardo Emanuel Hess, M.D.

SUMMARY:

Craniopharyngioma (CP) is a histologically benign tumor with long-term sequelae of visual impairment, pituitary hormone deficiencies, and hypothalamic dysfunction, including hypothalamic obesity (HO). Considered a serious morbidity that often contributes to the poor quality of life (QoL) of CP survivors, HO is a severe obesity syndromem with very limited treatment options and poor outcomes Specific behavioral disorders with disrupted impulse control, aggressiveness, and

episodic rage can occur following hypothalamic lesions in patients. In patients with CP, behavioral disturbances, impaired social, emotional, and neurocognitive functioning, and overall reduced QoL are often observed, with an overall prevalence of neurobehavioral dysfunction in 57% of patients. In patients with aggressive behavior caused by hypothalamic damage is reported when access to food becomes restricted. Social abilities, as well as emotional and social adaptation, develop from early childhood to adulthood and are attributed to prefrontal structure. In patients with CP, damage to the prefrontal cortex or projections between the hypothalamus and the prefrontal cortex may occur from tumor or surgical damage, especially when a subfrontal approach is used. Damage to this area may therefore result in disturbances of social abilities or emotions, such as bursts of unpredictable anger. Behavioural studies observed frequent psychopathological symptoms such as anxiety, depression and withdrawal; recently, increased risk of apathy in long-term survivors of childhood-onset CP was reported. Difficulties in learning, emotional control, concerns with regard to physical appearance and body image, and unsatisfactory peer relationships are frequent problems in the daily functioning of those with childhood-onset CP. Case studies suggest that functional behavioural analysis and goal management therapy are useful diagnostic and therapeutic options for cognitive rehabilitation, compensating for cognitive and psychosocial impairments. To describe the experience of the multimodal pharmacological approach of clinical cases of 4 patients with CP and other secular patients with behavioral disorders and hyperphagia during immediate surgical intervention and outpatient follow-up of the disease. The use of pharmacological groups such as antipsychotics, SSRIs and anxiolytics has a palliative effect on the symptoms produced by the hypothalamic syndrome. In our experience, an adequate approach is centered on interdisciplinary treatment. Combined lifestyle interventions, including diet, should always be included for children and adults with HO and hyperphagia after treatment of CP or other suprasellar tumors. • Methylphenidate may be considered for children with HO and hyperphagia after treatment of CP or other suprasellar tumors. Melatonin may be considered in children and adults

with CP or other suprasellar tumors with HO and circadian rhythm sleep wake disorders to improve daytime somnolence </p>

No. 39
WITHDRAWN

No. 40
Emotional Impact and Risk of PTSD on the Students in the School Where the Student Suicide Occurred

Poster Presenter: Jiseon Jang

Lead Author: Seok-Ho Yun

Co-Authors: Yoojeong Lee, Hangil Lee

SUMMARY:

Background Despite many efforts to reduce youth suicide made at the national level, these problems are still serious in most countries. If a student commits suicide, the consequences can have a profound impact on the school community. In particular, students who attend the same school as the suicide student often experience stress and various psychiatric symptoms(PTSD). Although it is important to identify risk groups that experience severe psychiatric symptoms due to suicide in school, it is not well known which factors are involved in this. This study tried to identify factors with a high risk of developing post-traumatic stress disorder in the future based on the emotional evaluation results conducted within 1 week of crisis intervention after a student suicide case occurred. **Methods** We used emotional evaluation data from crisis interventions conducted in 17 middle and high schools in Gyeongsangbuk-do, South Korea in 2020 and 2021 where suicide cases occurred. A total of 2,382 students were included in the study, and subgroups were formed into the middle school/high school, non-boarding/boarding school, same class/different class in the same grade/different grade. Mental health scales used for emotional evaluation were IES-R-K, STAI-S, STAI-T, CES-D, and SSI. **Results** Students in boarding schools had a 1.9 times higher risk of PTSD compared to students in non-boarding schools. (OR=1.916, 95% CI 0.318-0.648). Compared to students in other grades, the relative risk of PTSD among students in the same class as the suicide student was about 2.2 times higher (OR=2.172, 95% CI 1.435-3.288), and students in other classes in the

same grade as suicide students were about 1.5 times more likely (OR=1.462, 95% CI 1.144-1.868). The risk of PTSD was 2.3 times for mild (OR=2.350, 95% CI 1.705-3.240) and 5.4 times for moderate (OR=5.473, 95% CI 3.684-8.132), PTSD risk for students with state anxiety, and 11 times (OR=11.070, 95% CI 6.556-18.695) in severe cases. In case of mild and moderate level of trait anxiety, the relative risk of PTSD occurrence is about 1.7 times (OR = 1.658, 95% CI 1.045-2.631) and 2.2 times (OR = 2.196, 95% CI 1.094-4.406), respectively. The relative risk of PTSD was 3.7 times higher for students with potential depression. (OR=3.729, 95% CI 0.404-2.117).

Conclusion When a student suicide event occurs, high risk group of developing post-traumatic stress disorder includes those who attend boarding schools, those who are in the same class or grade as the suicide students, and those with high state anxiety on an early emotional evaluation, those with mild or moderate characteristic anxiety, those showing depressive symptoms. It is necessary to intensively manage high-risk students and to monitor the morbidity of psychiatric diseases in the long term.

No. 41
Fibromyalgia, Attention Deficit Hyperactivity Disorder, Obstructive Sleep Apnea and Obesity

Poster Presenter: Evan J. Sitar, B.A.

Co-Authors: Jiin Vivien Choi, Sarah Xu, Edwin S. Meresh, M.D., M.P.H.

SUMMARY:

Background: Fibromyalgia (FM) is a chronic pain disorder and is often comorbid with obstructive sleep apnea (OSA)¹, a sleep disorder that comes with its own negative consequences and can furthermore, exacerbate the symptoms of patients with fibromyalgia. Attention Deficit/Hyperactivity Disorder (ADHD) is a neurodevelopmental disorder and there are emerging reports on co-morbidity of ADHD and FM, one study reports that ADHD was present in 24.5% of FM patients.² Another study reports that ADHD was present in 29.5% of FM patients.³ Therefore, in a subgroup of patients with FM, OSA, Obesity and ADHD could be all related. The aim of this study is to develop a better understanding of the relationship between FM, OSA, Obesity and ADHD.

This is an important line of inquiry because many FM patients are commonly prescribed opioid medications for their pain, which come with their own associated risks of dependence and overdose. **Study Aims:** For better care of these patients, we need a better understanding of this overlapping presentation of FM, OSA, Obesity and ADHD. This study assessed the co-occurrence of ADHD in FM patients diagnosed with OSA and Obesity. **Methods:** Institutional Review Board Committee approved the research protocol, all patients gave their written informed consent after the study was explained. Adult ADHD Self-Report Scale (ASRS-v1.1) Symptom Checklist Questionnaire⁴ was administered to patients diagnosed with FM and OSA. Total score of ≥ 4 on the six-item Part A section of ASRS-v1.1 is threshold to indicate a positive screening test. Patients were also requested to report if symptoms were present during childhood age. Inclusion criteria: Age greater than 18, met the ICD 9-10 diagnosis of FM, and diagnosed with OSA after sleep study. Their weight and body mass index (BMI) were noted. **Statistical analysis:** This is an ongoing pilot study of 50 patients with FM and comorbid OSA to see if ADHD is present. To compare comorbidity of obesity between groups the Fisher's exact test was used. **Results:** FM n= 38, males n=2, females n=36. Mean age 60.60, BMI mean 37.16 FMS + ASRS-v1.1 positive screen n = 18 (47%), age: 60.27, BMI 35.44 Reported if symptoms were present during childhood age n=10 (26%) FMS + ASRS-v1.1 negative screen n=20 (52%), age 60.94, BMI 38.89 Both groups have higher BMI, the co-morbidity of obesity between the two groups is not statistically significant (Fisher exact statistical value is 1). **Discussion:** This pilot study has identified co-morbidity of ADHD (26%) based on the survey findings from a self-reported scale. Detailed assessment to rule out ADHD in FM and OSA is required as attention problems are frequent in FM and OSA. Obesity is noted to be high in both groups, likely contributed by OSA and FM. **Conclusion:** Prospective studies are needed to understand a likely connection in a subgroup of patients with FM diagnosed with OSA, ADHD and Obesity.

No. 42

A Rarity Among the Rare: Psychiatric Manifestations in a Young Woman With Stiff Person Syndrome

Poster Presenter: Erick Acosta Heredia

Co-Author: Derek Sanak

SUMMARY:

Stiff-person syndrome (SPS) is a rare progressive neurologic disease associated with autoantibodies against glutamic acid decarboxylase, an intracellular enzyme involved in the production of gamma-aminobutyric acid. We present a case involving a 35-year-old Haitian female who was placed under the Baker Act in the emergency department for suicidal behavior and acute psychosis. She has a history of SPS with a positive glutamic acid decarboxylase (GAD) antibody, a condition most commonly found in females between 20 and 50 years of age. The condition was managed by an outpatient neurologist using diazepam, baclofen, and monthly intravenous immunoglobulin treatments. She also has an extensive history of organic neurological conditions, including traumatic brain injury at 18 years old and COVID-19-related anoxic encephalitis that occurred in December 2020. Both psychiatric and neurological physical exams were completed. They revealed a cerebellar tremor, bilateral ptosis, poor eye contact, decreased concentration, poor insight, depressed mood, flat affect, poor judgement, delusional thoughts and a disorganized thought process with tangential speech. CT and MRI imaging of the brain showed no acute intracranial abnormalities. A quantitative titer of the GAD antibody was completed and shown to be elevated $>250\text{IU/mL}$. Depakote 500mg twice daily and risperidone 3mg twice daily were prescribed. The patient had progressive improvement of psychosis including delusional thoughts over the following five days and was able to be discharged with instructions to follow-up with outpatient neurology.

No. 43

Treating Benzodiazepine Resistant Catatonia of Unclear Etiology in an Adolescent?

Poster Presenter: Moshe Bitterman

Co-Authors: Emanuel Martinez, Ewa Bieber

SUMMARY:

Ms. K, a 16-year-old female was hospitalized with malnutrition secondary to catatonia. On examination by consultation liaison psychiatry, the catatonia was characterized by stupor, withdrawal, mutism, staring, catalepsy, waxy flexibility, stereotypies, incontinence, automatic compulsive movements, and refusal to eat or drink. Ms. K required g-tube placement for feeding. She at times also displayed odd, regressive behavior, using cloth or paper towels to dress stuffed animals with diapers. She responded well to a lorazepam challenge. However, lorazepam was titrated up to a total daily dose of 27.5mg with only modest improvement in symptoms. History revealed the onset of behavior change 1.5 years prior with the patient undertaking a planned forty day fast that, which parents felt at that time was congruent with the family's religious disposition. Weeks following this fast, Ms. K's school performance began to deteriorate, and odd behaviors began to emerge, such as walking backwards, bumping into household objects, and apparent imbalance. At that point Ms.K was medically admitted, and extensive workup led to diagnosis of seronegative autoimmune encephalitis. Her serum was positive for atypical ANCA, CSF contained oligoclonal bands, and MRI showed nonspecific cerebral white matter lesions, but all other studies were unremarkable. She received IVIG followed by PLEX with only minor, transient improvement. Further medical work-up during her admission to Lurie Children's revealed progression of hemispheric white matter lesions on MRI, thyroid nodule with +anti-TPO antibodies, and nonspecific abnormal EEG. She again received IVIG followed by PLEX with only slight, transient improvement from these interventions. From a psychiatric perspective, the risks and benefits of initiating treatment with a second-generation antipsychotic targeting a potential underlying psychotic etiology for catatonia were discussed, now conceptualizing the religious fast as hyperreligiosity and the deterioration in function as a prodromal period, however parents declined this in favor of pursuing further medical workup and treatment. ECT, was also recommended and discussed, but the family initially declined. Given lack of progress despite treatment with lorazepam and IVIG/PLEX, and with strong recommendation from medical providers, the family eventually consented to ECT. Ms. K was transferred to a facility

capable of performing ECT on minors where she has experienced improvement, though remains below her functional baseline. While ECT is the gold standard of treatment for catatonia that does not remit with benzodiazepines, the protocol for treating catatonia in children when ECT is not available is not well defined, especially when the condition underlying the catatonia remains unclear. In this poster, we discuss the options for treating a pediatric patient with benzodiazepine resistant catatonia when the family declines ECT or when ECT is difficult to access.

No. 44**Culturally Competent Collaborative Care: The Importance of Culturally Sensitive Care in Collaborative Care for Racial/Ethnic Minorities**

Poster Presenter: Anthony Duong, M.D.

Co-Author: Philip R. Muskin, M.D., M.A.

SUMMARY:

The collaborative care model (CoCM) was introduced to expand access to mental health services by making it more convenient, reducing the stigma associated with treatment, and by building on existing provider-patient relationships. The effectiveness of this research-based integrated model is supported by randomized-controlled trials and meta-analyses; however, the research is limited regarding the efficacy of collaborative care models for racial/ethnic minorities and/or groups of lower socioeconomic status. Current research generally supports the use of collaborative care models in racial/ethnic minorities with statistically significant improvements in treating depression, anxiety, and PTSD when compared to "usual care." This is in line with much of prior CoCM research conducted in largely non-minority communities. Some research shows that culturally sensitive care has no statistically significant impact on depression outcomes; however, the studies lack standardization for what is considered culturally sensitive care. There is a breadth of research purporting the effectiveness of culturally sensitive care in improving health outcomes. Mental health disorders are often underdiagnosed or undertreated in these groups. Therefore understanding how to better engage these patients, and whether a more standardized culturally

sensitive care system can be i) more effective, and ii) utilized in collaborative care models, is critical in further expanding access to mental health services. This poster will focus on current research on collaborative care models with racial/ethnic minorities and/or groups of lower socioeconomic status, culturally competent care, and future directions of CoCM.

No. 45

WITHDRAWN

No. 46

A Descriptive Study of a Perinatal Psychiatric Consult Service to Improve Racial Disparities in Maternal Outcomes

Poster Presenter: Elizabeth M. Fam, M.D.

Co-Authors: Ilirjan Gjonbalaj, M.D., Ali Kalam, Meghana Medavaram, M.D., Rubiahna Vaughn, M.D., M.P.H.

SUMMARY:

Background: Pregnancy is associated with increased vulnerability to psychiatric disorders. Untreated psychiatric illness during the perinatal period is known to worsen medical outcomes for the expectant mother and fetus. During the perinatal period, women of color have higher rates of maternal morbidity and mortality, perinatal depression, and suicidal ideation compared to White women. There is limited data on characteristics and psychiatric treatment of women of color in the perinatal period. This descriptive study aims at highlighting key demographic information and potential interventions to improve outcomes for women of color. Methods: A retrospective chart review was conducted on 48 patients admitted to the obstetric service and seen by a perinatal psychiatric consultation team over the course of 18 months. Patient demographics, primary medical and psychiatric histories, and obstetric characteristics were collected. Chi-square or Fisher's exact tests were used to analyze associations of psychiatric diagnosis with patient demographic and obstetric characteristics. Results: Patients were primarily Hispanic (41.7%) or non-Hispanic Black (33.3%), with high school education (27.1%) or less (27.1%), unemployed (66.7%), and publicly insured (91.7%).

72.9% of patients had a past psychiatric history, 22.9% had prior suicide attempts, 37.5% had prior psychiatric admissions, 54.2% reported a history of trauma and 50% had a history of substance use. Patients were seen primarily in the postpartum period (56.3%) and third trimester (22.9%). 43.8% of newborns were admitted to the NICU. 62.5% had father of the baby involvement. 12.6% of patients were admitted with a primary psychiatric related complaint, including anxiety and substance use disorders. The most common reasons for consultation were depression (22.9%) or anxiety/panic (25%), 64.6% of patients were not taking psychiatric medications at the time of initial consultation, and medications were started by the consult team for 54.2% of patients. Outpatient follow-up was recommended for 60.4% of patients. Conclusion: Our study had majority Hispanic and Black patients and the high levels of reported trauma, substance use, and prior suicide attempts highlights the uniquely elevated baseline risks in this patient population. Our data helped identify areas for potential interventions such as incorporating fathers in treatment, ensuring effective communication in line with patients' education level, identifying preferred language, and increasing collaboration with NICU staff. We referred most of the patients to psychiatric outpatient treatment, however, most outpatient reproductive mental health specialists do not accept public insurance. This study helped us fund an outpatient reproductive psychiatry attending position to better serve the needs of our patients. Continued research about women of color during the perinatal period is needed for further improvement of both psychiatric and obstetric outcomes.

No. 47

Speech Impairment Associated With Functional Neurological Disorder, Potential Treatment Targets: A Case Report

Poster Presenter: Aisha Shaukat Shariq, M.D.

Lead Author: Enrique Murillo, M.D.

Co-Authors: Chika Nwachukwu, Sarah Michael, M.D., Sophia Hantzopoulos

SUMMARY:

Introduction Functional Neurological Disorder (FND), or conversion disorder, is a psychiatric syndrome characterized by motor and sensory dysfunction not due to underlying neurological or medical conditions. FND is difficult to diagnose and treat and we are limited in terms of treatment options. In patients with co morbid medical illness, distinction between medical vs. psychiatric etiology can be specially challenging. Here we present a case of a South American refugee patient with exposure to trauma, who presented with mutism as a symptom of FND Case Report The patient is a 16-year-old immigrant female from El Salvador with a medical history of epilepsy diagnosed at age 9. The patient was domiciled at a shelter while awaiting reunification with her father. She was evaluated by the psychiatric consultation liaison team multiple times due to concerns of FND with seizures. Her two EEGs were negative, and a previous MRI displayed suspicious mesial temporal sclerosis. During her initial evaluation by the psychiatric team, she was diagnosed with psychogenic nonepileptic seizures (PNES) and adjustment disorder with mixed anxiety and depressed mood. Patient was started on Escitalopram 10 mg PO QAM and discharged with recommendations to continue with outpatient treatment and psychotherapy. Patient returned ten days later after having a seizure at the shelter. EEG performed showed generalized onset seizures as well as some postictal right central sharps. EEG completed two days later showed no epileptiform features. The following day, the psychiatric team was consulted for catatonia as the patient exhibited mutism for 24 hours. The patient had no other symptoms of catatonia and no improvement with an Ativan challenge. Patient was diagnosed with FND and started on Escitalopram 10 mg which was titrated to 20 mg. Pt. had improvement in mood and associated mutism resolved on day 3 of treatment Discussion FND occurs after a psychologically distressing event that can cause unexplained physical and neurological symptoms. There are several indicators pointing to trauma exposure for this patient given immigration and detainment in the immigration detention center. Serotonergic mechanisms involved in trauma can also be involved in mutism associated with FND. Mutism as a symptom of FND is not commonly encountered and

treatment options include cognitive and therapy. There is limited data on the utility of SSRI for mutism in FND. Selective Serotonin Reuptake Inhibitors (SSRI) are effective in treating FND with a comorbid mood or anxiety disorder, Here we present a case of resolution of mutism with SSRI Conclusion There are limited studies on mutism associated with FND and our scope of practice is limited in terms of treatment options. Our case demonstrated that SSRIs can be useful in the treatment of FND, especially in patients experiencing mutism or speech difficulties. More research is needed to study SSRI as a treatment option for mutism associated with FND

No. 48**A Vietnamese Man's Denial of Tuberculosis and Its Impact on Treatment: A Cultural Psychiatry Approach**

Poster Presenter: Rohan Patel, D.O.

Co-Author: David Karol, M.D.

SUMMARY:

Mr. N., a 48-year-old Vietnamese man with no past psychiatric history is evaluated by the psychiatric consultation-liaison service for capacity to refuse medications for tuberculosis (TB). He denied being afflicted with TB, lacked core understanding of the disease and its effect on his wellbeing. He would persevere on somatic pain and a persistent sensation of internal coldness. He reported sadness but did not meet criteria for a mood disorder, thought disorder, or cognitive impairment. Due to increased risk of mortality and inertia towards antibiotic treatment, the patient's brother-in-law facilitated rapport and social connectedness, along with the understanding that the patient has been isolated and wishes to reunite in their home setting. His involvement served as the primary catalyst toward the patient's agreement with medical interventions. Although the patient's denial regarding the diagnosis of tuberculosis remained stagnant, the shared decision-making with family allowed delivery of necessary antibiotics and prevention of further spread of the contagious bacterium. Mental illness and TB have a bidirectional relationship, with rates of mood disorders as high as 70% in patients with TB and increased incidence of TB seen in patients with depression and

schizophrenia.^{1,2} Compared to TB alone, depression comorbid with TB contributes to a decrement in all health domains - particularly in self-care³ - and is associated with disability, discrimination, stigma, malnutrition, isolation, and rejection.³⁻⁵ TB-related stigma and depressive symptoms are associated with medication adherence and quality of life.⁶ Vietnamese culture often views disease as an imbalance between alternating vital forces of âm and duong, translated to “cold and hot,” respectively.⁷ We believe our patient’s expression of feeling cold may have been related to this cultural belief. The Vietnamese population have a high level of stigma against mental illness due to its association with shame, ostracization in the community, and being labeled “crazy.”⁸ Vietnamese adults experiencing serious distress are at an elevated risk of delaying medications than other Asians overall⁹; acculturation, self-care, and motivation from family are protective factors which promote professional help-seeking.¹⁰ Older Vietnamese immigrants prioritize collectivism over individuality, with older males in the family being involved in important decision-making processes.⁷ The patient’s brother-in-law was the oldest male in the family and served as the primary decision maker. Cultural competence and shared decision-making can assist clinical teams to identify the interpersonal, social, psychological, and stigmatizing factors in this population, especially when assessing decision-making capacity. In this poster, we explore the challenges in providing medical care when faced with cultural barriers in a Vietnamese male with TB and the role of psychiatry in bridging the gap towards treatment.

No. 49

Efficacy of Electroconvulsive Therapy in Melancholic and in Atypical Depression: A Systematic Review

Poster Presenter: Lucia Wang, M.D.

Lead Author: Lucia Wang, M.D.

Co-Author: Fabiano Nery, M.D., Ph.D.

SUMMARY:

Background: Early research suggested that electroconvulsive therapy has great efficacy for melancholic depression whereas has relatively milder efficacy for atypical depression. However, this

assumption remains to be confirmed. We conducted this systematic review to assess the evidence for superiority of ECT for melancholic depression compared to that for atypical depression. **Method:** We systematically searched the literature in PubMed and Cochrane databases published from January 1980 to August 2022 investigating the efficacy of ECT in melancholic depression and in atypical depression. We used the search terms: "electroconvulsive" AND "depress*" AND ("respon*" OR "remi*" OR "efficacy") AND ("atypical" OR "non-atypical" OR "typical" OR "melancholi*" OR "non-melancholi*"). We limited the search to comparative clinical trials with adult patients with unipolar and/or bipolar depression, categorized by either atypical or melancholic subtype and the respective control group, that reported response and/or remission to ECT based on Hamilton Rating Scale for Depression and Montgomery-Asberg Depression Rating Scale. We excluded articles not in English, that included patients with primary psychotic disorder or major neurocognitive disorder, and that did not specify the inclusion criteria for depression and subtype.

Results: We had a total of 195 search results. Our final analyses included 4 articles, with a total of 1161 patients. Three articles compared the efficacy of ECT on melancholic depression (MEL) vs. non-melancholic depression (NMEL). One study found that patients with NMEL had higher remission rates (78.7%) than those with MEL (62.1%), with an odds ratio of 2.3. In another study, patients with MEL had 5 times greater odds of achieving response and 3 greater odds of achieving remission than patients with NMEL. In one study in older adults, odds of achieving response and remission did not differ between MEL and NMEL. Only one article compared the efficacy of ECT on atypical depression vs. non-atypical depression, with higher remission rate for atypical (80.6%) vs. non-atypical depression (67.1%), with an odds ratio of 2.6; no response rates were reported. There were no articles comparing ECT vs. sham intervention in either depression subtype, nor directly comparing ECT efficacy between atypical and melancholic depression, nor studying ECT efficacy in DSM-5 depression subtypes. **Conclusion:** ECT appears to be equally effective for achieving remission in both melancholic and atypical depression, but their relative efficacy in these subtypes remains to be fully determined. Differences

in sample selection of melancholic subtypes may partly explain discrepancy in findings, and the validity of DSM-IV criteria specifiers has been controversial. Limitations of this review include the lack of head-to-head trials and studies with controlled conditions. Future research needs to be done to investigate the relative efficacy of ECT in DSM-5 depression subtypes.

No. 50

Assessment of Complement Cascade Components and Ketamine's Mechanism of Action in Patients With Treatment Resistant Depression

Poster Presenter: Brandi Quintanilla

SUMMARY:

Background: Over 300 million people world-wide suffer from major depressive disorder (MDD). Unfortunately, only 30-40% of patients with MDD receive remission after conventional monoamine antidepressant therapy. In recent years, ketamine has revolutionized the treatment of MDD, with its rapid antidepressant effects manifesting within a few hours as opposed to weeks with conventional antidepressants. Many research endeavors have sought out to identify Ketamine's mechanism of action in mood disorders, with several studies implicating ketamine's role in neuroinflammation regulation. The complement system is an important component of the innate immune response vital for the regeneration processes, including neurogenesis. The complement pathway has been implicated in the pathophysiology of depression and studies have shown significant increases in Complement component 3 (C3) expression in the PFCs of depressed suicide subjects. Given complement's role in depression, ketamine's/complement's ability to modulate glutamatergic transmission, and the fund of research highlighting ketamine's anti-inflammatory properties; there is reason to suspect an overlay between the complement system pathway and ketamine's mechanism of action. To investigate this, we hypothesized an increase in baseline complement system levels that are subsequently attenuated by ketamine administration at varying time points. Methods: Thirty-nine unmedicated individuals with MDD (23F) and 25 healthy volunteers (HVs, 16F) participated in a

randomized, double-blind trial comparing intravenous ketamine (0.5 mg/kg) to placebo. Blood was obtained at baseline and at three post-infusion timepoints (230 minutes, Day 1, and Day 3). Plasma was then aliquoted into cryotubes and stored at -80 °C until thawed for assay. In this secondary analysis from a placebo-controlled double-blind inpatient crossover ketamine trial, C3a levels were determined by ELISA. Due to notable skew in our data, we log transformed C3 values. We used a linear mixed model with C3 (log ng/ML) as our outcome and included fixed effects of drug (KET, PBO) and drug*time to test our hypotheses. Models also included time as a main effect, sex, age, and baseline C3 as covariates, and a random intercept per person. Results: We did not detect overall drug differences or differences on C3a levels at any of the time points. The model adjusted overall drug effect was (collapsed over time) (Ket - Pbo = -0.008 (SE= 0.04) $t=-0.203$ (df=286), $p= 0.84$). The Ketamine/Placebo difference at each time point was 230 min: Ket - Pbo = -0.0517 (SE=0.065) $t=-0.795$ (df=282), $p=0.4271$; Day 1: Ket - Pbo= -0.0250 (SE=0.0652), $t= -0.384$ (df=279), $p=0.7014$; and Day 3: Ket - Pbo 0.0531 (SE=0.0695), $t=0.764$ (df=278), $p=0.4458$. Conclusion: Our findings did not show a significant effect of ketamine on plasma C3a levels. Additional analyses on other complement proteins and their association with inflammatory markers are in progress.

No. 51

Association Between Health-Related Quality of Life and the Severity of Depression in Patients Diagnosed With Depression

Poster Presenter: Aarij Khan, M.D.

Co-Authors: Jose J. Madera, M.D., Manuel Rosario, M.D., Mariel Nunez Checo, M.D., Nelson Leonel Martínez Rodriguez, M.D.

SUMMARY:

Objective: This study aims to relate the Health-Related Quality of Life (HRQL) and the severity of depression in patients diagnosed with depression who attended a psychiatric inpatient clinic in Santiago de los Caballeros between July and September 2019. **Methods:** A cross-sectional descriptive study was conducted. Participants signed informed consent and filled out a questionnaire that

included the SF-36 and the Beck Depression Inventory-II (BDI-2). The mean of the results associates the HRQL and the severity of depression. P-values >0.05 were statistically significant. **Results:** A sample of 55 participants filled out the survey and qualified for the final analysis. Patients with severe depression (38.2%) had a worse quality of life regarding physical function, vitality, mental health, and social function, with an SF-36 mean of 40.0, 28.3, 34.3, and 21.4, respectively. Female patients with severe depression (23.6%) had lower HRQL according to their vitality, mental health, and social function, with a mean of 25.3, 33.8, and 19.2, respectively, compared to the male sex. Vitality, mental health, and body pain were lower in patients with severe depression within the age range of 25 to 44 years compared to others. **Conclusion:** A lower HRQL was associated with greater severity of depression in the general population. Female patients and those aged 25 to 44 years showed a worse HRQL concerning the severity of depression. In order to expand on these results, there is a need for further observation with more patients. The close observation of these dimensions in day-to-day clinic activity could lead to personalized intervention for these high-risk patients.

No. 52

Late-Onset Mania in a Fragile X Carrier

Poster Presenter: Heba Ekladios

Co-Authors: Melissa Calt, Adriana M. Fitzsimmons, M.D., Robert G. Stern, M.D., Rehan Aziz

SUMMARY:

Background Old-age bipolar disorder (OABD) is used to describe bipolar disorder (BD) occurring in individuals ≥ 50 years of age. The disorder has been reported to have a yearly incidence rate of 0.1-0.5 % [1]. OABD is often associated with cerebrovascular disease [2,3]. More recently, fragile X carrier status has been linked with an increased risk for OABD [4]. Here we report on an older female who is a fragile X carrier presenting with a first episode of mania at age 70. **CASE SUMMARY** The patient had a past medical history of fragile-x permutation, uncontrolled hypertension, and atrial fibrillation. The patient had no significant past psychiatric history. She has a son diagnosed with autism spectrum

disorder and fragile X syndrome. In clinic, she presented with a 6 month history of mood lability, pressured speech, forgetfulness, suspiciousness, and sleep disturbance. Medical work-up was significant for Head CT brain demonstrating a small remote area of encephalomalacia in the left frontal deep white matter. On cognitive evaluation, she scored 30/30 on the MMSE and 29/30 on the MOCA. The patient was diagnosed with bipolar I disorder, MRE manic with psychotic features. She was prescribed quetiapine 50 mg PO BID. Two weeks later, she returned with worsening symptoms of disinhibited behavior, irritability, increased non-goal-directed activity, aggression, disorganized thought process, word-finding difficulty, and inability to care for her son. She had not been adherent with quetiapine. One week later, she was admitted to a psychiatric unit for stabilization. After ten days of treatment and titration of Divalproex to 500 mg PO BID, her symptoms improved. **Discussion** Fragile X syndrome (FXS) is a genetic disorder caused by a trinucleotide repeat expansion of CGG in the 5' untranslated region of the fragile X mental retardation 1 (FMR1) gene located on the X chromosome.[5] It is classified according to the number of CGG repeats with normal alleles (5–44 repeats), premutation alleles (55–200 repeats), or full mutation alleles (>200 repeats). Premutation expansions are common. They occur as 1 per 113–259 females and 1 per 260–810 males. People with fragile-x gene permutations have a higher incidence of new-onset older-age mood disorders, including OABD.[5] We recommend routinely screening patients with fragile X permutation for late-life mood and anxiety disorders. However, in this case, we cannot exclude the possibility of vascular mania contributing to the patient's presentation due to the patient's underlying cerebrovascular disease. [2,3] **CONCLUSIONS** Neuropsychiatric correlates of the fragile x permutation are under-researched, though in combination with cerebrovascular changes may increase susceptibility for OABD. Clinicians should be alerted to the increased risk of psychiatric disorders beginning in late-life in carriers of the premutation.

No. 53

Assessing Ageism Among Medical Students Participating in a Geriatric Volunteer Initiative

Poster Presenter: Jamie Chen

Co-Authors: Singi Weerasuriya, Naomi Ambalu, D.O., Morgan Peltier

SUMMARY:

Background: Ageism, or discrimination based on the grounds of an individual's age, is particularly prominent in the healthcare sector, leading to poorer health outcomes in older adults that are a growing demographic in the United States (Mikton et. al, 2021). Students at Hackensack Meridian School of Medicine (HMSOM) created a new HMSOM student club, the "Phone Pal Program," aimed at supporting isolated seniors in the community. Such programs have been reported to have beneficial effects on both the participating seniors as well as the volunteering students (Office et al. 2020). We evaluated whether participation in the Phone Pals Program may have impacted their perceptions of aging. Methods: Older adults reporting isolation or loneliness to their attending psychiatrist were presented with information about the HMSOM Phone Pal Program. Medical student volunteers were matched with an older adult (Phone Pal), and attempted to conduct regular weekly telephone calls to their designated Phone Pal over a period of three months in an effort to provide emotional and psychosocial support. First and second-year medical students were recruited for this project. 39 responded to the opportunity to volunteer in the study. 12 were trained and entered the Phone Pals program over a period of three months, and the remaining 27 did not. A digital survey incorporating both qualitative and quantitative elements, including questions about background experiences with older adults (e.g. home life, work experience), adjectives to describe older adults, and the validated Ambivalent Ageism Scale (AAS; Cary et. al, 2017), was administered to the cohort before and after the 3 month period for both groups. Baseline data were compared using t-tests and Fisher's exact tests as appropriate and responses to the mixed and stratified ordinal regression analyses. Results: Both intervention and control groups were largely similar regarding age (P=0.48) , sex (P=0.25), previous coursework in geriatrics (P=0.09), work (P = 0.08), volunteer (P=0.72), lived (P=0.73), planning to live (P=1.0), or desire to work with (P=0.30) the elderly. Students in the intervention group more frequently gave higher responses to AAS questions 4 (P=0.04),

10 (P=0.02), and 11 (P=0.03) at baseline than the controls. After the intervention, however, no differences were detected except for AAS item 1 (P<0.001) which were significantly lower for the intervention group. Conclusion: Although this was a small pilot study, we were still able to demonstrate a clear effect of participation in the project on at least one measurement on the AAS. Further refinements to the training program may be helpful to further impact ageism among our student and patient population. A larger scale study involving more participants is warranted.

No. 54

Trans Cranial Pulse Stimulation as a Method for Treating the Central Nervous System of Patients With Alzheimer's Disease

Poster Presenter: Marc Ziegenbein

SUMMARY:

Introduction: Dementia - one of the most common diseases in old age - is often only diagnosed at a late stage. Therefore patients with dementia have often a 1.4 to 3.6 times greater risk of treatment as an inpatient. Consequently it is highly relevant within the caring system to identify and treat the onset of dementia at the earliest possible opportunity. Part of a new treatment center, a psychiatric clinic in the Hanover area (Wahrendorff) has concentrated on treating patients with a mild or moderate form of Alzheimer's disease as early as possible on an outpatient basis. The method of transcranial pulse stimulation is used. Acoustic pulses generated outside the body are introduced specifically into the brain regions requiring treatment. The aim being the release of growth factors and an improvement in cerebral blood flow, as a means to maintaining and promoting cognitive performance for as long as possible. The poster contribution shows reports from clinicians, patients and relatives, using transcranial pulse stimulation. The development of cognitive performance in the course of treatment is also considered. Method: The data collection for the quantitative study design will take place at the clinic in the period from 06/2021 to 10/2022 (N planned = 60). Cognitive performance is recorded using the Montreal Cognitive Assessment (MoCA test) and the experience reports via interview. Results &

Discussion: Results of repeated measurement and analysis of the variance in terms of cognitive performance (MoCA test, baseline and follow-up measures) are presented. Field reports are considered and the suitability of transcranial pulse stimulation as a method for treating the symptoms of dementia in Alzheimer's disease is discussed in the form of a best-practice example.

No. 55

Pro-Inflammatory Cytokines and Late-Life Depression: A Community Based Brazilian Study

Poster Presenter: Lais Lundstedt Kahtalian

Co-Authors: Eduardo Goncalves, Salma Rose Imanari Ribeiz, Patricia Buchain, Geraldo Busatto

SUMMARY:

INTRODUCTION Late-life depression is a prevalent mental disorder, reaching rates from 10 to 38% worldwide and has similar rates in Brazil (VALIENGO et al, 2016). The urge to understand the pathophysiology of this disease led to the study of the hypothalamic-pituitary axis and inflammatory mechanisms (REA et al, 2018). Pro-inflammatory cytokines have an influence on brain functioning, and their excessive or sustained release may impact mood and cognition (BEUREL et al, 2020). Previous studies have found an association of higher levels of interleukin 1 β and 6 and depression among the elderly (NG et al, 2018). **METHODS** A total of 3.171 elderly users of primary care units from São Paulo were assessed for depressive symptoms, being excluded from analysis those with screening missing data or evident cognitive decline (less than 13 points in the Mini Mental State Exam). Blood samples for dosage of inflammatory cytokines were obtained for dosage of C-reactive protein (CRP), tumor necrosis factor (TNF), interferon gamma (IFN-G) and interleukins (IL) 1 and 10. A score of 13 or more in the Center for Epidemiological Studies - Depression (CES-D) was considered positive for clinically relevant depressive symptoms. Statistical analyses were performed using the R-Project and the outliers were treated by Box Plot. Significance was evaluated using the non-parametric Mann-Whitney test. Logistic regression was performed for cytokines dosages controlled by sex. **RESULTS** The final sample consisted of 835 participants who met the inclusion

criteria and provided blood samples for analysis. The group with a positive screening for depressive symptoms (n=306) was predominantly female (73%) with a mean age of 68.6 years, compared to the control group who had 54% of female participants with a mean of 68.8 years. There was a statistically significant association between female sex and depressive symptoms. We found statistically significant lower dosages of IL-1 (p: 0.0015) and higher dosages of IFN-G (p:0.0025) for the group with a positive depression screening compared to the control group. After controlling for sex the difference remained significant only for IFN-G. There were no significant differences in dosages for CRP, TNF and IL-10 between groups. **CONCLUSION** The finding of higher dosages of IFN-G in the depression group is consistent with previous findings (NG et al, 2018) and suggest an association of inflammation and the mood disorder. The lack of significant findings for CRP and TNF α is also consistent with previous results (NG et al, 2018). Our findings add information to the current state of knowledge, and further studies are needed for a better understanding of the neurobiological aspects of late-life depression.

No. 56

Unmasking of Myasthenia Gravis After Starting Atypical Antipsychotics

Poster Presenter: Mohammad Lesanpezeszki, M.D.

Co-Authors: Lendita Haxhiu-Erhardt, M.D., Graham Hughes, M.D., Elizabeth DeOreo, M.D., Jonah Grossman

SUMMARY:

Background: Myasthenia Gravis (MG) is caused by autoimmune antibodies affecting neuromuscular junctions. Symptoms are characterized by muscle weakness which is life-threatening with respiratory involvement; this is known as myasthenic crisis. Psychotropic medications, such as antipsychotics, have anticholinergic effects on the neuromuscular junction.(1) Here, we present a patient with undiagnosed MG that was unmasked by the initiation of Atypical Antipsychotics. **Case report:** A 49-year-old female without known past psychiatric history presented with bizarre behavior and paranoid delusions. She was severely malnourished with BMI

of 15.4. Per chart, she had lost up to 85 pounds in the past five years. Other than tachycardia, tachypnea and notable hoarseness, the rest of the physical exam was unremarkable. Initial medical workup to include ANA was also normal. She was started on Risperidone for psychosis but refused treatment. She declined Olanzapine as well, though she agreed to Paliperidone 3 mg daily. After only 4 doses, she reported difficulty swallowing. Due to chronic hoarseness and new onset swallowing difficulty, ENT evaluated the patient with flexible nasolaryngoscopy. Exam was largely normal, vocal cords were mobile bilaterally, with only incomplete opening on inhalation. Within hours of evaluation, the patient suddenly developed shortness of breath, tachycardia, drop in SpO2 to 50% and was subsequently intubated. After extensive chart review it was discovered that the patient had a remote ED visit following an episode of sudden onset diplopia. Work-up was unremarkable at that time and she was instructed to follow up with outpatient ophthalmology. She did not present for follow-up. She was extubated but became agitated on the medical floor. This time she received Olanzapine 2.5 mg once and subsequently required intubation. MG was suspected based on the current presentation. Acetylcholine Receptor (AChR) Binding Antibody, AChR Blocking AB and AChR Modulating AB resulted negative. Only Anti-muscle-specific kinase (MuSK) AB resulted positive. Pyridostigmine and Prednisone were initiated. The patient's condition improved, she was eventually extubated and discharged with these medications. She was not restarted on antipsychotics and remained delusional. Discussion: Schizophrenia is associated with an increased risk of autoimmune diseases(2), however, co-occurrence with MG has been reported to be rare. Three subtypes of MG exist based on autoantibody levels: AChR Antibodies, Anti-MuSK Antibodies, and Seronegative.(3) There have been some case reports indicating worsening of symptoms in seropositive MG (4, 5) and seronegative MG (6) after initiation of antipsychotics, possibly due to compromise of neuromuscular transmission at both presynaptic and postsynaptic levels.(7) Although reports exist of the safe use of antipsychotics in the setting of MG with mild symptoms (8) judicious use of these medications in a closely monitored setting is advised.

No. 57

Munchausen Syndrome by Stroke: A Case Study Investigating Factitious Disorder Imposed on Self

Poster Presenter: Sophia Youn, D.O.

Co-Author: Abbas Naqvi, M.D.

SUMMARY:

Factitious disorder imposed on self (FDIS), previously Munchausen Syndrome, is a condition often mentioned colloquially, but seldom diagnosed in practice. Patients may intentionally feign symptoms to assume the "sick" role, without obvious gain or external reward. FDIS can be difficult to establish, as patients are often deceitful regarding medical and psychiatric history. If these issues are confronted, there is another obstacle where the patient may choose to seek care in a different facility. Patients presenting with neurological complaints may differ in masking the motivation for their goal to assume the sick role. ER and Neurology teams bear the responsibility to activate a "stroke code" when there is reasonable concern for a cerebrovascular accident. If patients meet a simple set of clinical criteria, guidelines favor administering tissue plasminogen activator (tPA) medications. For patients with FDIS, this can have significant risks and side effects, potentially causing undue harm to the patient. A February 2021 retrospective review found that a particular phenomenon is being seen in evaluations of stroke patients. A portion of these patients, confirmed to have FDIS through medical and psychiatric assessments, were thought to be feigning symptoms in order to receive tPA as part of the Neurology protocol (Willenberg et al., 2021). Additionally, the financial cost of providing potentially harmful treatment cannot be overlooked. In a 2015 journal review, the excess direct hospital costs for "stroke mimic" patients (those whose final diagnosis was not TIA or stroke) was \$257,975. Understandably, this phenomenon is layered with medical, psychiatric and ethical dilemmas. This case report discusses a 36 year old female whose chart lists a history of Munchausen Syndrome, three prior TIA episodes, and Munchausen Syndrome by proxy, with an ongoing legal case surrounding the custody of her 3 children. The patient presented to the ER with right sided hemiparesis for 2 hours, and NIHSS score was found to be 7, after "stroke code" was activated. Routine imaging showed no acute

pathology, and ultimately, the patient was given tPA. The patient was evasive and combative when questioned about her medical and psychiatric history. On further chart review, this was a pervasive pattern for her, across several different hospitals in the area. The objective of this case study is to highlight the importance of collaboration and discussion amongst interdisciplinary teams. If the diagnosis was communicated to all treatment teams, it may have prevented the patient from receiving tPA unnecessarily. However, this also raises the ethical conundrum of going against established Neurology guidelines. The benefit in assessing and properly managing FDIS is paramount for patients and practitioners alike. Appreciating the nuances of the illness is key, but it is the collaborative effort that can determine how effective patient management will be.

No. 58

Anti-NMDA Receptor Encephalitis in the Late Postpartum Period

Poster Presenter: Brent Beck

Co-Author: Megan Burin

SUMMARY:

Anti-N-methyl-D-aspartate receptor encephalitis (anti-NMDAR encephalitis) is a subtype of autoimmune encephalitis characterized by antibodies attacking the Glu-N1 subunits of NMDA-type glutamate receptors in neuronal networks. This illness exhibits a broad range of neurological and psychiatric symptoms, has a variable age of onset (infancy to geriatrics), and has an unpredictable disease course. Patients may present with new-onset seizures, acute psychosis, combative behavior, cognitive slowing, or catatonia. There are multiple documented cases of autoimmune encephalitis in the antepartum and postpartum periods, including anti-NMDAR encephalitis. However, the majority of these cases report symptom onset between several weeks to five months postpartum. Here, we describe a case of a 22-year-old female with a past medical history of epilepsy who developed anti-NMDAR encephalitis in the late postpartum period. She had a spontaneous vaginal delivery in June of 2021. In February of 2022, she was admitted to the medical hospital for breakthrough seizures and odd behavior.

She was diagnosed with other specified schizophrenia and psychotic spectrum disorder and discharged home on risperidone and an increased dose of her previously prescribed antiepileptic. By April of 2022, she was admitted to the psychiatric hospital for worsening delusions that her baby was deceased. She subsequently developed catatonia, so risperidone was discontinued and lorazepam was initiated. Due to her breakthrough seizures, the rapid progression of her psychosis, and failure to respond to antipsychotics, a serum NMDA-antibody test was ordered. This test was positive and the patient was transferred to the medical hospital with a diagnosis of anti-NMDAR encephalitis. The suspicion for this diagnosis was initially low due to the late onset of her symptoms within the postpartum period. At the medical hospital, she presented with significant thought-blocking, paranoia, and preoccupation with internal stimuli. Although her symptoms of catatonia (mutism, waxy flexibility, and fixed gaze) had already stabilized, oral lorazepam was continued as a precaution. Her encephalitis was treated with a five-day course of intravenous methylprednisolone. By day five of hospitalization, her paranoia and auditory hallucinations had resolved. She was discharged on day six with significant improvement of her symptoms, although she had some residual cognitive slowing and memory deficits. She followed up with outpatient psychiatry who began a lorazepam taper. Over time, her symptoms continued to improve. However, providers should be aware that approximately 16% of patients with anti-NMDAR encephalitis experience relapse. This case illustrates that anti-NMDAR encephalitis should remain in the differential diagnosis even if the symptom timeline is atypical. This poster will explore treatment options, disease course, and relapse rates of anti-NMDAR encephalitis in antepartum and postpartum patients.

No. 59

Post Stroke Agitation: Evaluation and Management

Poster Presenter: Christian A. Acosta

SUMMARY:

Ms. P is a 66-year-old female with past medical history of hypertension (HTN), hypothyroidism, Type-2 Diabetes, atrial fibrillation, non-ischemic cardiomyopathy, irritable bowel syndrome (IBS) who

presented to the ED with right leg weakness following an episode of diplopia and nervousness the day before. She was on her way to the gas station to get cigars, when she noticed she was unable to get out of the car; she drove back home, and her neighbor helped her inside. These symptoms persisted the next day, prompting her to seek medical attention. Initial assessment included vertebrobasilar insufficiency vs presyncope vs anxiety driven etiologies. CT angiography of the head showed diminutive appearance of the vertebrobasilar arteries, but subsequent MRI brain w/out contrast revealed acute non-hemorrhagic infarct of the left posterior limb internal capsule extending into the thalamus. During her time in the ED, Ms. P became disruptive towards the ED staff and began using racial language and threatening to blow up the building – a behavioral contract was subsequently signed. Out of concern for the development of post stroke delirium, Ms. P. received a psychiatry consultation given repeated attempts to leave against medical advice (AMA) to determine capacity to ensure both her autonomy and safety. She was found to be incapable of explaining her decision-making process. This, coupled with passive suicidal ideation, fluctuating mental status, and violent outbursts led to the determination that Ms. P lacked capacity to leave AMA. Post stroke delirium is common in the setting of hospitalization following acute stroke and indicates a poor prognostic outcome. Prevalence ranges from 13 to 48% in general hospitals. Stroke patients that develop delirium have higher inpatient mortality (OR 4.71; 95% CI 1.85-11.96) as well as longer hospitalizations (mean 9.39 days; 95% CI 2.21-5.21). They often require multi-disciplinary care as well as rehabilitation, though extent of psychiatric intervention is not always clear. In this poster, we discuss the case of Ms. P's hospitalization for stroke, management of acute delirium, and support required to address her unique biopsychosocial needs.

No. 60

The Varied Pathophysiology of Peduncular Hallucinosi

Poster Presenter: Shena Ayobello, M.D.

SUMMARY:

Background Psychotic symptoms are rarely documented in association with cortex-sparing central nervous system lesions limited to the midbrain. Sparse literature exists regarding Peduncular Hallucinosi (PH), a rare form of hallucination consisting of vivid and nonthreatening colorful visual hallucinations (VH). (Teeple, 2009) Case An 85 yo female with past psychiatric history of dysthymic disorder and medical comorbidities of atrial fibrillation, sick sinus syndrome, carotid artery stenosis and prior CVA (Right basal ganglia lacunae infarct) was admitted to the hospital with a fibula fracture. On day 4 of hospitalization, the patient began reporting VHS that she had experienced prior to admission. Patient reported a small boy in the corner of the room, not Lilliputian in nature. VHS had been going on for approximately 6 months and also included seeing flowers and dogs. There was no associated distress to the images other than the patient surprised to understand that others were not seeing them. Discussion Although rare, PH typically presents following an insult to the pons, midbrain, cerebral peduncles, and/or thalamus. Here the authors present a case of PH from a lesion to the basal ganglia (BG) and add to the literature as one of the few cases of PH from a BG lesion. (Penney, 2014) Additionally, the authors review the different known etiologies as well as lesion locations that have led to PH. Lastly, an outline of the putative neurobiological pathways of PH are highlighted, including the effects of serotonin regulation on excitatory cholinergic activity from the lateral geniculate nucleus. (Spiegel, 2011) Further, the authors explore the hypothetical mechanisms of overactivity in the thalamus and inferotemporal lobe resulting from disrupted neuroanatomical pathways, as well as associated lesions in the reticular activating system. (Pascal, 2016) Conclusions PH is a rare form of visual hallucination with multiple etiologies. The authors present an exemplary case and review the pathogenesis to underline the importance of organicity in PH because it may be overlooked easily and misdiagnosed as a psychiatric disorder.

No. 61

Intimate and Sexual Feelings in Psychotherapy: Educational Topic or Still Taboo?

Poster Presenter: Lara Vesentini, M.Sc.

Co-Author: Johan Bilsen

SUMMARY:

Background: Intimate and sexual feelings are common within psychotherapy, with negative outcomes when not managed adequately. This study aims to investigate the understudied topic of these intimate and sexual feelings in basic education and psychotherapy training programs. Method: In this convergent mixed method study, both a survey (N=786) and 8 focus groups (N=36) were conducted among psychotherapists in Flanders, Belgium (November 2016-June 2018), using inferential and thematic analyses respectively. Results: The majority indicates that dealing with intimate and sexual feelings towards clients was hardly part of either their basic education or psychotherapy training. Talking about such feelings with peers or supervisors remained difficult because of concerns about being judged. Therapists indicating this topic was addressed in some way in their training indicated more often that they did not perceive it as a taboo topic. Therapists advocated a more open discussion and reflection on this topic. Education and training, as well as support from renowned key figures in their field, were regarded as important incentives to initiate change. Conclusion: Psychotherapy training should focus on how to deal with intimate and sexual feelings, referring to introspection and exploration of these feelings in a more integrated way during training.

No. 62

Managing Romantic and Sexual Feelings Towards Clients in the Psychotherapy Room in Flanders (Belgium)

Poster Presenter: Lara Vesentini, M.Sc.

Co-Author: Johan Bilsen

SUMMARY:

Background: It is important that therapists manage adequately their romantic and sexual feelings toward clients as it can negatively affect the psychotherapeutic relationship and may even pose a risk of sexual abuse. **Method:** This study explores how psychotherapists in Flanders (Belgium) manage such feelings, by conducting both a survey (using 105 of 786 respondents for analyses, as they reported

romantic feelings) and focus groups (with a total of 36 participants). **Results:** Results show that most therapists never consider starting a romantic relationship with a client. They reflect profoundly on their feelings, dwell on possible consequences, while maintaining strict boundaries. Although therapists themselves highly recommend referring the client to a colleague if feelings become too intense, this rarely happens in practice. Most therapists consider talking about their romantic and sexual feelings towards clients as something very important, but only a third have disclosed their feelings in supervision, peer-supervision, or in personal therapy. Therapists indicate there is still hesitation about this due to fear of condemnation. **Conclusion:** Motives for referral of clients due to such feelings need more reflection and more efforts are necessary to create possibilities for therapists to talk about these experiences confidentially with peers or supervisors.

No. 63

The Agitated Covid-19 Positive Patient on Isolation: Cases From the Inpatient Psychiatric and Addiction Units and the Need for Creative Interventions

Poster Presenter: Christina Mika Connolly, M.D.

Co-Authors: Amy Swift, Karishma Jagtani, Rigoberto Leyva

SUMMARY:

Although medically necessitated isolation in the treatment setting is nothing new (scabies, tuberculosis, etc.), the COVID-19 pandemic has made it increasingly prevalent and salient. The pandemic has highlighted the stress, increased anxiety, and shortcomings in patient experience that occur when patients are placed in isolation in the hospital setting, and has also demonstrated the increased risk of agitation occurring in these circumstances. With the Omicron surge hitting New York City over the 2021/2022 winter season, our inpatient addiction units began to admit COVID positive patients for medically managed detoxification protocols. The unexpected observation was a noticeable spike in incidents of agitation resulting in administrative discharge. Our inpatient psychiatric units also cared for COVID positive patients during the Omicron surge, and instances were observed of increased agitation in these patients as well. In this poster we

identify possible contributing factors to agitation in COVID positive patients in the inpatient setting, and present 2 case reports from both our inpatient detoxification and inpatient psychiatry units, in which a COVID positive patient on contact isolation became agitated. The first example illustrates a patient on the inpatient detoxification unit who tested positive for COVID on admission and was isolated to his room per protocol, and a few days later required administrative discharge after assaulting a peer, but who notably had no other identifiable risk factors for violence in the chart or on initial assessment, and had normal vitals and was asymptomatic. It is possible that social isolation and loss of control could contribute to acting out, or even that the virus can have subtle effects on stress tolerance leading to an agitated state in response to a trigger. The second example is a patient on the inpatient psychiatric unit who had a history of agitation that during her admission responded well to psychiatric medication, but agitation re-emerged in the setting of newly diagnosed COVID infection while on the unit; the agitation subsequently resolved again after implementation of “problem-focused” and “emotion-focused” coping interventions, including providing the patient with a Kindle Fire Kids (access to games, e-books, videos) as well as access to some use of the unit phone. We will explore what “problem-focused” and “emotion-focused” coping interventions are, and discuss how by being creative in helping patients cope with the reality of physical and social isolation and implementing these interventions sooner, we may be able to limit episodes of agitation for patients placed in isolation, which could lead to better outcomes and better experiences for both patients and providers.

No. 64

Firearm Removal When a Patient Threatens to Conduct a Mass Shooting: A Case and Review of Ways Psychiatrists Can Prevent Gun Violence in the U.S.

Poster Presenter: Eric N. Kramer, M.D., M.P.H.

Co-Authors: Vedang Uttarwar, Alexis Seegan

SUMMARY:

Background: Although still rare and causing less than 1% of total gun deaths in America, mass shootings

have been increasing in frequency in the last 50 years. Mental illness is often blamed for these shootings even though only about 4% of violence has been directly attributable to mental illness. While mental illness plays only a small role in mass shootings, there has been an increasing focus on preventing mass shootings in the psychiatric setting. Case: We present a case of a 76 year-old man with a history of major depressive disorder who was admitted to the otolaryngology service after laryngectomy for laryngeal cancer who wrote down comments: “I’m getting my revolver and start shooting”, suggesting he wanted to go home, retrieve his handgun, return to the hospital, and conduct a mass shooting. He was alert and oriented x4. The patient was evaluated by the psychiatry consult/liaison service overnight, and in close collaboration with police, the overnight psychiatry resident placed the patient on a 72-hour psychiatric hold for being a danger to others. This gave police the time and legal grounds to go to the home and remove the firearm the following morning. On repeat evaluation and discussion with the patient’s family, it was determined that the patient was likely experiencing increased irritability and impulsivity due to nicotine withdrawal and possible opioid withdrawal. The psychiatric hold was discontinued and the patient was eventually discharged from the hospital once deemed psychiatrically and medically stable for outpatient treatment. Firearm removal was re-confirmed with family prior to discharge. Discussion: Psychiatric holds are one of the tools that psychiatrists have at their disposal to prevent gun violence, although their implications for firearm ownership may vary by state. Furthermore, per federal law, a person “committed to a mental institution”, meaning a 5250 14-day hold with probable cause in California (CA), receives a federal lifetime ban from owning and purchasing firearms. Another tool that has proven to be effective at reducing gun violence are extreme risk protection orders (ERPOs), which may be particularly useful when individuals cannot be placed on a psychiatric hold. ERPOs, called gun violence restraining orders in CA, and more commonly referred to as “red flag” laws, allow certain individuals such as police, family members, roommates, and even mental health providers in Maryland and Washington D.C. to petition a court to remove firearms from individuals

they deem to be a danger to themselves or others, irrespective of a mental health condition. While effective, these laws are frequently unheard of and vastly underutilized. Conclusion: Psychiatrists and other mental health professionals should be more aware of the various ways they can work to minimize the risk of gun violence and educate patients and their families on best practices for reducing gun violence.

No. 65

Electronic Medical Record Tool for Delirium Work-Up Guidance

Poster Presenter: Jill S. Bange, M.D.

Co-Authors: Aaron Puckett, Gabriel Brown, Daniel Demick

SUMMARY:

Background During a one-year time period, 371 patients were admitted to a community general medical hospital with a problem list containing “altered mental status.” These patients can experience delays in indicated treatment, delays in discharge, and worse outcomes if a portion of an initial medical work-up is delayed. Furthermore, specialty consultants may be asked to see these patients prior to the ruling-out of underlying medical causes for altered mental status or delirium, which can divert hospital resources to patients who may not need this specialty care. **Methods** All admissions from August 30, 2020 to August 31, 2021 for patients with a problem list containing “altered mental status” were included in this study. Patient data from the electronic medical record were obtained to determine if the following studies were obtained during initial work-up: basic metabolic panel or complete metabolic panel, complete blood count, urinalysis, urine culture, urine drug screen, ammonia level, arterial blood gas, lower respiratory culture, chest radiograph, and computed tomography (CT) of the head. These labs were of interest as they were suggested for the work-up of altered mental status by the American Academy of Family Physicians in 2014. Other measures collected during the study were: whether the patient met systemic inflammatory response syndrome (SIRS) criteria on admission, whether psychiatry or neurology were consulted during the hospital stay, the length of stay,

and the patient’s discharge location. **Results** For admitted patients who had delirium at some point during their hospital stay, the majority were ordered a complete blood count (100% of patients), a basic or complete metabolic panel (100%), a urinalysis (91.4%), a chest radiograph (89%), and a head CT (82%). Studies which were most commonly excluded from an initial medical work-up for these patients were cultures of blood (65.2%), urine (65.2%), or sputum (12.4%). Of note, only 49.3% of patients of any age were ordered a urine drug screen, and patients above the age of 50 were even less likely to have had a urine drug screen obtained compared to younger patients. **Discussion** At our general medical hospital, a proportion of patients admitted for “altered mental status” do not receive the complete initial work-up as indicated by general practice guidelines prior to consulting specialty practitioners. Barriers to obtaining this complete work-up may be a narrow initial differential, or bias towards an assessment of acute psychiatric decompensation for patients who already carry a psychiatric diagnosis. Future studies will again assess the completeness of initial work-up for patients with altered mental status after an “altered mental status” order set is implemented in the electronic medical record as part of a quality improvement project.

No. 66

“Not Just Tick Boxes”, Systematic Review of Patient and Provider Perspectives on Measurement-Based Care

Poster Presenter: Ayan Dey, M.D., Ph.D.

Co-Authors: Josh Posel, Ze’Ev Lewis, Rachel Pan, Karen Wang, M.D., M.Ed.

SUMMARY:

Background: Measurement based care (MBC) is increasingly becoming common across healthcare systems – partly in response to growing demands that such systems be patient-centered while also demonstrating effectiveness for finite healthcare resources. This is most pronounced in the fields of psychiatry and clinical psychology where there has long been a desire for greater standardization. Attitudes towards MBC however vary between mental health clinicians and patients resulting in variable uptake. **Objective:** To identify the varying

ways in which clinicians currently use MBC in their practice and explore perceptions of the impact of MBC on patient experience, engagement as well as unintended negative effects, we systematically reviewed existing literature on patient and physician perspectives/attitudes towards MBC. **Method:** Ovid MEDLINE, EMBASE, EBM Reviews, APA PsychINFO and CINAHL databases were searched for related studies. A total of 1418 titles and abstracts were screened. From this, 33 full papers were reviewed and 19 were included in the final review. All papers were reviewed by at least two independent reviewers. During the extraction process, articles were evaluated using the Mixed Methods Appraisal Tool and papers were assigned descriptors of “low”, “medium”, and “high” to indicate quality of included studies. Papers were evaluated across five criteria and only papers meeting all criteria were considered “high” quality. **Results:** 7/19, 10/19, and 2/19 articles were considered high, medium, and low quality respectively – suggesting that most studies included were methodologically sound. Several themes emerged from this review including the finding that patients appear to be largely more accepting and optimistic about MBC than clinicians – seeing it as a gateway to help lessen stigma associated with MBC (1), enabling them to better communicate their feelings/experience particularly for sensitive topics (1), providing hope (2), while also increasing their own knowledge base (3). Patient identified limitations included concerns over how such ratings would impact their care (3) and frustration related to certain measures not adequately describing their overall state or experience (1). Clinician perceived benefits included the belief that MBC helps structure and keep appointments goal-directed (4), build rapport with patients (4), facilitate communication between providers (1), while also aiding the assessment of patient progress (3). Lastly, clinician perceived limitations include belief that measures fail to capture complexity (5), concerns related to depersonalization of interactions (4), as well as concerns related to loss of therapy time and inadequate MBC training (5). **Conclusions:** We hope that the insights emerging from this review will help guide careful advancement of MBC into psychiatric clinical practice in both inpatient and outpatient settings.

No. 67

A Narrative Review of Clinical Futility With Severe Mental Illness (SMI) Patients: Is It Pragmatics, Respect for Autonomy, or Just Giving Up?

Poster Presenter: Akshaya Selvamani, M.D.

SUMMARY:

Clinicians get uncomfortable when they can no longer offer anything useful for their patients — clinical futility, in other words. This can occur when patients reject assistance, their illness is treatment-resistant, or when it becomes end-of-life comfort care. Finding the therapeutic balance between aggressively providing care and respecting autonomy can be made more difficult when we are influenced by implicit bias, our countertransference, or by pragmatic limitations on services or resources.

Narrative Literature Review We focused on that middle ground often encountered with SMI patients, where accepting the therapeutic balance elicits frustration or sadness from staff because we have nothing left to give or our assistance is rejected. We found abundant literature on medical futility, the recovery model, harm reduction, and associations between giving up and suicide risk. A smaller literature has emerged concerning psychiatry and end-of-life care (caring for psychiatry patients dying from medical illness, and decision-making for patients whose psychiatric illness has become terminal). A few researchers examined the ethical aspects of providing care for people with SMI - how we find equipoise between our desire to help and respecting patient autonomy. Some have questioned how our countertransference influences our decisions about "giving up" on refractory or difficult patients. Moral distress can push us to give up when we work with limited resources or support. Other voices showed that decision-making with SMI patients is distorted by implicit bias, systemic racism, and scarce resources. **Ethical Themes and Possible Solutions** Clinicians working with SMI patients endeavor to reduce suffering, improve daily functioning, maintain autonomy, and decrease risks of self-harm. Despite good intentions, clinicians are often substantially hindered by systemic racism, resource scarcity, and patient resistance. If unexamined, this conflict between professional goals and pragmatic constraints leaves our decisions vulnerable to bias and inefficiency. Awareness of this

conflict is critical when working with patients who are “clinically futile,” sometimes described as “difficult,” “treatment-refractory,” or “lost causes.” Our decisions should not be influenced by implicit bias or malignant countertransference, nor should they be opaque to patients and families. We propose to use this literature review to develop a checklist that explicitly considers: (1) resource scarcity in both the community and healthcare system, (2) provider countertransference, implicit biases, and systemic racism, (3) patient and family wishes, and (4) clinical functioning and risks. The goal is “reflective equilibrium,” when we balance aggressive psychiatric treatment with our unconscious biases, acknowledged patient wishes and needs, and the pragmatics of scarce resources. We think routine assessment of clinical futility in SMI patients leads to better care and reduces staff moral distress.

No. 68

Mindmapp: The Ultimate Mental Health Mobile Application Emphasizing Neurofeedback in Diagnosing and Treating Depression

Poster Presenter: Rhea Shishodia

Co-Authors: Shannon Savino, Sadeepa Bulathsinhala, Jonathan Terry

SUMMARY:

Background: Artificial intelligence (AI) and machine learning have revolutionized all aspects of our lives, including mental health. Mental health mobile applications (apps) are at the forefront of innovation for accessing and distributing timely, accurate, and efficient information pertaining to the diagnosis, management, and treatment of psychiatric illnesses. Depressive disorders are the leading mental health disorders affecting nearly 300 million people worldwide and correspond with specific electroencephalographic (EEG) signatures;^{1,2} yet, consumer-level mental health apps don't have the ability to provide neurofeedback. Hence, this research project focuses on developing a mental health application that allows EEG compatibility for accurately diagnosing and treating depression in its users. Methods: In the present study, a systematic review based on PubMed articles was conducted to discuss the potential role of neurofeedback for diagnosing and treating depression. To create a

holistic app with the potential to enhance user understanding of the mental disorder, enable early diagnosis, and provide effective treatment methods, we analyzed consumer reviews on current successful mental health apps and modeled our app based on those. Tables comparing our app to Youper, Woebot, and MindDoc are presented in a clear and organized fashion to share the specific features and benefits that our app possesses to motivate the development of mobile EEG technology that is cost effective and feasible for public use. Results: Based on combined results from published studies, it is evident that “the absolute power of the theta wave” is an essential EEG finding integral for neurofeedback potential.¹ Current mental health apps rely solely on subjective data via an AI chatbot and/or biofeedback via phone sensors, and thus provide limited potential for accurate diagnosis and treatment for depressive mood disorders.³ Beyond existing application limitations, MindMapp aims to utilize objective EEG and sensory data in addition to subjective emotional data from an AI chatbot to provide a more accurate diagnosis and more efficient coping methods tailored to each individual. Discussion: Depression is a serious global health concern that requires meticulous detection to save lives. Unfortunately, current methods of screening are human-intensive and depend on physician experience.¹ However, with the use of MindMapp, people around the world can have accessible means of accurately diagnosing and managing myriad mental health disorders from the comfort of their homes. Further research should be conducted on overcoming issues related to misuse of clinical data, the ethics, cost, and usability of mobile EEG technology, and the potential for collaboration with local professionals and existing companies, such as Muse or Alphabet's Project Amber. In the future, we hope to expand our resources to include other mental health disorders once the depression algorithm is established.

No. 69

Mental Status Examination Using Affordable Brain Computer Interface Devices: Proposal for an Innovative Evidence-Based Psychiatric Assessment and Care

Poster Presenter: Parameshwaran Ramakrishnan

Co-Author: Vivian Ho

SUMMARY:

Background: The intuitive reasoning with which expert psychiatrists perform their patients' mental status examination (MSE) for diagnosis and care involves an empathic listening (EL) process. However, no study to date has objectively measured EL skills. An objective assessment will help psychiatrists improve their EL skills and the quality of MSE that they perform. **Aims and Objectives:** To illustrate the Mindfulness-to-Transcendence (MT) framework of the EL assessment process and demonstrate how Brain-Computer-Interface (BCI) devices can validate the MT framework. **Methods and Materials:** A case series of EL care (specific exposure) and healing interactions was performed (2019-2021). Analytical autoethnography was used. The clinician was a psychiatrist training as a chaplain at an academic tertiary care hospital. The specific outcome measures were (1) neurofeedback recordings obtained from BCI devices worn by the clinician and care recipients and (2) their experiences associated with the clinical healing. **Results:** The MT framework of the EL assessment was consistent in all four case studies. The clinical researcher and his care recipients attained a contemplative state of mind through their EL interaction. The attainment of a contemplative state was confirmed by respective BCI recordings. The care recipients' attainment of the contemplative state of mind, depended on the clinician's EL skills. The BCI graphs confirmed the contemplative/MT framework of the EL process of assessment. **Conclusion and Implications:** EL/intuitive reasoning in expert clinicians' assessment is a contemplative process that is measurable by BCI devices. The use of low-cost technological/BCI devices can help psychiatrist improve their EL skills while conducting MSE. Furthermore, the technique could also help us incorporate the clinical chaplaincy curriculum into academic psychiatry to enhance EL skills.

No. 70

Taking AIMS: Characterization of Abnormal Involuntary Movement Scale Utilization in the VA Healthcare System

Poster Presenter: Conner Polet

Co-Author: Tim Bigdeli

SUMMARY:

BACKGROUND: Tardive dyskinesia (TD) is a medication-induced movement disorder that is classically precipitated by long term exposure to dopamine receptor blocking agents. TD is often irreversible, is debilitating, has been associated with a poorer quality of life and increased mortality. TD surveillance is typically carried out via routine documentation through the Abnormal Involuntary Movement Scale (AIMS), especially in those prescribed medications with elevated TD risk, including antipsychotics. **METHODS:** We reviewed electronic health records (EHRs) for 700,000 participants in Cooperative Studies Program (CSP) #572 and the Million Veteran Program, including ICD-9/10 billing codes, prescription records, and AIMS, and spanning more than 20 years. We used "phecodes", which are groupings of conceptually related ICD codes, to assign putative diagnoses of schizophrenia (295.1), bipolar disorder (296.1), psychosis NOS (295.3), depression, and extrapyramidal symptoms (EPS; 333*). We intersected these data to characterize the clinical correlates of antipsychotics-induced EPS assessed using the AIMS and corroborated by a diagnosis of TD. **RESULTS:** The AIMS was administered 126,766 times to 38,364 individuals (median=12, mean=27.3, SD=43). AIMS scores were documented in X% of all individuals who were taking antipsychotic medications. Of those with any AIMS data, n=18,591 had AIMS score >0; most had no incapacitation (n=13,100;70%), followed by minimal (n=3,340;18%), mild (n=1,390;7%), moderate (n=533;3%), and severe (n=129,1%). Symptoms most commonly affected the jaw, and least commonly affected the trunk. Schizophrenia (n=9,033;48.6%), bipolar disorder (n=4,775;25.7%), psychosis NOS (n=1,123;6%) and depression-related diagnoses (n=3,221;17.3%) were the most common diagnoses in those with AIMS>0. AIMS scores were greater for those with a recorded diagnosis of EPS or abnormal movements compared to those without (5.4,SD=4.8 vs 3.2, SD=3.2; t=30.6, df=7120.2, p<10⁻¹⁹³). Consistent with expectation, patients who ever received treatment with a first-generation antipsychotic medication (44.8%) had higher AIMS than those treated with second-generation agents alone (55.2%; unpaired t-test, t=20.8, df=14585, p<10⁻⁹³). **CONCLUSIONS:** We have undertaken a

preliminary survey of extrapyramidal side-effects of antipsychotic medications in the VHA, and describe the clinical correlates of EPS and TD with respect to medication classes, specific agents, lifetime psychiatric diagnoses. Available AIMS data revealed appreciable individual differences in risk and severity of EPS/TD, and support an AIMS score of 2 or more as a relevant clinical cutoff for TD. Ongoing analyses include more granular investigations of particular medications based on receptor affinity and with consideration to dosage, and genome-wide association studies (GWAS) to identify novel TD/EPS susceptibility (or resilience) loci.

No. 71

Not Another Capacity Consult—Using a Routine Case to Illustrate the Utility of Telepsychiatric Consultation

Poster Presenter: Zachary S. Goodman, M.D.

Co-Authors: Spencer Gardner, M.D., H. Landsman, M.D., Christine Finn, Patrick Ho, M.D., M.P.H.

SUMMARY:

Healthcare delivered in rural settings occurs in critical access hospitals and other remote settings where psychiatric consultation is not available due to scarcity of resources and providers, as well as geographic separation from academic medical centers. Telehealth is a healthcare delivery modality that has seen exponential growth in innovation and usage in psychiatry, as necessitated by the COVID-19 pandemic. In this poster, we aim to describe a routine case of dispositional capacity to illustrate how telepsychiatry can be used as an innovative solution to meet the dire need for psychiatric care and consultation in rural settings. Ms. A, a 36 year-old female with past medical history of depression and chronic alcohol use disorder, presented to a rural hospital with months of cognitive impairment, ophthalmoplegia and gait disturbance concerning for Wernicke's encephalopathy. Subsequently, our telepsychiatry consult service was engaged for dispositional capacity. She was grossly disoriented, was not able to comprehend the risks of her decision, and determined to not have capacity to leave the hospital. Over the subsequent hospitalization, in the setting of prolonged abstinence from alcohol and

treatment with thiamine, she was noted to make tremendous strides in her cognitive and physical ability. Given these improvements, our telepsychiatry consult service was re-engaged by the primary team. She was found to have improved memory, attention, and orientation from her prior assessment and was now agreeable to recommended care. As such, she was determined to have capacity to accept recommended care. In this case and others like it, telepsychiatry has met an important need for rural hospitals requiring comprehensive and longitudinal psychiatric consultation. Current limitations of this novel service include the limited ability to conduct a physical exam and inability to view imaging or laboratory studies in the electronic medical records of other health systems. However, this service confers numerous advantages for rural healthcare systems, including access to experts in consultation-liaison psychiatry at an academic medical center, opportunities to share in regional resources, and access to continuity of care. Ultimately, without the implementation of our telepsychiatric consultation service, this consult and subsequent reassessment would not have been possible. The necessity of telehealth in the setting of the COVID-19 pandemic has allowed for this innovative form of telepsychiatric consultation to meet the crucial needs of hospitals in rural settings.

No. 72

Investigating the Therapeutic Benefits of MDMA in Psychiatry: A Systematic Review

Poster Presenter: Jacqueline Koichi, D.O.

Co-Authors: Elizabeth Howey, D.O., Devin McDonald, D.O., Suporn Sukpraprut-Braaten, David Martin, Ph.D.

SUMMARY:

BACKGROUND: MDMA (3,4-methylenedioxymethamphetamine) is a substance with many names and uses. Although MDMA was banned by the United States Drug Enforcement Agency (DEA), there has been evidence showing possibilities of prescribing MDMA for treatment resistant psychiatric disorders. Landmark studies have shown the therapeutic benefits and potential for psychedelics in medicine including lysergic acid diethylamide (LSD) and psilocybin, which have been

the more commonly used schedule 1 drugs utilized in clinical trials. The purpose of this systematic review is to investigate how MDMA has been used in medicine thus far, its therapeutic benefits as observed through clinical trial results, and its potential use in the future. **RESULTS:** This study is a systematic review of 33 articles published between 2008 to 2022 identified through PubMed, ClinicalTrials.gov, Cochrane Library with human subjects only, with 460 articles originally retrieved and screened (PRISMA diagram). The search keywords are “MDMA” and “Psychiatry.” Exclusion criteria include articles not written in English and studies performed on non-human subjects. Three investigators reviewed the articles and extracted information reported in the articles. Out of 33 studies, 29 (87.8%) studies were related to MDMA and PTSD¹, two (6.06%) studies related to social anxiety associated with autism², and one (3.03%) study related to life-threatening illnesses³. All studies required participation in two preparatory sessions and two psychotherapy sessions associated with each experimental session. Differences between the trials included the experimental arm MDMA doses varied from 25 mg to 187.5 mg, and the parallel arm ranged from lower dose of MDMA, inactive placebo, or no intervention as well as the follow-up schedule as well as the respective psychometric scales. Nonetheless, all results concluded in the moderate-higher dose MDMA arm demonstrating a more clinically significant response in terms of decreasing symptoms compared to the parallel arm with each study’s primary outcome such as Clinician-Administered PTSD scale (CAPS-5), Liebowitz Social Anxiety Scale (LSAS), and State-Trait Anxiety Inventory (STAI). All studies with MDMA regardless of the psychiatric diagnoses, demonstrated positive results to decrease the respective symptoms. **CONCLUSION:** There are few MDMA studies most likely due to stigma and funding. Due to these factors, most of the studies had difficulty obtaining and retaining subjects, and therefore had small sample sizes. However, with the paradigm shift towards psychedelic medicine, this will hopefully change in the future. The studies we reviewed ranged from various diagnoses from social anxiety in autism, PTSD, alcohol use, and anxiety in palliative care patients. The common factor in all studies reviewed was the use of MDMA allowed

subjects to shift their perspective, provided symptomatic relief, and a sense of openness that allowed for improved human connection.

No. 73

Early Childhood Trauma Influences Life History Decisions Made in Adulthood in Patients With Severe Mental Illness

Poster Presenter: Christopher Gurguis

Lead Author: Kacy Smith

Co-Authors: Tyler Kimm, M.D., Mayur Patel, M.D., Kristin Nicole Budd, M.D.

SUMMARY:

Variation in life history decisions among individuals with psychiatric disorders is likely to shape the evolution of mental illness. Previous work shows that childhood sexual abuse predicts risky adult sexual behavior even after controlling for other forms of childhood abuse (1, 2). History of childhood abuse is also associated with earlier mortality in women, but not men (3). Based on life history theory, we hypothesize that the influence of trauma on life history decisions will depend on its association with mortality (4). If childhood trauma indicates an environment with increased adult mortality, we predict individuals with more severe histories of trauma will have an earlier age at first reproduction. If childhood trauma indicates an environment with increased offspring mortality, we predict individuals with more severe histories of trauma will have more children. Data were collected from 654 patients admitted to a standalone psychiatric hospital in Houston, TX. All patients completed the Early Trauma Inventory Self Report. Fitness information was obtained from chart review. The relationships between trauma, age at first reproduction, and fecundity were analyzed with generalized linear models. Analyses were performed for male and female patients separately. Age and race were included as covariates. More severe early trauma was not associated with earlier age at first reproduction for females ($\chi^2=0.01$, $p=0.94$) or males ($\chi^2=0.97$, $p=0.32$). More severe early trauma was associated with higher fecundity for women ($\chi^2=7.39$, $p<0.01$), but not for men ($\chi^2=0.00$, $p=0.98$). Our results demonstrate that trauma experienced during early childhood may have long-reaching

consequences for reproductive decisions in adulthood. Early trauma is associated with increased fecundity, suggesting that trauma may signal increased offspring mortality. Interestingly, this pattern was true for females, but not males, suggesting possible sex differences in the incorporation of early information into later decisions. Early trauma was not associated with earlier age at first reproduction, suggesting it does not indicate increased adult mortality. However, this pattern should be interpreted cautiously as >95% of our sample reported a history of trauma. In the U. S., the average age at first reproduction is 25 for males and 23 for females. In our sample, the average age at first reproduction was 23 for males and 22 for females, suggesting that the average age at first reproduction may be earlier when compared to the general population (5). Understanding the evolutionary persistence of mental illness depends on an understanding of the life history decisions (6). We found a positive association between severity of trauma and fecundity. Given the near ubiquity of trauma in this population, the functional impacts of mental illness may be offset by altered life history decisions on evolutionary timescales.

No. 74

Comparing Epidemiological Trends With Suicide Rate Amongst Developed Countries

Poster Presenter: Farah Shaikh, M.D.

SUMMARY:

The Human Development Index (HDI) is a measure used by the United Nations to evaluate countries in terms of the well-being of their citizens. The HDI measures development in three areas: health, education, and standard of living (1). Most developed countries have an HDI score of 0.8 or above, landing them in the very high human development category. These countries have stable governments, affordable education and healthcare, high life expectancies, and growing economies. The United States is amongst these countries, with an HDI score of 0.926 in 2019 (2). The countries with an HDI score closest to the United States are Canada (HDI 0.929), Austria (HDI 0.922), Japan (HDI 0.919) and Israel (HDI 0.919). Although these 5 countries have similar HDI scores, the United States has the highest suicide rate

(16.1/100,000 population in 2019) (3). Additionally, the remainder of these countries showed decline in suicide rate over the last 20 years, while United States showed a steady increase. The United States showed greater than 30% increase in suicide rate from 2000-2019 while Japan showed greater than 30% decrease. It would be beneficial to examine other epidemiological trends amongst these countries to determine if there is any association with the suicide rate. The United States is an outlier amongst these countries in gun death rate (4) as well as drug overdose death rate (5). The gun death rate in the United States in 2019 was greater than quadruple the rate of the countries being discussed and nearly two-thirds (63%) of gun deaths in the US in 2019 were suicides. Japan boasts a population of more than 127 million people, yet finished 2019 with a gun death rate of only 0.02 per 100,000 people. One major factor in this success is that Japan has some of the strictest gun control laws in the world. Similarly, the drug overdose rate in the United States is also the highest, at 27 times the rate of Japan in 2019 (6). However, the depression prevalence rates amongst these countries do not follow the same trend (7). Suicide risk can be broken down into two categories: psychological anguish and lethality (8). Based on these trends, it could be argued that ease of access to suicide method greatly increases lethality and is a major contributor to the suicide rate disparity amongst these countries that otherwise have comparable prevalence of mental illness and access to healthcare. These trends support a conclusion that mental health and access to mental healthcare are not the only factors affecting suicide rate, but include systemic political/legal policies and other nonclinical based systems. However there are limitations in support of that conclusion, including variation in suicide reporting amongst countries as well as variation within each country, likely skewing suicide rate numbers. More in depth study of the various epidemiological trends in these countries is needed to establish possible association with suicide rate.

No. 75

Examining the Use of Psychoactive Substances in Treatment of Post-Traumatic Stress Disorder: A Literature Review

Poster Presenter: Farah Shaikh, M.D.

SUMMARY:

There is a growing number of clinical studies examining the use of psychoactive substances for treatment of numerous psychiatric conditions, including Post-Traumatic Stress Disorder (PTSD)⁽¹⁾. As of September 6th, 2022, there are 40 clinical studies registered on clinicaltrials.gov that evaluate the use of psychedelic substances for the treatment of Post-Traumatic Stress Disorder. 18 of these studies are listed as complete⁽²⁾. The majority of these studies aim to investigate methylenedioxymethamphetamine (MDMA). Other substances being studied are ketamine, cannabis and psilocybin. Six randomized, double-blind, controlled clinical trials at five study sites were conducted from April 2004 to February 2017 in which individuals with PTSD received either active doses of MDMA or placebo during psychotherapy sessions. These studies showed that MDMA-assisted psychotherapy was efficacious and well tolerated in the sample of adults with PTSD⁽³⁾. Studies on Ketamine had varying results. While one study showed that ketamine was associated with rapid reduction of core PTSD symptoms and reduction in comorbid depressive symptoms⁽⁴⁾, another study failed to demonstrate significant efficacy on PTSD symptoms in comparison to placebo. The latter was a double-blind, randomized, controlled trial with the largest sample and longest treatment duration for ketamine studied to date for treatment of PTSD symptoms in Veterans⁽⁵⁾. Although there are numerous studies investigating psilocybin in the treatment of the major depressive disorder⁽⁶⁾ with promising results, there are limited studies on psilocybin in treatment of PTSD. As of September 6th, 2022, there was one clinical trial registered with clinicaltrials.gov that is currently recruiting⁽²⁾. The first randomized placebo-controlled trial of smoked cannabis for treatment of PTSD showed good tolerability and significant improvements in PTSD symptoms during three weeks of treatment, however no active treatment statistically outperformed placebo⁽⁶⁾. A major challenge in the study of psychedelics for treatment for psychiatric disorders is the potential for functional unblinding, due to the distinguishing psychoactive effects of these substances, especially the acute dissociative effects of ketamine. Another factor to consider is that early phase trials are

designed to demonstrate feasibility and safety, not efficacy. Despite these limitations, studies on MDMA-Assisted therapy have consistently shown positive results, which supported expansion into phase 3 trials and led to FDA granting Breakthrough Therapy designation⁽³⁾. Larger placebo-controlled randomized clinical trials are needed to further establish efficacy.

No. 76

PTSD and Quality of Life Changes in Patients With Aortic Disease

Poster Presenter: Claire Platt

Lead Author: Sukanya Vartak, M.D.

Co-Author: Melanie Schwarz

SUMMARY:

Background: Acute aortic dissection is a catastrophic illness characterized by sudden-onset and critical timeline, high morbidity and mortality, and post-surgical quality of life changes. Similarly, aortic aneurysms pose high risk of dissections and also carry similar post-surgical sequelae as aneurysm repairs. These clinical features make the diagnosis of aortic disease (AD) a traumatic experience, whether in the setting of an acute aortic dissection or aortic aneurysm. While recent studies have addressed the psychological consequences of various cardiovascular diseases, with prevalence rates post-myocardial infarction estimated as high as 30%, there is surprisingly little on aortic dissections in cardiac-psychiatric literature. Our study aims to determine whether there is a relationship between AD and PTSD and how it impacts quality of life (QOL). **Method:** In this IRB-approved project, four types of aortic conditions were identified as possible traumas: Type A Aortic Dissection, Type B Aortic Dissection, Aortic Aneurysm with Surgical Repair, and "Watch and Wait" Aortic Aneurysm. Symptoms of PTSD were measured using a modified PTSD Checklist for the DSM-5 (PCL-5). Additionally, quality of life measures and other qualitative data were gathered via free-text questions in the survey. This anonymous survey was distributed online via a patient support group email list in two consecutive years (2020 and 2021). **Results:** Of the 434 respondents, 57.6% had a provisional diagnosis of PTSD based on PCL-5 scores >33. However, the

incidence of PTSD varied significantly among them depending on the type of their AD ($p = 0.04$). Type A Aortic Dissection patients scored higher on the PCL-5 scale than those with other types of AD. Multivariate logistic regression analysis illustrate that AD is a significant risk factor for developing PTSD ($p=0.01$). Qualitative analyses of the free-text section ($n=302$) shows that 77.5% of respondents have perceived QoL impairment of which 55.6% reported psychiatric complaints, 49% reported reduced physical activities, 19.5% reported work-related concerns, and 6.3% reported issues with sexual activity. **Conclusions:** Aortic disease is a significant risk factor for PTSD. Qualitative data show that, in addition to PTSD, patients had symptoms consistent with other psychological illnesses such as adjustment disorder, major depression disorder, and anxiety disorders which need further investigation. Distribution of the qualitative responses indicate that, physical limitation and employment-related issues are of significant concern to this patient population. Treating PTSD can be extremely important as it is associated with poor health behaviors such as non-adherence to medications and avoidance behaviors leading to poor health outcomes. As QoL is significantly impacted by diagnosis of AD, psychological screening, prevention measures, and support, should be considered to mitigate the effect of AD on mental health of cardiac patients.

No. 77

Analysis of Repetitive Transcranial Magnetic Stimulation for Treatment Resistant Anxiety and Depression

Poster Presenter: Fatimah Abdul Hameed, M.D., M.Sc.

Co-Authors: Almari Ginory, D.O., Michael Reid Johnson, M.D., Andrew Li, M.D.

SUMMARY:

Background: Anywhere from 20%-60% of patients with psychiatric illness struggle with treatment resistant disease (1). However, advances in the management of psychiatric disorders have led to the development and usage of neuromodulation alternatives in addition to traditional psychotropic options. Of these treatments, repetitive transcranial magnetic stimulation (rTMS) has proved efficacious

with recent FDA-approval including both depression and OCD. Though the efficacy of TMS treating depression has had ongoing studies, the frontiers on the impact of TMS on anxiety and related disorders has yet to be fully identified. The aim of this current study is to explore outcomes of rTMS in patients with both treatment resistant major depressive disorders and treatment resistant anxiety disorders. **Methods:** 297 subjects consented to serial assessments during clinical treatment of rTMS. Criteria included dual diagnosis of Major Depressive Disorder along with diagnosis of Generalized Anxiety Disorder. Criteria also included persistence of symptoms refractory to psychopharmacology, with average prior number of medication trials at 12.96. Approximately 32.5 average treatments were performed with the approved TMS device. Assessments were performed at baseline prior to induction of rTMS, in intervals of treatments, as well as conclusion of TMS treatment. Primary outcomes were measured on self-reported depression scales (PHQ-9, MADRS) and self-reported anxiety scales (HAM-A). Study conducted at HCA Florida Capital Hospital in Tallahassee, Florida. **Results:** *results undergoing further statistical analysis; the following results include raw data* Findings indicate mean difference in depressive scales of PHQ-9 score of -48% and MADRS score of -41%. A mean difference in anxiety scales of HAM-A -36% was identified. The mean starting PHQ-9 was 19.75 and mean concluding PHQ-9 was 10.08, with 48% reduction in score (Confidence interval, P-value pending). Additionally, the starting HAM-A score prior to rTMS was 26. After rTMS HAM-A score was 16, with a 36% reduction rate (CI, P-value pending). **Conclusion:** As evidenced by the mean reduction in the anxiety scale score relative to a reduction in both depression scales, our preliminary findings may (*pending statistical significance, confidence interval data*) support the efficacy of rTMS for treatment resistant anxiety disorders with co-morbid depressive disorders. The PHQ-9 score was reduced by nearly 50%, while the HAM-A score was reduced by 36%. Our study can help incite further rTMS usage for treatment resistant depression and anxiety, and may propel further studies on TMS for other treatment resistant psychiatric disorders. Such findings may pave the way for a more substantial role of TMS in the treatment of not just anxiety, but

other pharmacologically resistant psychiatric disorders as well.

No. 78

Intellectual Disability With Perimenstrual Psychosis and Catamenial Catatonia: Diagnostic and Management Challenges

Poster Presenter: Vatsala Sharma, M.D.

Co-Authors: Myra Karina Morales, M.D., Anna Paley, M.D., Maria Chona P. San Gabriel, M.D.

SUMMARY:

Ms. N., a 22-year-old Guyanese-American nulligravida, with a significant past psychiatric history of Intellectual Disability and Perimenstrual Psychosis was brought to the emergency department for disorganized behavior. She presented with psychosis and developed new-onset catamenial catatonia on the second day of menses during hospitalization. Antipsychotics were discontinued, catatonia was treated with intravenous lorazepam and the residual cogwheel rigidity secondary to the intramuscular antipsychotics received in the emergency department for disorganized behavior was managed by intramuscular benzotropine that afforded symptom relief. Her psychotic symptoms reappeared on the next menses and antipsychotics reintroduced with favorable response. She was discharged on quetiapine 75 mg nightly. Menstrual psychosis is characterized by psychotic, mood, and behavioral symptoms during the menstrual cycle with a relapsing-and-remitting pattern. Menstrual psychosis is categorized as a) premenstrual, b) catamenial, c) perimenstrual/paramenstrual, d) mid-cycle and e) epochal. (1) Perimenstrual psychosis is characterized by symptoms at variable timing, and always in harmony with the menstrual cycle. Catamenial episodes coincide with the onset of menstruation. Although menstrual psychosis was detected nearly one and a half centuries ago, confirmed cases are limited due to the rigorous monthly monitoring requirement and the condition's under-recognized status likely secondary from diagnostic exclusion guideline. (1) Further understanding is required for the prevention and adequate management of this complex condition. Despite the absence of existing management guidelines, research supports hormonal and menstruation-suppressing agents,

such as oral contraceptive pills (OCPs), as first line agents. (2) Antipsychotics are indicated for symptom duration reduction during acute episodes. (1) (2) For our patient, the diagnosis of menstrual psychosis was confirmed during two inpatient admissions and a six-year close follow-up in the outpatient department at our facility. Her underlying intellectual disability complicated the diagnosis and management of menstrual psychosis and catatonia. Failed trials with OCPs and multiple antipsychotics provide the opportunity for further discussion. In addition, the development of catamenial catatonia and antipsychotic-induced cogwheel rigidity further complicated the management of this conglomerate condition. (3) Clinicians are encouraged to screen women for menstrual psychosis as the treatment is not confined to antipsychotics and the prognosis is satisfactory when adequately treated. In this poster, we aim to discuss the challenges of diagnosing and managing perimenstrual psychosis and catamenial catatonia in an intellectually disabled patient.

No. 79

Depression in Multiple Endocrine Neoplasia 2a (Men2a): An Unexplored Multifactorial Approach

Poster Presenter: Vatsala Sharma, M.D.

Co-Authors: Vimala Sim, M.D., Maria Chona P. San Gabriel, M.D.

SUMMARY:

Mr. D., a 21-year-old Hispanic male, with a past medical history of Multiple Endocrine Neoplasia 2A (MEN2A), past psychiatric history of Major Depressive Disorder, and a significant family history of MEN2A, depression, and suicide attempts presented in our Comprehensive Psychiatric Emergency Program (CPEP) with suicidal ideation. The infectious, metabolic, and endocrine workup was done on the psychiatric inpatient service, and he was managed for psychotic depression. MEN2A is a rare autosomal dominant disorder inherited in successive generations secondary to the mutation in RET proto-oncogene and results in the triad of medullary thyroid cancer (MTC), parathyroid adenoma/hyperplasia, and pheochromocytoma. (1) Patients undergo prophylactic thyroidectomy for MTC and many develop hypothyroidism or hyperthyroidism due to inappropriate thyroid

hormone replacement. Parathyroid adenoma or hyperplasia can cause hyperparathyroidism with associated secondary hypercalcemia. Pheochromocytoma is a rare, and primarily benign adrenal tumour secreting high amounts of catecholamines. ⁽²⁾ Based on prior literature, hypothyroidism, hyperparathyroidism, hypercalcemia, and pheochromocytoma can cause depression independently. ⁽²⁾ ⁽³⁾ In our patient, the endocrine etiology of depression was investigated and after careful exclusion of each condition, depression was identified to be purely psychiatric in origin. With this case, we encourage the interdisciplinary exploration of the etiology of depression with the complex management of focusing on treating the endocrine causes prior to implementing psychiatric interventions. Treatment of MEN2A patients developing psychiatric conditions with these intersecting diagnoses needs to adopt an interdisciplinary approach to optimally address the symptoms as well as the drug interactions while prescribing medications, thereby improving the overall prognosis. ⁽¹⁾ Clinicians should also be mindful of the familial patterns of depression and probable genetic anticipation of depression and suicidal ideations in MEN2A patients. The treatment should focus on addressing the bridging psychosocial aspects of the whole family with the adoption of a truly holistic approach. This poster aims at discussing the following: attributing factors for depression in MEN2A, conditions resulting in suicidal ideation in MEN2A, familial depression in MEN2A, and the holistic approach entailed, including correction of underlying hormonal imbalance, psychopharmacological and psychosocial interventions for managing depression in MEN2A.

Poster Session 7

No. 1

Personality Traits in a Brazilian Sample of Late Life Depression

Poster Presenter: *Lais Lundstedt Kahtalian*

Co-Authors: *Salma Rose Imanari Ribeiz, Patricia Buchain, Fernanda Mariotti Marques, Geraldo Busatto*

SUMMARY:

BACKGROUND As the Brazilian population gets older, it is fundamental that we acknowledge the characteristics of older adults with depression. Studies have found that personality traits appear to contribute to the onset and course of depression (Manning et al, 2017). Understanding its relationship with geriatric depression may imply more effective approaches for screening, diagnosis and treatment of the disorder in the elderly. **METHODS** Our sample was recruited from a group of users of basic health units in the city of São Paulo, aged 60 years or older, selected at random. From this sample, 76 elderly people with major depressive disorder (diagnosed by the International Neuropsychiatric Interview - MINI) and 55 controls were included in the study. Those with evident cognitive impairment (Mini Mental State Examination <13) were excluded. The personality assessment was performed using the NEO-FFI inventory, which scores the dimensions of the five personality domains: neuroticism, extroversion, openness to experience, agreeableness and conscientiousness. Analysis was performed using the R-Project and the outliers were treated by Box Plot. It was verified whether the difference was significant between the groups using the non-parametric Mann-Whitney test. Logistic regression was performed for personality factors controlled by age and sex. **RESULTS** The patient group was predominantly composed of women (84%) in comparison to the control group (51%). Patients were younger, with a mean age of 67.4 versus 71.2 years. Therefore, logistic regression was performed, controlling for these factors. Patients had a mean score of 34.0 vs 20.0 for controls in neuroticism (CI 32.5-35.5 and 18.4-21.5, respectively, $p < 0.001$), mean score of 23.7 vs 27.1 in openness (CI 22.2-25.1 and 25.8-28.3, $p < 0.001$), mean score of 32.8 vs 33.8 in agreeableness (CI 31.4-34.2 and 32.4-35.0, $p = 0.08$), mean score of 32.8 vs 34.5 in conscientiousness (CI 31.4-34.1 and 33.2-35.6, $p = 0.02$), mean score of 21.2 vs 27.4 in extroversion (CI 19.6-22.7 and 26.0-28.6, $p < 0.001$). There were statistically significant higher levels of neuroticism and lower levels of openness and extraversion among patients. **CONCLUSION** Literature shows that greatest severity of depressive symptoms is associated to lower levels of extroversion, conscientiousness, openness and agreeableness

(Koorevaar et al, 2013). High neuroticism scores are associated with onset, recurrence and severity of depressive symptoms (Steffens et al, 2013). High extraversion levels are associated with better quality of life, a better support network and healthy habits, which can lower the probability of developing depression (Sadeq & Molinari, 2018). Our results are in agreement with the literature. Our next project involves evaluating the influence of these personality traits on the response to pharmacological treatment of late-life depression.

No. 2

Catatonia After a Brainstem Stroke, an Unusual Presenting Clinical Manifestation

Poster Presenter: Sophia Sanchez-Lopez

Co-Author: Castaneda Hector

SUMMARY:

Background: The DSM-5-TR defines Catatonia as the presence of three or more of the twelve psychomotor features: stupor, catalepsy, waxy flexibility, mutism, negativism, posturing, mannerism, stereotypy, agitation, grimacing, echolalia, and echopraxia. A variety of medical conditions may cause catatonia, especially neurological and metabolic conditions. **Case**

Description: A 36-year-old woman who began her current illness at the age of 21 with delusional ideas of reference, insomnia, and social isolation. She was taken to a psychiatric evaluation and started receiving some treatment she did not recall, maintaining null adherence to the treatment or medical follow-up. At the age of 22, she had persistent psychotic symptoms, for which she was taken to a new psychiatric evaluation, where they diagnosed schizophrenia and began treatment with Risperidone and Carbamazepine, with adequate adherence and follow-up every 6 months. At 33 years after the birth of her first child, she began with mutism and negativism, for which she was taken to a hospital where she was admitted and discharged one month later. After she was discharged, the patient had adequate adherence and medical follow-up, remaining stable. A month and a half prior her recent hospital admission, she started with psychotic symptoms, delusional ideas of harm and reference, auditory hallucinations and dromomania. Two weeks

after, negativism was added. She did not accept medications or food, staying for hours in the same position, staying 15 days without taking off her shoes. Spontaneously, her symptoms stopped, and she started taking her medications. Two days prior her admission, she began with mutism, negativism, stupor, and posturing. She was taken to a Psychiatric Hospital where she is evaluated and referred to this unit for evaluation of hospitalization. Upon arrival at the emergency department, she remained immobile for approximately 5 hours. At the E.R. evaluation, the patient was observed in the same position throughout the examination, immobile, staring without making eye contact, with mutism, and oral intake refusal. She was admitted to the observation service, and treatment with Lorazepam was started until reaching a dose of 12 mg per day and Olanzapine 10 mg per day. She had poor improvement of the catatonic symptoms. In addition, the placement of a nasogastric tube was necessary due to refusal to oral intake. Given the history, complications, and catatonic symptoms, it was decided to send her to the Special Psychiatric Care Unit. An MRI was performed finding a brainstem stroke. At the electroencephalogram a suggestive image of an epileptogenic focus in the left temporal region was found. After 29 days, she was discharged with Lorazepam 2 mg per day, Olanzapine 20 mg per day, and Valproate 800 mg per day. **Discussion:** There are many possible medical conditions that cause catatonia. Even on a patient with prior Schizophrenia diagnosis, other causes of catatonia should be ruled out.

No. 3

Elevating Lived Experiences of Schizophrenia on the Internet – a Qualitative Analysis of BIPOC Patient Narratives Using Dipex Methodology

Poster Presenter: Fabiha Sabin

Co-Authors: Breanna Sehorn, Megan Shedd, M.D., Nancy Pandhi, M.D., Ph.D., M.P.H.

SUMMARY:

Background: Among people with serious mental illness, those diagnosed with schizophrenia are subjected to the highest levels of stigma leading to lower quality care and poor health outcomes.³ Additionally, people with schizophrenia who identify

as BIPOC may experience racism, further compounding health inequity.¹ Therefore, it is crucial to create interventions that destigmatize schizophrenia through an intersectional lens. In the era of the internet and social media, online narratives of mental illness are becoming an increasingly popular method for seeking support and promoting destigmatization in marginalized groups.² Health Experiences Research Network (HERN) is a non-profit organization of clinicians, researchers, and advocates that seeks to build an online library of quality-controlled health narratives for public awareness, education, and research. DIPEX methodology is the innovative approach HERN uses to explore health narratives, which utilizes qualitative research for content creation on the non-commercial website HealthExperiencesUSA.org. In this poster, we describe our collaboration with HERN to pilot DIPEX methodology in patients with schizophrenia who identify as BIPOC as an effort to employ the internet to destigmatize their experiences. Furthermore, we analyze the interviews to understand the participants' experiences of stigma, identity, and motives to share their narratives online. **Methods:** Seven self-identifying BIPOC individuals with schizophrenia participated in filmed interviews. Qualitative analysis of transcribed interviews was performed to identify relevant themes and to organize content for future online dissemination. All aspects of recruitment, interviews, and analysis followed the DIPEX-method, which prioritizes in-depth, patient-centered narratives, diversity of health experiences, and autonomy over shared content. **Results:** Participants were motivated to share their story online to dispel misconceptions about schizophrenia and help others with the diagnosis. Several themes emerged that highlight how participants perceived stigma due to their diagnosis: (1) Being treated differently by medical professionals when seeking care; (2) Experiencing increased discrimination from law enforcement due to both BIPOC identity and diagnosis; (3) Receiving negative assumptions about functional ability and capacity to maintain relationships. In contrast, participants reported sharing similar values, goals, and desires as those without a diagnosis of schizophrenia. They encouraged others with a diagnosis of schizophrenia to engage in treatment, rely on support from friends and family, and

maintain a positive outlook. **Conclusions:** BIPOC individuals with schizophrenia were motivated to share their narratives online to bring awareness to the ongoing mental stigma they experience due to their intersecting identities. These experiences strongly contrasted with the similarities they perceived to be shared with those without this diagnosis.

No. 4

Analyzing Demographic Variabilities Associated With Age of Diagnosis of Schizophrenia Among Patients in Controlled Clinical Trials

Poster Presenter: Vijay K. Singh, D.O.

Co-Authors: Aghaegbulam Uga, M.D., Amber Shin, Nikhil Gopal, Hilary Linzie, M.D.

SUMMARY:

Background: Prior literature and epidemiological data suggests that the age of diagnosis of schizophrenia (AOD) follows a bimodal and trimodal distribution for males and females, respectively. The studies used to generate these findings were often small and relied on self-reported patient data from a single geographic region in addition to other methodological limitations. We replicated these studies using a modern big data approach by combining raw data from large randomized controlled clinical trials. **Methods:** Patient-level data from 15 similarly designed, randomized, double-blind, placebo-controlled, crossover studies with patients using paliperidone extended-release tablets, paliperidone palmitate 1-month, and paliperidone palmitate 3-months, were obtained through the Yale Open Data Access Initiative (YODA). Descriptive statistics and histograms were calculated for continuous variables. A multivariable linear regression was performed with AOD as the outcome variable. Race and sex were used as predictor variables. **Results:** Our final analysis included 7881 patients consisting of male (n=4962) and female (n=2919) patients among different racial demographics. Race was consolidated into the following groups: Asian (n=949), Black (n=1692), Hispanic (n=3), Southeast Asian (n=17), White (n=4769), and Other (n=343) based on patient self-identification on the YODA datasets. A chi-square test revealed that there is a statistically significant

association between patient sex and AOD ($\chi^2=295.61$, $df=68$, $p < 0.0001$). By proxy, this likely means that sex affects age of onset (AOS) as well. Our linear regression output with sex as a predictor of AOD revealed that only the male variable was found to have a statistically significant relationship ($p < 0.0001$) with AOD and resulted in a lower AOD. Histograms generated with the frequency of occurrences against AOD for both male and female patients appeared to be unimodally distributed and skewed right. However, the AOD for female and male patients were found to be 28.79 and 25.44 years old, respectively. This demonstrates that while both male and female AOD are distributed unimodally, there are slight differences in their distributions.

Conclusion: Our analysis differs from previous studies and finds that AOD for male and female patients are seen in a unimodal distribution as compared to previous literature that shows a bimodal and trimodal distribution. Our findings not only call for a re-evaluation of previous epidemiological understandings of AOD but may support future efforts in understanding the origins and typical clinical presentations of patients with newly developed symptomatology of schizophrenia as well as support clinicians' perspectives as part of clarifying differential diagnoses. Further studies can also continue to evaluate possible correlations among different races.

No. 5

Alcohol Use Disorder Causes Global Changes in Gene Expression and Splicing in a Tissue-Specific Manner

Poster Presenter: Ilya O. Blokhin, M.D., Ph.D.

SUMMARY:

Alcohol use disorder (AUD) is a widespread disease which causes impairment of cognitive and executive functions. Genome-wide mechanisms by which alcohol results in deterioration of mental health remain to be elucidated. Splicing constitutes a nuclear process of removal of introns from the precursor RNA which leads to the maturation of transcript and diversification of transcriptome. We tested the hypothesis if AUD impairs gene expression and splicing on a genome-wide scale in liver and brain. RNA sequencing files were generated from

liver biopsies from patients with early alcoholic steatohepatitis (eASH) and severe alcoholic hepatitis (sAH). RNA sequencing files were also generated from brain samples that were obtained *postmortem* from patients with AUD and matched control subjects, with following brain regions included in the study: superior frontal cortex (SFC), nucleus accumbens (NA), basolateral amygdala (BLA), and central nucleus of amygdala (CNA). To evaluate splicing, bam files from STAR alignments were indexed with samtools for use by rMATS software. We found that AUD causes significant changes in gene expression in the liver. Thus, 4,928 genes were differentially expressed in eASH, 14,100 – in sAH. Impairment of splicing also occurred in the liver on a genome-wide scale: 3,222 missplicing events were detected in eASH, 4,839 – in sAH. In the brain, AUD was associated with relatively limited changes in a brain transcriptome: expression of 23 genes was altered in SFC, 14 – in NA, 102 – in BLA, and 57 – in CNA. Missplicing occurred on a broader scale: 1,421 mis-splicing events were detected in SFC, 394 – in NA, 1,317 – in BLA, and 469 – in CNA. In summary, our results suggest that AUD is associated with genome-wide changes in gene expression and splicing in both liver and brain. Investigation of mechanisms responsible for difference in AUD-induced changes in magnitude and composition of transcriptional landscape between liver and brain may further delineate pathogenesis of AUD and suggest novel therapeutic targets.

No. 6

The Role of Clozapine & Naltrexone in Reducing Self-Injurious Behavior Addiction in Borderline Personality Disorder & Intellectual Developmental Delay

Poster Presenter: Chris Gauthier, D.O.

Co-Authors: Amanda Lynn Campbell, M.D., Alex Slaby, M.D.

SUMMARY:

Patient is a 29-year-old female with a past medical history of hypothyroidism, obesity, chronic migraines and past psychiatric history of intellectual developmental delay, borderline personality disorder, schizoaffective disorder, presented with non-suicidal self-injury (NSSI), and command

auditory hallucinations. Stressors prior to admission included family conflict. Patient has history of over 40 hospitalizations. History and current admission symptoms of BPD included impulsivity, affect instability, difficulty controlling anger, and non-suicidal self-injurious behaviors of hitting her head on the wall, making statements that she would hit her head on the toilet if she did not receive a continual 1:1, stating she would end her life by cutting her wrists with a plastic card, scratching herself without drawing blood. She was transparent in this, stating that she was "addicted" to said behaviors and had difficulty abstaining from self-harm as she enjoyed the attention and concern derived from others. Patient was offered a multi-pronged approach: trialed on naltrexone due to its known anti-craving properties, adjustment of clozapine which has known harm reduction effects, offered basic education by providers on addiction, and modest behavioral interventions. Patient had substantial improvement on this regimen. Her attention seeking behaviors reduced - displaying behaviors only for positive conduct as opposed to self-injurious behaviors. Additionally depressive symptoms improved, and auditory hallucinations abated. Collateral from patient's mother indicated that patient was behaving more appropriately towards mother, and she felt comfortable with discharge. Patient was discharged back to family. Since admission approximately one year ago, patient has been to the ED for psychiatric complaint only twice, and admitted on a psychiatric unit one time following the death of a family member. This is significantly less than in previous history and can thought to be attributed to novel naltrexone intervention in combination with clozapine, education, and behavioral intervention. In this poster, we discuss the role of the above to improve outcomes and more effectively utilize acute treatment, thereby reducing overall overuse of emergent resources.

No. 7

Delaying Buprenorphine Induction With Full Agonists to Prevent Precipitated Withdrawal: A Case Report and Review of the Literature

Poster Presenter: James Sherer

Co-Author: Arslaan Arshed, M.D.

SUMMARY:

Opioid overdoses continue to skyrocket in the US. This surge is largely being driven by fentanyl, which is now implicated in most opioid overdose deaths. Fentanyl is also replacing heroin as the most misused and widely available opioid. Fentanyl has unique pharmacokinetic properties, such as extremely high lipophilicity, which make predicting its effects and duration difficult. Because of its unpredictable nature, fentanyl greatly complicates the induction of buprenorphine. Psychiatrists on inpatient consult services are seeing more cases of withdrawal precipitated by buprenorphine when fentanyl is involved, even if the patient reports several days since their last use, or if the patient is scoring very high on the Clinical Opiate Withdrawal Scale (COWS). While buprenorphine micro-induction with products such as Belbuca or Butrans can help avoid precipitated withdrawal when fentanyl is involved, these products are relatively rare on hospital formularies, and their use requires some familiarity as well as buy-in from nursing and pharmacy staff. When fentanyl use is suspected or confirmed, and micro-induction is not an option, providers can use full agonist agents with short half-lives, such as oxycodone, to help reduce the risk of precipitated withdrawal. By using full agonists as a bridge to buprenorphine induction, providers can treat the symptoms of withdrawal, build an alliance with the patient, and allow fentanyl adequate time to leave their system, ensuring a smoother transition to buprenorphine. Once fentanyl is fully metabolized, the full agonist can be discontinued, and buprenorphine can be introduced only a short time after. In this way, patients can avoid protracted withdrawal symptoms prior to buprenorphine induction, and precipitated withdrawal is less of a concern. We present the case of a 26-year-old man with opioid use disorder and multiple medical comorbidities due to his use. He reported illicit intravenous fentanyl use prior to admission and wished to be induced on buprenorphine while in the hospital. Oxycodone 10 mg orally twice daily with 5 mg orally every 6 hours as needed was prescribed to treat withdrawal symptoms and give the patient time to sufficiently metabolize the fentanyl in his system. After 48 hours, the oxycodone was discontinued. After an additional 12 hours, buprenorphine-naloxone was induced over the course of 6 hours, for

a total first daily dose of 8-2 mg. The patient did not report any precipitated withdrawal symptoms. In addition to this case, we will provide a concise literature review on the subject to help explain why using full agonists in this way can help ensure patients are induced on buprenorphine without precipitated withdrawal, thereby improving outcomes.

No. 8

Women and Drug Use: The Extent and Treatment Services in the Eastern Mediterranean Region - a Systematic Review

Poster Presenter: Yasna Rostam Abadi

Co-Authors: Jaleh Gholami, Maral Mardaneh, Afarin Rahimi-Movaghar

SUMMARY:

Background: Drug use among women is mainly neglected and is associated with a higher stigma. In this study, we aimed to assess the extent and patterns of drug use and use disorder among females and the availability of treatment services in the 21 countries and one territory of the Eastern Mediterranean region (EMR) from 2010-2022. **Methods:** The international and regional online databases were comprehensively searched on April 17, 2022. The online databases of the related United Nations bodies, official government reports, and other sources were searched for grey literature along with backward citation tracking. Data on each section was extracted separately for each country. For the estimates of the prevalence of last-year drug use, the latest, most representative study was used for synthesis for each country based on a grading system and selection criteria adapted from previous reviews (1) and adjusted for the study aims. Few and heterogeneous studies were found on the extent of drug use disorder, and the results were presented with no further analysis. The proportion of females among the treatment-seeking population was pooled. The availability of the treatment services for women in each country was extracted. **Results:** 134 studies were included. The regional estimates of last-year use of any illicit drug, opioids, and cannabis were 2.5% (95% CI: 1.9-4.3), 2.2% (95% CI: 1.9-2.6), and 0.6% (95% CI: 0.3-2.0), respectively. The estimated last-year use of inhalants and cocaine both

were 0.2% (95% CI: 0.1-0.4). Eight countries (Bahrein, Jordan, Libya, Morocco, Saudi Arabia, Syria, and the UAE) had no findings on the prevalence of drug use among females. Only two studies reported the prevalence of drug use disorder among females: the last-year estimate was 0.4% in Iran, and the lifetime estimate was 2.4% in Saudi Arabia. The pooled proportion of female clients among treatment-seeking individuals was 7.5% (95% CI: 5.3-9.9; 36 studies). Specific treatment services for women existed only in Iran and Afghanistan, while most inpatient and residential centers in the region only admitted men. **Conclusion:** Opioids are the most prevalent drug used among females in the EMR, primarily reflective of the higher use of opioids in Afghanistan, Iran, and Pakistan, constituting 50% of the EMR population. The proportion of females among treatment-seeking clients is low, and only two countries in the region had specific facilities for women. There is a need for further studies to assess the extent of drug use and use disorder among females. There seem to be serious barriers to treatment-seeking in the EMR for women, with a need for expansion of targeted care for this population. This study has been financially supported by the World Health Organization.

No. 9

The Effectiveness of Web Based Korean Patient Placement Criteria on Alcohol Use Disorder

Poster Presenter: Sang Kyu Lee

SUMMARY:

Alcohol use disorder is a health problem with the highest prevalence and recurrence rate in Korea. To solve this problem, various health care systems suitable for Korea have been proposed, however their effectiveness is still insufficient due to lack of expertise in treatment/management programs, uniform treatment, and fragmented treatment system. Various treatment guidelines have been developed for this purpose, and the representative one is the Patient Placement Criteria of the American Society of Addiction Medicine (ASAM-PPC). This guideline presents four levels of care (LoC) that can be used to determine the severity of alcohol problems through assessment in multiple domains. In Korea, the need for a treatment guideline to

provide an appropriate LoC to patients has been raised and we developed the Korean Patient Placement Criteria (K-PPC) that was modified to fit the Korean situation based on the ASAM-PPC. This study hypothesized that the group that complied with the LoC set according to the K-PPC would show better results than the group that did not, and tested its effectiveness. Recruited from 20 medical institutions and 11 addiction management support centers in Korea. A total of 524 participants were included in the final analysis, 73.6% male, aged 19-72 years. Case managers at participating institutions have a list of recommended treatment programs and participation guidelines for each level of care, and are trained to follow these guidelines whenever possible. In order to examine the effectiveness of K-PPC, Kaplan-Meier survival analysis and log-rank analysis were used for the follow-up participation rate of participants. The log ranking analysis of the follow-up participation rates of the matched and non-matched groups showed no statistically significant difference between the two groups, however addiction severity scales were found in the K-PPC match group (AUDIT -C: 4.4, CIWA-Ar: 3.25) had lower AUDIT-C and CIWA-Ar scores than the unmatched group (AUDIT-C: 5.61, CIWA-Ar: 5.91), and 1 month (AUDIT-C: 4.04, CIWA-Ar: 4.09), 3-month (AUDIT-C: 3.61, CIWA-Ar: 3.36), and 6-month (AUDIT-C: 3.43, CIWA-Ar: 2.91) follow-up scores were lower. In the insight scale (HAIS), there was a difference in baseline measurements, and in the 1-month and 3-month follow-up. The overall attendance rate of the treatment programs recommended according to the K-PPC was compared. As a result, it was investigated that the matched group showed a higher overall treatment program attendance rate than the unmatched group. The results of this study suggest that the evaluation, placement, and treatment of alcohol use disorder patients according to the K-PPC has the potential to help solve the problems currently encountered in the treatment scene of alcohol use disorder in Korean society. However, given that it is an exploratory study on K-PPC, it will be necessary to continuously verify the validity and effectiveness of K-PPC.

No. 10
Disparities in Mental Health Care Utilization Among Limited English Proficient (LEP) Individuals Who Require Interpreter Services

Poster Presenter: Sidrah Najam, D.O.

Co-Authors: Jenifer Vohs, Jay Hamm

SUMMARY:

Background: Previous work has shown that, among Latinos, Limited English Proficient (LEP) immigrants were less likely to utilize mental health services compared to immigrants with English proficiency. In this retrospective study, we examined individuals enrolled in outpatient mental health services that were LEP and required Spanish interpreter utilization. We hypothesized that these individuals would be less likely to use the full extent of services available in an outpatient mental health setting, when compared to individuals who do not require interpreter services. The present study builds off the limited extant literature addressing utilization rates for LEP individuals by comparing service utilization of individuals requiring interpreter services. **Methods:** Demographic and visit information for each individual enrolled in outpatient treatment was retrospectively drawn from the electronic medical record (EMR). Included individuals were then categorized into a diagnostic cluster based on ICD-10 F codes assigned within their EMR chart. Data were queried for number of case management and activities of daily living (CM-ADL) appointments attended, number of medication management (MD) appointments attended, and number of therapy appointments attended. Demographic variables were tested for between-group differences (interpreter vs no interpreter) using either t-tests or chi-square analysis. A series of MANOVAS was then used to examine group differences in utilization of available mental health services both by service type and by diagnostic cluster. **Results:** As expected, there was a robust pattern of fewer visits in the interpreter group (n = 199) vs. the no-interpreter group (n = 264). For the combined diagnostic clusters analysis, the interpreter group had fewer CM-ADL (p < 0.001) appointments than the no-interpreter group. For the F20s group, the interpreter group had statistically significant fewer CM-ADL appointments (p = 0.006). For the F30s group, the interpreter group had fewer CM-ADL (p = 0.005) and MD (p < 0.001)

appointments than the no-interpreter group. For the F40s group, the interpreter group had fewer appointments than the no-interpreter group for all appointment types ($p < .01$). For the F60s group, the pattern remained; however, the sample size was small. **Conclusions:** There are important differences in service utilization of individuals who are LEP and require interpreter services versus patients who do not require interpreters for mental healthcare. Individuals who are LEP and require interpreters attend fewer therapy appointments, medication management appointments, and are less likely to utilize other services such as case management and ADLs/skills training appointments. These findings have important implications for potential disparities in mental health care utilization and areas for improvement in mental health delivery.

No. 11

Analysis of Hospitalizations of Patients With Sexual Addictions: A United States National Population-Based Study

Poster Presenter: Precious Eseaton, M.B.B.S.

Co-Author: Ehizogie Edigin, M.D.

SUMMARY:

Background: Stigma exists for people with sexual addiction (SA). Little is known about the epidemiology, reasons for hospitalization of patients with SA [1-3]. We aim to study the reasons for hospitalization, demographic characteristics, and hospital outcomes of hospitalized patients with SA.

Methods: The National Inpatient Sample (NIS) is the largest inpatient all-payer public database in the United States (US). We obtained data from the NIS 2016-2019 databases. About 142 million hospitalizations were included in the combined NIS databases. Each hospitalization in the NIS has a principal diagnosis (the main reason for hospitalization) and can have up to 39 secondary diagnoses (any other diagnosis other than the principal). We extracted data for adult patients aged ≥ 18 years, with either a "principal" or "secondary" diagnosis of SA, using the ICD-10 code "F528". SA includes psychosexual dysfunction associated with inhibited sexual excitement such as nymphomania, satyriasis, and excessive sexual drive. Analyses were performed using STATA, version 16. By using a "rank"

command in STATA, the most common principal discharge diagnoses were divided into categories based on organ system, and the most common specific principal discharge diagnoses were recorded for hospitalized patients with SA in descending order of frequency. We outlined baseline demographic characteristics and hospital outcomes of hospitalized patients with SA. Since NIS contains deidentified patient data, Institutional Review Board (IRB) review was waived. **Results:** A total of 1,465 hospitalizations for patients with SA were analyzed. The mean age was 49.4 years, were majorly males (73%), and whites (58.8%), had a long mean hospital length of stay of 14.4 days, inpatient mortality of 0.3% and mean total hospital charges of \$68,902. The most common principal diagnosis category of hospitalizations of patients with SA in descending order of frequency were mental and behavioral disorders, neurologic, cardiovascular, rheumatologic, genitourinary, and injury/poisoning. The most common specific principal diagnoses for these patients in descending order of frequency were schizoaffective disorder, bipolar type, paranoid schizophrenia, bipolar disorder with a current severe manic episode with psychotic features, unspecified bipolar disorder, recurrent severe major depressive disorder without psychotic features, unspecified schizophrenia, unspecified schizoaffective disorder, unspecified psychosis not due to a substance or known physiologic condition, unspecified Alzheimer's disease, and delusional disorders.

Conclusion: Patients with SA should be screened for comorbid psychiatric conditions and vice versa. Patients who screen positive for SA or psychiatric comorbidities should be provided resources to seek help and counseling via a multidisciplinary approach.

No. 12

30-Day Readmission Following Hospitalization for Poisoning/Adverse Effects of Addictive Drugs of Abuse: A Nationwide Analysis

Poster Presenter: Precious Eseaton, M.B.B.S.

Co-Author: Ehizogie Edigin, M.D.

SUMMARY:

Background: Poisoning by substances of abuse in the United States (US) is a significant reason for

hospitalization, morbidity, and mortality [1-3]. However, national population data are scarce on readmission following hospitalization for addictive drugs of abuse (ADA) in the US. We aim to describe the rates, baseline characteristics, and most common reasons for 30-day readmissions following index admission for poisoning/adverse effects of addictive drugs of abuse in the US. **Methods:** We analyzed the 2018 Nationwide Readmissions Database (NRD). Each hospitalization in the NRD has a principal diagnosis (which is the main reason for the admission) and can have up to 39 secondary diagnoses (any diagnosis other than the principal diagnosis). We included index hospitalizations for all adult patients (≥ 18 years) with a principal diagnosis of poisoning/adverse effect of ADA using the international classification of diseases (ICD)-10 code "T40". This includes index admissions for unintentional (accidental) or intentional self-harm of opium, heroin, methadone, fentanyl, tramadol, other synthetic narcotics, cocaine, cannabis, synthetic cannabinoids, Lysergide (LSD), and other unspecified psychodysleptics or hallucinogens. We excluded elective readmissions. Chi-square test was used to compare baseline characteristics between readmissions and index hospitalizations. Using a rank order command, the 5 most common reasons for 30-day readmission (or principal diagnosis of readmissions) were highlighted. STATA, version 16 was used for analysis. **Results:** Out of 67,445 index hospitalizations with a principal diagnosis of poisoning/adverse effect of ADA in 2018, 64,401 were discharged alive. Among those discharged alive, 8,364 (13%) were readmitted within 30 days. 30-day readmissions had lower in-hospital mortality (2.3% vs 4.4%, $p=0.021$), longer mean hospital length of stay (5.7 vs 4 days, $p<0.0001$), higher total hospital cost (\$12,145 vs 10,844, $p<0.0001$), were older (53.2 v 48.4 years, $p<0.0001$), had more patients with Charlson co-morbidity index score of ≥ 3 (38.7% vs 21.3%, $p<0.0001$), Medicaid insured (42.8% vs 32.6%, $p<0.0001$), and from the lowest household income quartile (41.8% vs 38.6%, $p=0.0007$) compared to index admissions. 30-day readmissions had similar proportion of females (44% vs 42.6%, $p=0.0698$), patients with depression (20.6% vs 21.5%, $p=0.1822$), and bipolar disorder (9.3% vs 9.6%, $p=0.589$). compared to index admissions. Sepsis and accidental cocaine poisoning were the first and

second most common reasons for 30-day readmissions. Accidental poisoning by other opioids, heroin, and severe recurrent major depressive disorders (MDD) was among the 10 most common reasons for 30-day readmissions (No. 7, 8, and 10 respectively). **Conclusion:** Poisoning/adverse effects of different ADA and mental health conditions such as severe recurrent MDD are common reasons for 30-day readmissions.

No. 13 WITHDRAWN

No. 14 Impact of Telemedicine on Utilization of Psychiatric Resources in New York City During the Covid-19 Pandemic

Poster Presenter: Sarah J. Ricklan, M.D., M.Phil.

Co-Authors: Nancy Sohler, Ph.D., Crystal Lewis, Ph.D., Carina Lorenz, M.D.

SUMMARY:

Objective: During the height of the COVID-19 pandemic in New York City, patients discharged from psychiatric inpatient units in the New York City Health and Hospitals (NYC H+H) system relied on telepsychiatry outpatient follow-up rather than in-person outpatient follow-up. This study evaluates differences between these patients and patients discharged to in-person outpatient care the year prior. **Methods:** This study used data extracted from electronic medical records across the NYC H+H system from patients discharged to telepsychiatric care between 4/1/20 and 4/30/20 ($n=739$ discharges) and in-person outpatient care between 5/1/19 and 5/30/19 ($n=527$ discharges). For the 60 days following discharge, the number, timing, and attendance for follow-up appointments and the number and timing of emergency room (ER) visits and readmissions were collected. Group demographics and clinical characteristics were compared using t-tests and chi square tests. Logistic regression was used to evaluate the odds of having a follow-up visit and ER visit or readmission, and Kaplan-Meier analyses were used to compare time to first follow-up and first ER visit or readmission. **Results:** Inpatient psychiatric discharges in 2020 (to telepsychiatry) were more likely to result in a follow-

up visit (29.4% versus 19.9%, $p < 0.001$) and an ER visit or readmission (40.5% versus 28.7%, $p < 0.001$). Kaplan-Meier analyses showed shorter time to first follow-up (chi-square=14.694, d.f.=1, $p < 0.0001$, number of follow-ups=322) and ER visit or readmission (chi-square=19.57, d.f.=1, $p < 0.0001$, number of ER visits or admissions=450) for 2020 discharges. In multivariable analyses, discharges in 2020 were more likely to result in a follow-up visit (OR 1.85, 95% confidence interval: 1.40, 2.54, $p < 0.0001$). Conclusions: These results demonstrate greater use of psychiatric services during the pandemic in the NYC H+H system in a particularly vulnerable psychiatric population. Although being discharged to telepsychiatry for outpatient care made outpatient follow-up more likely and sooner, this connection with care did not decrease ER visits and readmissions. Further exploration of this pattern and the role of telepsychiatry is needed, especially among high-risk populations. We would like to acknowledge the contributions of Chiemeka Ezie, MD; Lynsey Avalone, LCSW, MPH; Victoria Dinsell, MD; Omar Fattal, MD, MPH; Sabish Balan, MD; Hunter McQuiston, MD; Frank Pastore, MD; Nermica Sarcevic, MD; Ronnie Swift, MD; and Gemma Espejo, MD.

No. 15

Potential Implications for Intranasal Ketamine in Depression With Psychotic Features, Complicated by Yao Syndrome

Poster Presenter: Justin Chin, D.O.

Co-Authors: Jaclyn L. Chen, M.D., Lucian Manu, M.D.

SUMMARY:

Ms. A is a 38 year old Caucasian female, with a past psychiatric history of MDD with psychotic features, borderline personality disorder, generalized anxiety disorder, PTSD with extensive trauma history, history of self injurious behaviors and suicide attempts in the past 2 decades, past medical history of Yao Syndrome, PFO s/p closure, chronic pancreatitis, who was admitted to an inpatient psychiatric unit following a suicide attempt by insulin overdose. Previous outpatient medication regimen of duloxetine, gabapentin, prazosin, quetiapine, fluphenazine, and mirtazapine were not effective in managing symptoms. The patient's current episode

was potentially triggered by lack of improvement in addition to longstanding complaints with Yao syndrome. The patient was started on intranasal ketamine, which showed significant improvement in her depressed mood and psychotic features within her first 8 treatments. The patient noted a decrease in intensity and frequency of her auditory and visual hallucinations and has had better control of her Yao syndrome flares. Given her improvement in mood and lack of suicidality, Ms. A was discharged with follow-up at our hospital's Treatment Resistant Depression clinic, where she continues to undergo Ketamine treatment for maintenance of mood and psychotic symptoms. The case report highlights the role of ketamine in managing treatment resistant depression with psychotic features, especially when complicated by chronic conditions such as Yao syndrome. Ketamine continues to play an increasing role in treating various psychiatric and chronic pain disorders, with an increasing body of research that promotes its versatility. Future studies may further discover other uses of ketamine in previously untreated or undertreated conditions.

No. 16

Music Therapy as an Adjunctive Treatment in People With Serious Mental Illness

Poster Presenter: Louis M. Beers

Co-Authors: Amy Cheung, Xiaoduo Fan

SUMMARY:

Many people with serious mental illness (SMI), which includes major depressive disorder, bipolar disorder, and schizophrenia spectrum disorders, experience a lower quality of life than the general population. Creative arts therapy is a complementary treatment modality in mental health care that has been shown to promote psychosocial well-being and a greater sense of self. In particular, music therapy is a growing form of creative arts therapy that promotes emotional regulation skills, personal expression, and social ties. Therefore, we sought to explore the feasibility of music therapy for people living with SMI. An ongoing 8-week pilot program using primarily passive music therapy techniques was designed around a model in which participants listen to either live or recorded pieces of music while using drawing tools to artistically express their thoughts

and emotions during each piece. Six participants were enrolled in the study. The Perceived Stress Scale and salivary cortisol levels (primary endpoints) and Heinrichs-Carpenter Quality of Life Scale, Brief Psychiatric Rating Scale, and Healthy-Unhealthy Uses of Music Scale (secondary endpoints) were measured at baseline and will be collected at program completion and 4 weeks post-program. A post-program focus group will be conducted to evaluate the participants' subjective experiences with music therapy. Following completion of the study, we hope that our findings will inform future research promoting music therapy as a novel intervention approach for people with SMI during their recovery journey.

No. 17

Gut Feelings: A Case of Psychotropic Prescribing Post-Total Gastrectomy and Review of Psychotropic Bioavailability After Bariatric Surgery

Poster Presenter: Veronica Keenan Wright, M.D.

SUMMARY:

INTRODUCTION: Patients undergoing surgical procedures involving the stomach or small intestine often have variable postsurgical bioavailability of drugs, including psychotropic medications. Pharmacokinetic studies looking at the bioavailability of psychotropics in these situations are rare. The few studies that do exist focus on bariatric surgery patients due to the increasing prevalence of bariatric surgery as rates of obesity continue to rise in the United States. In this case, we present a patient requiring a peri-operative psychotropic regimen review while planning for a prophylactic total gastrectomy and provide a brief review of the literature on psychopharmacologic pharmacokinetics post-bariatric surgery. **CASE DESCRIPTION:** A non-binary person in their 20's with a history of Persistent Depressive Disorder, Fibromyalgia, IBS-D, and Skin Picking Disorder well-controlled on oral duloxetine 60mg twice daily, oral risperidone 1mg twice daily, and oral amitriptyline 10mg nightly, is found to have a CDH1 mutation when undergoing genetic testing for mutations associated with gastric cancer and breast cancer due to a strong family history of gastric and breast cancer. Given the patient's high risk for hereditary diffuse gastric cancer, it is recommended

that they undergo a prophylactic total gastrectomy to reduce their cancer risk. They present to their outpatient psychiatrist requesting changes to their current psychotropic regimen as part of their multidisciplinary pre-operative planning. After a review of the literature on duloxetine absorption post-Roux-en-Y gastric bypass (a close approximation to the functional anatomy post-gastrectomy), it is decided to change their psychotropic regimen to an oral disintegrating tablet (ODT) formulation of risperidone and continue duloxetine but monitor closely for changes in efficacy. **DISCUSSION:** Though this is a relatively rare indication for surgery involving the stomach or small intestine, this case highlights the importance of understanding the anatomy involved in these types of surgical procedures as they do affect the pharmacokinetics of commonly used psychotropics. For this case, the patient was stable on oral duloxetine, risperidone, and amitriptyline, all of which have been described in the literature to have decreased absorption after bariatric surgery.[1][2] Importantly, while oral risperidone can be easily transitioned to ODT risperidone, the literature suggests that Roux-en-Y Gastric Bypass likely decreases absorption of oral Duloxetine, and this might persist for at least 12 months after surgery.[2] Given the variability of absorption among psychotropics in an altered GI environment, the only current perioperative psychopharmacologic recommendation is to avoid extended-release preparation of medications when possible and maintain psychotropic regimens and closely monitor if a patient is stable on their current regimen. [1]

No. 18

Suspected Mirtazapine-Induced Bell's Palsy in a Young Female

Poster Presenter: Ashby M. Iype, M.D.

Co-Authors: Cassaundra B. Lewis, M.D., Kayla R. Anthony, M.D., Almari Ginory, D.O.

SUMMARY:

Mirtazapine is an alpha-2 antagonist and serotonin and norepinephrine receptor antagonist that is FDA approved for the treatment of major depressive disorder but is commonly prescribed for generalized anxiety disorder as well (1). This medication is also often used as an augmentation agent to SSRIs or

SNRIs and is especially helpful in alleviating common drug-induced Gastrointestinal side effects due to its 5-HT3 antagonism. Notable side effects of mirtazapine include weight gain and sedation at lower doses likely due to histamine 1 receptor antagonism (2). Bell's palsy, also referred to as idiopathic facial paralysis, is a neurological disorder of the facial nerve which results in sudden muscle weakness on one side of the face (3). Etiology for Bell's palsy is largely unknown but more commonly associated with viruses or inflammation. Herein lies a case of suspected delayed-onset mirtazapine-induced bell's palsy. This is a case of a 28-year-old female with past psychiatric history of bipolar disorder, cluster B traits, anxiety and past medical history of Irritable Bowel Syndrome (IBS) who was started on mirtazapine 15 mg at bedtime for anxiety/depression. Mirtazapine was also initiated due to the efficacy that mirtazapine has shown in studies for IBS, which significantly contributed to her anxiety(4). She was also taking lamotrigine 150 mg daily for mood stabilization, wellbutrin XL 150 mg daily for depression and hydroxyzine 25-50 mg at bedtime as needed for anxiety/insomnia. Within two weeks of mirtazapine initiation, the patient contacted the clinic to report she sought care at the emergency department for sudden onset of left-sided facial paralysis. In the emergency department, she was diagnosed with Bell's Palsy, attributed to recent mirtazapine initiation. Upon discontinuation of mirtazapine, patient reported resolution of facial paralysis within 3-4 days. This case raises awareness of this uncommon potential side effect of mirtazapine, which may warrant additional investigation, especially in this particular population. Disclaimer: This research was supported in whole or in part by HCA Healthcare and/or an HCA Healthcare affiliated entity. The views expressed in this publication represent those of the author(s) and do not necessarily represent the official views of HCA Healthcare or any of its affiliated entities.

No. 19

A Comprehensive Review of Novel FDA Approved Psychiatric Indications From 2018-2022

Poster Presenter: Shannon Savino

Co-Authors: Rhea Shishodia, Jonathan Terry, Sudhakar Shenoy, M.D.

SUMMARY:

Background/Purpose: Psychiatric medication research and development often lags behind other pharmaceutical developments.¹ Yet, mental health disorders remain among the top ten leading causes of disease burden worldwide and patients continually show high levels of treatment resistance.^{2,3} One way to combat these issues is to place an emphasis on improving medication development and discovery for psychiatric disorders through evidence-based research. There is a pressing need to explore novel psychiatric medications with new indications or mechanisms of action to treat the expanding population with mental health disorders, especially in those who are fully or partially resistant to common first-line medication options. Methods: We searched and reviewed novel psychiatric indications approved by the US Food and Drug Administration (FDA) in the 2018-2022 timeframe. We then analyzed each medication in the US Clinical Trials registry and gathered updated results for efficacy and safety information. We also used PubMed to understand how these new indications met current clinical needs. Tables of each medication are presented and include approval dates, manufacturer, active ingredient, target, mechanism of action, route of administration, and adverse events. Finally, through PubMed we inquired about related technological implications that will lead the field of psychopharmacology now and in the years to come. Results: We found 8 novel psychiatric indications out of 226 total pharmaceuticals approved by the US Food and Drug Administration within the years of 2018 and 2022, representing 3.5% of total FDA approvals during that time period. Clinical trials for each medication suggested favorable results in Phase III trials that lead to approval, along with current success in Phase IV trials as well. In 2018, Lucemyra (lofexidine) was approved for the treatment of opioid withdrawal. In 2019, Zulresso (brexanolone) was approved for postpartum depression, Caplyta (lumateperone) for schizophrenia, and Dayvigo (lemborexant) for insomnia. Azstarys (serdexmethylphenidate/dexmethylphenidate) and Qelbree (viloxazine) were both FDA approved in 2021 for ADHD. The newest FDA approvals include Quvivig (daridorexant) for insomnia and Auvelity (dextromethorphan/bupropion) for major depressive

disorder. Conclusion/Discussion: These psychiatric medications with new indications or mechanisms of action are expected to provide further options into treating a variety of mental health disorders; promising results will lead to new patterns of research in years to come. A related matter that needs to be examined is the current use of psychiatric medications that have not been FDA approved to treat a symptom or disorder (i.e. off-label utilization). Since the practice of off-label utilization is common in the field of psychiatry, this highlights a divide between the clinical experience of health care providers and current advancements in psychiatric research.

No. 20

A Case of Duloxetine-Induced Psychosis in an Older Adult

Poster Presenter: Shyam H. Bhatt, M.P.H.

Co-Author: Badr Ratnakaran, M.B.B.S.

SUMMARY:

Background: Duloxetine is a serotonin-norepinephrine reuptake inhibitor approved for the treatment of depression, anxiety, and neuropathic pain. Psychosis is a rare but reported side effect of duloxetine. We present a case of an older adult who presented with acute-onset paranoia and hallucinations precipitated by duloxetine prescribed for pain management. **Case:** Ms. P is a 71-year-old female with a history of anxiety, psoriasis, anemia, and an extensive cardiac history. Her past psychotropic medications included alprazolam, and she was taking aripiprazole for anxiety that included hearing-loss related auditory illusions of hearing chainsaws outside her room, in relation to hearing cars on the road. Ms. P was started on oral duloxetine 20mg daily for lower back pain. One week later, she presented to the emergency department with acute paranoid delusions and hallucinations characterized by paranoia against her son-in-law, delusions that her daughter was bleeding out and dying, visual hallucinations of people who didn't exist. She also reported seeing guinea pigs in her room, thinking people were out to get her and had subsequently locked herself in the closet. She had stopped taking the duloxetine due to these symptoms two days before presenting to the ER.

During inpatient psychiatric hospitalization, aripiprazole was increased from 2.5mg to 5mg. Ms. P's symptoms improved with aripiprazole, but persistent delusions and mild cognitive dysfunction remained after discharge. Risperidone was added one month later at an outpatient visit for persistent delusions, mood instability, and mild cognitive dysfunction. **Discussion:** Ms. P suffered from paranoia and psychosis after starting duloxetine, which continued for many days after cessation of the drug. It is hypothesized that increased dopamine release due to inhibition of norepinephrine receptors in the prefrontal cortex, or inhibition of serotonin reuptake may play a role. Norepinephrine transporters (NETs), which are inhibited by SNRI drugs like duloxetine, carry dopamine with high affinity in the prefrontal cortex, and their inhibition may further increase dopamine levels in this area. With Ms. P, persistent psychosis after cessation of the drug may be due to her age, and reduced drug clearance among the elderly. Delirium is primarily a disorder of the elderly, and her course of the disease may have been mixed with delirium due to hospitalization and age. **Conclusions:** Our case demonstrates one of the first reported cases of duloxetine-induced psychosis in an elderly patient. While useful in treating several mental health disorders and pain, duloxetine must be managed carefully by physicians caring for geriatric populations. Vigilance for potential side effects, including psychosis must be maintained, especially in older adults, as they may be hard to detect and challenging to treat.

No. 21

The Impact That Endures Long After Death: The Prevalence of Patient Suicide and Its Impact on Healthcare Providers

Poster Presenter: Michelle Mercer, D.O.

Co-Authors: Madison Jupina, Loren Hackett

SUMMARY:

Background: Patient suicide has been considered an occupational hazard for decades.¹ In this study, conducting an extensive literature review, we investigated the prevalence of patient suicide and its impact on providers.

Methods: An exhaustive search was conducted in

the following databases: Ovid MEDLINE®, Ovid Embase, EBSCO CINAHL, and Cochrane Library, using index terms and keywords relating to the concepts of suicide, patients, and clinicians to capture articles that studied the impact of patient suicide on healthcare providers. A total of 5,865 citations from these databases were imported into the Covidence systematic review software. After screening, articles were selected for review. Data was extracted from the included studies into tables summarizing findings from each article. **Results:** 48.79% (SD=21.43%) of all healthcare professionals will experience patient suicide in their careers.²⁻¹⁴ General Practitioners (Mean=86.57%, SD=4.97%)¹⁵⁻¹⁶ and Psychiatrists (Mean=73.09%, SD=16.47)^{1,11-14,17-29} experience patient suicide more than other providers. 47.92% (SD=20.89%) of Psychiatric trainees will experience patient suicide in their training.^{12,13,29,30-36} 35.93% (SD=15.87%) of Psychologists^{1,11-14,37-38} and 55.34% (SD=19.21%; 3 studies) of nurses will experience patient suicide.^{11,39-40} Amongst counselors, therapists and, social workers, 21.04% (SD=3.20%) will experience a patient dying from suicide in their careers.^{11,14,41} The most common emotional reactions to patient suicide are shock, sadness, guilt, anger, helplessness, and self-doubt. Studies utilizing the Impact of Events Scale show that up to 52% of providers are “clinically stressed” following a patient suicide event. Between 3.4% and 13.7% of providers even had IES scores consistent with a diagnosis of Post-Traumatic Stress Syndrome. Trainees (Psychiatry and Psychology Residents) tended to have higher IES scores than other care providers. 7 Studies found that these effects persisted for over one month for at least 20% of providers who experienced patient suicide.^{1,6,7,17,22,25,29,30,31,33,36,40-45} In the most severe emotional reactions, providers can become suicidal themselves following patient suicide.^{19,10,46-47} In 32 studies, 50.9-100% of providers changed their clinical practice following the event. These changes included increased tendency to hospitalize, becoming more cautious, increased use of consults, avoidance of or no longer seeing suicidal patients and more detailed charting.^{26,48,31,33} **Conclusions:** To our knowledge, this is the most extensive review of the prevalence and emotional impact of patient suicide to date. Our results will help inform all providers of how likely it is to encounter a patient suicide and what emotional reactions to expect following the event.</p>

No. 22

The Contribution of B12 Deficiency in the Acute Onset of Violent Suicidality in Elderly Women

Poster Presenter: Ethan Higginbotham, M.D.

Co-Authors: Daniel Chrzanowski, M.D., Suzanne Holroyd, M.D.

SUMMARY:

Ms. J is a 62-year-old woman who presented to the inpatient psychiatric hospital after a violent suicide attempt. The patient had been tackled by police officers after using a knife to inflict deep lacerations to both of her wrists, lower limbs, and chest wall. Upon initial examination, the patient was found to have feelings of guilt regarding her attempt, decreased energy levels, and significant psychomotor retardation. Ms. J initially denied any history of psychiatric illness, but after speaking with family members it was discovered that she had a one-year history of delusions involving the belief that her phone was being hacked by various stalkers. Family reported that the patient had no known prior suicide attempts or ideations. The team considered major depression with psychotic features as the primary differential diagnosis. On further medical workup, the patient was found to have low B12 levels, at 170 pg/mL. MRI findings revealed significant cerebral cortical and cerebellar atrophy. The patient was started on a five-day course of B12 injection replacement therapy, as well as 75 mg venlafaxine daily which was eventually titrated to 150 mg. Ms. J experienced initial improvement one week after admission with a decrease in both depressive and psychotic symptoms. However, in the following week paranoid delusions had returned and the patient was started on 5 mg olanzapine at bedtime. Suicidal ideations did not recur following B12 replacement. It has been well documented that females who attempt suicide are less likely to use a violent method, more often opting for drug overdose or toxic poisoning, making this patient presentation particularly unusual¹. The current literature also shows that nutritional deficiency of vitamin B12 can contribute to an increase in violent behavior, psychosis, and acute behavioral disturbances^{2,3,4}. In this poster, the author proposes that vitamin B12 deficiency plays a significant role in the ultimate

chosen suicide method, and often goes unappreciated in the setting of psychotic symptoms.

No. 23

Systematic Suicide Screening in a General Hospital Setting: Process and Updated 10-Year Data Results

Poster Presenter: Evan Becker

Co-Author: Eduardo Espiridion

SUMMARY:

Background: Suicide continues to be one of America's largest public health concerns. In response to the growing need for screening hospitalized patients for suicidal behavior and ideation, a Northeastern United States Hospital (NEUSH), in conjunction with Columbia University, implemented a screening version of the Columbia Suicide Severity Rating Scale (C-SSRS). The original project, published in 2020, evaluated the feasibility and initial results of using this screening tool in a NEUSH on the inpatient acute care floors. Now, this study aims to update the scientific community on the progression and effectiveness of this C-SSRS screening tool at the same NEUSH with a larger sample size. **Methods:** A total of 261,681 patients aged 18 and over were screened by trained nurses during the time period of July 1st, 2011, to June 30, 2021. Data was collected using the Electronic Medical Record Systems that the hospital was using during that time frame (Clin Doc® and Epic®). **Results:** From the 261,681 adult patients who were screened with the C-SSRS Screener, 1,375 (44.6%) scored a Level 3, another 198 (6.4%) scored a Level 4, and 1,509 (49.0%) scored a Level 5. Overall, 1.18% (3,082/261,681) of admissions had a psychiatric consult recommended due to the level indicated by the C-SSRS and a total of 2730 consultations were performed by the psychiatry department as a result of a Level 3 or higher on the C-SSRS screening. Over 99% of the consults performed from C-SSRS score of Level 3 or higher were deemed appropriate. Regarding disposition of patients who scored a Level 3, 4, or 5 on C-SSRS screening, 976 (31.7%) were referred to either start or continue outpatient mental health care, another 689 (22.4%) were discharged to home, and 623 (20.2%) were discharged to the inpatient psychiatric facility of the NEUSH. **Conclusion:** These findings suggest that the C-SSRS Screener continues to be a

low burden effective screening tool that can identify suicidal ideation and behavior in high-risk patients admitted to the hospital. Any hospital needing a method to screen for suicidal ideation and behavior should consider the C-SSRS Screener as a possible solution to their needs.

No. 24

The Effect of Suicide Prevention Program for Community Dwelling Elderly

Poster Presenter: Hyeok Gwon

Co-Authors: Younghwa Sea, Suhee Park

SUMMARY:

Background: The suicide rate in the elderly population is the highest of all ages in Korea. Suicide prevention programs specialized in the elderly are scarce. We evaluated the effect of the suicidal prevention program named "Nae-an-ae" (means to love oneself), which was specifically designed for the conditions of the community dwelling elderly. **Methods:** The subjects were those who agreed to participate in the Nae-an-ae program among those evaluated as suicide high-risk groups according to the 2021 Jeollanam-do Mental Health Survey. The program consisted of five sessions of simple activities that could be practiced in daily life along with knowledge transfer through education on emotion recognition, stress management, sleep and relaxation, pain and exercise, and depression. This program was conducted by social workers or nurses working at each local community mental health and welfare center. We evaluated the Geriatric Depression Scale-Short Form Korean Version (GDS-SF), suicidal ideation, satisfaction with life scale (SWLS) and brief resilience scale (BRS) which were measured before and after the program and compared them with the control group. **Results:** A total of 276 participated in the program, 226 were in the control group. In the program participating group, the frequency of suicidal ideation was significantly decreased from 36.2% to 11.6% after the program. GDS-SF, SWLS and BRS were significantly decreased in active group than control group. **Conclusion:** These findings showed that "Nae-an-ae" program was found to affect not only the control of suicide risk factors such as depression but

also positive factors such as life satisfaction and resilience.

No. 25

Gratification and Its Association With Problematic Internet Use: A Systematic Review and Meta-Analysis Using Use and Gratification Theory

Poster Presenter: Dannuo Wei

SUMMARY:

Background Problematic internet use (PIU) has been a growing concern over the past two decades. Although more evidence is needed to determine whether PIU is pathological in nature, many studies have reported the negative effects of PIU on users' psychological health. Meanwhile, researchers seek to explain the occurrence of PIU, and the Use and Gratification theory (UGT) is a primary framework used in related studies. The UGT posits that users experience gratification of certain needs through internet and media use, which enhances the likelihood of a repeated, habitual, or even addictive use. Many studies have followed UGT to investigate the association between gratification and problematic internet or media use through various research designs while results appear consistent. The present study aims to synthesize the findings of research that applied UGT and determine the associations between distinct gratifications and PIU.

Methods Studies reported associations between gratification and PIU under the guidance of UGT were included. A three-level meta-analysis was conducted using correlation r as the indicator of effect sizes. All effect sizes were pooled first to get an overall effect size. We then classified gratifications into five types according to the suggestions of previous studies and the definition of included studies: content, social, utilitarian, process, and technology. We calculated composite effect sizes and moderator analyzes of each type of gratification. Funnel plots and Egger's test were used for publication bias test. **Results** Based on 127 effect sizes from 32 samples in 33 studies, with 25,115 participants (Mean age = 24.2; 57.3% females), random effect model analyzes yield a small to medium effect size ($r = 0.240$, $p < 0.001$, 95% CI [0.184, 0.294]), indicating a positive association between general gratification and PIU. Subgroup

analyzes revealed that all gratifications were positively associated with PIU, with utilitarian showing the largest effect size, followed by process gratification. Moderation analyzes showed that platforms and study sites modify the associations between gratifications and PIU, underlying the variability in the relationship between gratification and PIU across online and offline contexts.

Conclusion This study supports the theoretical utility of UGT in examining gratifications as the mechanisms involved in PIU. Previous studies have highlighted process as a primary area of gratification linked to PIU; the finding of this study supports this observation. We also found the utilitarian gratification from generating a particular image of self might lead to PIU. Future research should further explore the reasons behind user's online self-image construction behavior and identify offline factors that may motivate users to seek utilitarian gratification online. Interventions should also consider that users may overuse the Internet for utilitarian gratification and provide targeted guidance.

No. 26

A Directional Change in Hospitalization Rates Among Children and Adolescents: 7 Years of Data in a Large Hospital System

Poster Presenter: Eugenia Y. Chen, M.D.

Co-Author: Brooke Harris, Ph.D.

SUMMARY:

Objective: Children and adolescents are experiencing escalating rates of mental health disorders with increased suicidality as the second leading cause of death in US adolescents (1). Over the past 15 years, pediatric hospitalizations for mental health reasons have doubled in emergency departments and outside facilities to hospitalizations (2). Recent studies have alluded to seasonal variability in addition to the increased volume of these presentations (3). Therefore, our study reviewed data from 2015-2021 between pediatric psychiatric hospitalizations and the clinical environment from which patients were hospitalized to obtain further insights regarding hospital trends and driving factors for this population. **Method:** Data was collected from a large Northern California health system that

includes pediatric patients (18 and younger). Total number of hospitalizations were examined annually between the years 2015-2021. Among these admissions, location of service prior to hospital admission was accounted for and divided into 4 subcategories: Kaiser Permanente (KP) San Jose Emergency Department, non-KP emergency departments, outpatient KP services, and other KP. For analysis, chi squared tests were used to compare proportions of hospitalization rates. **Results:** Between 2015 – 2018, yearly hospitalizations in the catchment area (with adjusted total patient numbers) were 53 (12%), 78 (17%), 167 (35%), 198(42%), respectively . From 2019-2021, the hospitalization rates began to decrease starting with 150 (31%), 144 (29%), and 146 (26%) . While adjusting for increases in patient numbers within our system, there is a significant difference between 2018-2021 ($p < 0.005$) indicating a statistically significant downward trend in hospitalizations. **Conclusion:** Although rates of psychiatric hospitalizations among children and adolescents initially increased between 2014 – 2018, we saw decreased rates in our catchment area between 2019 – 2021. Reasons could be explained by the implementation of additional interventions such as family therapy into the intensive outpatient program (IOP) and close follow up with outpatient providers. In addition, since the fall of 2020, multifamily groups implemented the use of graded scaling and family activities as ongoing intervention. As a result of the increased need for services, IOP was able to advocate for additional resources to provide intensive services. Reasonable factors that contribute to a downward trajectory may include variabilities in psychosocial support, restrictions placed on hospitalizations due to COVID-19, or increased vigilance of mental health awareness during the pandemic. Future directions include analysis of these factors which could further provide actionable strategies to target areas of intervention prior to a hospitalization.

No. 27

Psychiatric Comorbidities and Related - Risk of Somatic Symptom Disorders in Post Traumatic Stress Disorder: A Cross-Sectional Inpatient Study

Poster Presenter: Shruti Prabhudesai

Co-Authors: Rikinkumar S. Patel, M.D., M.P.H., Albulena Sejdiu, Anil Krishna Bachu, M.D., Sanobar Jaka, M.D., M.P.H.

SUMMARY:

Objective: Nearly 90% of Americans are exposed to a traumatic event at some point in their lives, and over 8% of those individuals will develop post-traumatic stress disorder (PTSD). Our study delineates the differences in demographic characteristics and psychiatric comorbidities in PTSD inpatients with versus without somatic symptom disorders (SSD), and evaluates the factors increasing the likelihood of SSD in PTSD. **Method:** We conducted a cross-sectional study using the nationwide inpatient sample (NIS, 2018 and 2019). Our sample included 12,760 adult patients (age 19-50 years) with a primary diagnosis of PTSD which was further sub-grouped by co-diagnosis of SSD. We used a logistic regression model to evaluate the odds ratio (OR) of association for SSD to evaluate the demographic predictors and comorbid risk factors in PTSD inpatients. **Results:** The prevalence of SSD in PTSD inpatients was 0.43%. Personality disorders were the most prevalent comorbidity in the SSD cohort and were significant highly compared to non-SSD (63.6% vs. 22%) followed by anxiety disorders (54.5% vs. 35.5%). About 18.2% of PTSD inpatients with SSD were Native American/Asian and were at higher odds (OR 2.79, $P = 0.004$) compared to Caucasians. Personality disorders (OR 5.55, $P < 0.001$) and anxiety disorders (OR 1.93, $P = 0.018$) were found to increase the likelihood of co-diagnoses of SSD in PTSD inpatients. **Conclusion:** In our study, we found that somatic symptom disorder (SSD) was prevalent among young adults, particularly females and Caucasians, who were hospitalized for post-traumatic stress disorder (PTSD). These patients also struggled with comorbid conditions such as personality disorders and anxiety disorders. These findings suggest that there is a need for targeted interventions to address SSD in at-risk populations with PTSD.

No. 28**Real-World Effectiveness of Esketamine and Ketamine for Treatment-Resistant Depression: An Open-Label Single-Site Study**

Poster Presenter: Shruti Prabhudesai

Co-Authors: Yarob Almaaitah, M.D., Ahmed Z.

Elmaadawi, M.D.

SUMMARY:

Background: There has been a very limited head-to-head comparison between ketamine and esketamine for refractory depression [1]. Objective: To assess the efficacy of ketamine compared to esketamine in patients with treatment-resistant depression (TRD). Methods: We conducted a six-week open-label clinical trial with two parallel groups: adult participants (mean age 47.4y, 66.7% females) receiving an intravenous infusion of ketamine (N=15) vs. intranasal esketamine (N=15). The primary outcome was the difference in response rates (minimum reduction of 50% in baseline score) for depression at end of trial using the Montgomery-Åsberg Depression Rating Scale (MADRS). Results: MADRS scores improved from 24.1 (SD 5.7) to 16.1 (SD 4.6) in the esketamine group and from 23.1 (SD 6.9) to 8.5 (SD 6.6) in the ketamine group, with a mean difference of 7.6-point (95% CI 3.3-11.9, P=0.001) at end of study. There was a statistically significant and higher response rate in ketamine group (66.7% vs. 13.3% in esketamine, P=0.003) and higher likelihood (OR 50.9, P=0.006) for positive response compared to esketamine. Discussion: NMDA antagonism and opioid neurotransmission represents the antidepressant mechanism of ketamine [2]. There is long-term data for esketamine that led to its FDA approval for major depression but not much data for intravenous ketamine leading to its off-label use[1]. Only one study compared both and found esketamine was non-inferior with improvement to ketamine for TRD at 24h [3]. Conclusion: Intravenous ketamine appears to be more effective for TRD at a 6-week period possibly due to the long-lasting antidepressant effect compared to esketamine.

No. 29**Rapid Response to ECT in Post-Operative Induced Catatonia: Case Report and Review of the Literature**

Poster Presenter: Nadia Surexa Cacodcar, M.D.

Co-Author: Alyssa Nielsen

SUMMARY:

Catatonia (CAT) is a severe psychomotor syndrome characterized by abnormal movements and behaviors. CAT is well identified in primary mood, psychotic disorders, and in the setting of severe medical illness.¹ Limited literature exists regarding post-operative induced catatonia (POC) with approximately 18 cases identified—only 4 of which utilized ECT.²⁻⁵ Here our objectives are to discuss the swift resolution of POC through utilization of an abbreviated Index Series of ECT, cite known data regarding POC-ECT courses, review ECT technique for POC, and discuss known limitations on short-term and long-term relapse rates for CAT and POC for the cited literature. Ms. E is a 76 year-old female with a history of hypothyroidism secondary to Hashimoto's Thyroiditis, no CAT history, and an ongoing major depressive episode (MDE), recurrent, severe, without psychotic features that failed a TMS trial and was marginally responsive to venlafaxine 300mg daily and mirtazapine 7.5mg. During this MDE, she underwent general anesthesia for surgical correction of a uterine/bladder prolapse, with subsequent successful treatment of urinary tract infection with delirium. Despite medical stabilization, self-neglect, decreased appetite with weight loss, insomnia, avolition, anhedonia, persecutory delusions and bizarre behaviors persisted at home. Confusion surrounding basic tasks was quantified through decline in her baseline MOCA of 26/30 to 17/30. This pernicious deterioration led to subsequent inpatient hospitalization whereupon olanzapine was started to target psychosis; however, her progressive decompensation continued. The presentation became increasingly concerning for CAT supported by Bush-Francis Catatonia Rating Scale (CRS) score of 12. A lorazepam 1mg oral challenge revealed marked improvement (CRS - 3) within 30 minutes. Unfortunately, decreased response over a 7-day course of lorazepam 1mg every 8 hours necessitated ECT. She received bifrontal ECT using a Thymatron System IV with a total device energy calculated with the age-based method. ECT #1 dosing was 35% and

resulted in a startling, robust response in which she was found smiling, completing a puzzle, speaking in full complex sentences, and finishing meals. Subsequent device energy was increased to 50% based on subjective assessment of seizure quality parameters. Ativan was tapered. By ECT #3, she had returned to pre-morbid baseline functioning such that ECT was held at the abbreviated Index Series of ECT of #3. She was discharged home with family. ECT is well documented in its treatment of CAT, yet the sparse literature surrounding its use in POC offers minimal information on treatment response, technique, and overall course. This case contributes to the limited body of work by presenting a unique treatment course revealing ECT parameters leading to marked response by treatment #3. Further discussion about a Continuation and Maintenance ECT course for POC will be addressed.

No. 30

Electroconvulsive Therapy in Thrombocytopenic Patients: A Case Report and Literature Review

Poster Presenter: Jake Nearine

Co-Author: Samantha Ongchuan Martin

SUMMARY:

Introduction: Electroconvulsive Therapy (ECT) continues to be one of the most effective treatments for severe and treatment resistant major depression. Although there are no absolute contraindications to performing ECT, the risks and benefits need to be assessed in all patients. We present a patient with a history of Paroxysmal Nocturnal Hemoglobinuria (PNH) with significant thrombocytopenia, who completed an index course of six ECT sessions, without complication. Currently, there are only two published case reports which describe the use of ECT in patients with thrombocytopenia. **Methods:** AD is a 37-year-old female with a history significant for MDD, GAD, panic disorder, PNH, and Budd Chiari who presented to ED for suicidal ideation. Initial labs showed pancytopenia (Hb 4.56 mg/dl, Absolute Neutrophil $0.7 \times 10^3/\text{mL}$). Given her history of multiple failed SSRIs, ECT was proposed to treat her depression. Anesthesia delayed her initial pre-operative assessment due to concerns regarding her platelet count and risk of bleeding. They recommended transfusion with a preprocedural

platelet count goal of $50 \times 10^3/\text{mL}$. Psychiatry recommended a platelet goal of $20 \times 10^3/\text{mL}$ given previous ECT literature. Patient underwent six ECT sessions, without complications. Her platelets ranged from $24 - 40 \times 10^3/\text{mL}$ and she did not require preprocedural platelet transfusion. **Results:** Due to a lack of published literature, there are no formal guidelines for performing ECT in thrombocytopenic patients. The first case report details a 64-year-old female who underwent 12 ECT sessions without complication, while her platelet count ranged from $7 - 38 \times 10^3/\text{mL}$. The most recent case report describes a 74-year-old male who underwent nine ECT treatments without complications. The authors decided to transfuse prophylactically if pre-procedure platelet count was less than $20 \times 10^3/\text{mL}$. The patient underwent nine treatments, requiring eight transfusions. CT head did not show any signs of hemorrhage or structural changes. The authors remarked it is unclear whether the transfusions were necessary. **Conclusions:** Even though ECT has been in use for over 80 years, there is still much that is unknown about this treatment modality. This case highlights the lack of absolute contraindications to performing ECT. However, the lack of literature and studies regarding platelet goals in thrombocytopenic patients for ECT delayed patient care in this specific case. We add a third case report in a thrombocytopenic patient who underwent ECT without complications with a pre-procedure transfusion criterion if platelet count was less than $20 \times 10^3/\text{mL}$. More research needs to be conducted to determine risk and cut-off limits for platelet transfusion prior to performing ECT in thrombocytopenic patients.

No. 31

Delineating Distinct Decreases in Depression Symptomatology and Their Temporal Association to Treatment Between 10 Hz rTMS and iTBS

Poster Presenter: Nathen Spitz, B.A.

SUMMARY:

Background: Transcranial magnetic stimulation (TMS) is a novel, FDA-cleared treatment for major depressive disorder. TMS treatment strategies include the standard 10 Hz repetitive TMS (rTMS) and a newer modality, intermittent theta burst (iTBS)

-- recently demonstrated as non-inferior. Our study sought to explore if certain depression symptoms improved faster than others after treatment, and to examine differences between trajectories of symptom improvement with iTBS and 10 Hz rTMS. **Methods:** Retrospective analyses of participants with MDD that received open-label TMS treatment at the left dorsolateral prefrontal cortex (DLPFC) to examine response to treatment using weekly Patient Health Questionnaire 9 (PHQ-9) scores [10 Hz rTMS (n=68) and iTBS (n=37)] and pre, mid, and post-treatment Montgomery-Åsberg Depression Rating Scale (MADRS) scores [10 Hz rTMS (n=65) and iTBS (n=28)]. Using cumulative logistic regression analyses, and pairwise odd ratio point and interval estimates, effects between treatment group and treatment number at weekly intervals were used to investigate if specific depression symptoms responded differentially. **Results:** PHQ-9 scores amongst TMS responders (>50% improvement on PHQ-9, n=41) showed rapid and significant improvement in most items in one week of treatment, but a slower improvement on item #6 "feeling bad about yourself" (at week 3, $p = 0.046$) and on item #8 psychomotor changes (at week 5, $p = 0.0031$). Investigating differences between 10 Hz rTMS and iTBS using the weekly PHQ-9, we found 10 Hz rTMS showed greater response for item #2 "feeling down, depressed, or hopeless" at week 6 of treatment ($p = 0.045$); as well as for item #4 "feeling tired or having little energy", with 10 Hz rTMS having a significantly greater reduction from baseline, compared to iTBS ($p = 0.027$). MADRS scores between 10 Hz and iTBS responders showed faster response in the 10 Hz rTMS group on symptoms of "reported sadness" (item #2) and "lassitude" (item #7) from baseline to the mid-treatment time interval ($p = 0.0320$ and $p = 0.0060$, respectively). There were no other depression symptoms that had a significantly different response pattern between the two modalities. **Conclusion:** Using PHQ-9 and MADRS depression rating scales, we found TMS treatment responders demonstrated more gradual improvements in pessimistic thinking and psychomotor abnormalities compared to other depressive symptoms. 10 Hz rTMS showed faster response in symptoms of reported sadness and lassitude, as well as trended towards a faster response in other symptom categories compared to

iTBS. We did not find a significant difference between 10 Hz rTMS and iTBS in overall response rates at completion of treatment. Delineating the temporal trajectory of depression symptom improvement and differences between TMS modalities may enable clinicians to tailor treatment strategies and further guide patient expectations in relation to specific symptoms of depression.

No. 32

Resident and Faculty Survey on the Teaching and Use of the Biopsychosocial Formulation

Poster Presenter: Barbara N. Trejo, M.D.

Co-Authors: Ruby Lekwauwa, M.D., Keith Gallagher, M.D.

SUMMARY:

Introduction: The biopsychosocial (BPS) formulation is used to offer a holistic picture of a patient's difficulties and allows for the generation of etiological hypotheses about symptom presentation. Psychiatry residency programs in the United States have adopted teaching the BPS formulation as a core feature of training. The ACGME also outlines the use of formulation as a required core competency for psychiatrists in training. Psychiatrists also question the utility of this model, with some proposals of alternative formulation strategies. While there are formalized methods for teaching formulation skills and evaluating trainee competency in residency, we developed a survey to assess resident and faculty perceptions of competency in this skill. We also sought feedback around the teaching and use of formulation in an effort to improve the existing educational framework for teaching trainees.

Methods: Two online surveys were designed to address resident and faculty perspectives, respectively, on BPS formulation training and practice in our residency program. Both the faculty and resident survey included 38 questions and were formatted as a series of agree/disagree 5-point Likert scale questions around the perceived level of confidence trainees or faculty have in resident use of the various aspects of the BPS formulation. Both surveys also allowed for written submission of comments, feedback as well as recommendations for improvement. The survey was distributed to residents across all years. Faculty were invited to

participate in the survey via e-mail and during medical staff meetings. **Results:** A total of 40 residents and 28 faculty members completed the survey. [RL1] Residents across years reported more confidence in the cultural and biological aspects of the formulation and less confidence in the psychological aspects. Faculty perceptions of residents' confidence mirrored that of trainees. However, trainees perceived themselves as more confident with the social formulation than faculty believed them to be. Similarly, themes around lack of unified expectations between faculty and trainees were common, and both groups offered suggestions regarding standardization of content and expectations around formulation teaching and learning. **Conclusion:** Survey data can be used to inform curriculum changes and improve resident teaching in formulation. Aspects of the formulation that require strengthening, the psychological and cultural in particular, may be an area for specific focus. More work is needed to understand where perceptions of faculty and trainees differ significantly. Perhaps faculty and trainees have differing opinions about the relative relevance of the different components of the formulation, especially considering the growing representation of minoritized identities amongst trainees. [RL2] Future directions could thus build on described approaches to teaching the formulation to develop a joint trainee-faculty vision for this clinical tool.

No. 33

Effects of COVID-19 Pandemic on FSOM MS1 Life Satisfaction, Cohort Interactions, and Education

Poster Presenter: Ritu Patel

SUMMARY:

Background: Previous research has demonstrated that the pandemic negatively impacted medical students resulting in higher rates of anxiety, depression, and loneliness with decreased life satisfaction and academic motivation. The return to in-person learning provided the opportunity to compare the impact of social distancing, an online curriculum, and limited in-person interactions on the wellbeing and sense of community amongst two different cohorts of medical students at the Foster School of Medicine (FSOM) in El Paso, Texas. The aim

of this study was to evaluate if the COVID-19 pandemic restrictions caused a significant negative impact on students within the cohorts of Classes of 2024 and 2025 at FSOM. *Methods:* In this cross-sectional study, a secure web platform for online databases and surveys (REDCap) was used to distribute a series of online surveys regarding three dependent variables: life satisfaction, academic frustration, and cohort interactions, totaling 48 questions. The questionnaire was adapted from previous studies on the effect of COVID-19 on individuals' mental health and wellbeing. Data collection occurred between early April to late June 2022. This time corresponded to the end and the beginning of the academic year for students Class of 2024 and Class of 2025 who were exposed to differing levels of pandemic restrictions during their academic years. *Results:* The results from this study of 47 medical students indicated that medical students at FSOM were not significantly impacted in areas of mental and emotional wellbeing, subjective feelings of familiarity toward their peers, and perceived frustrations with academic delivery. Students were significantly impacted in participation of public, social activities due to governmental and local regulations. *Conclusion:* Students at FSOM were not significantly impacted—except for their ability to participate in social gatherings and other activities—by the pandemic and its restrictions, as compared to other larger studies, which have shown significant negative impacts on medical students. These conclusions allow for greater understanding about student resiliency and adaptability, two core components of medical school. Further research could elucidate what traits within these medical students or FSOM protected them from the significant negative impact of the COVID-19 pandemic.

No. 34

Collaborative, Innovative Approach for Managing Symptoms of Autism Spectrum Disorder (ASD)

Poster Presenter: Joshua Okoronkwo, M.D.

Co-Author: Chidinma Isinguzo

SUMMARY:

Background: Autism spectrum disorder (ASD) is a complex neurodevelopmental disorder characterized

by impaired social communication, restricted repetitive behaviors and interests. The deficit impairment in ASD is variable. Some individuals with more developed speech and cognitive abilities are more likely to function independently. However, Individuals with less robust expressive language, nonverbal communication, lower intellectual abilities may struggle to fully articulate their feelings, may require substantial support. Regardless of the severity level, individuals with ASD can sometimes exhibit emotional and behavioral symptoms including aggression, irritability, self-injurious behavior and co-morbid diagnosis including anxiety, depression. Some behaviors can have legal and socio-economic ramifications including, limited academic achievement at school, limitation of employment opportunities, criminal justice system involvement. Family-members and caregivers may struggle to manage the problematic and potentially dangerous behaviors that can arise when the core symptoms are not accurately managed. Method: A search of the most recent medical literature databases using relevant search terms. Results : Emerging studies are suggesting potential for improved outcomes when a collaborative approach that integrates multi-pronged approach, including medications, Behavior Therapy, Psychological interventions and other exciting, novel genetic treatments targeting Fragile X syndrome (FXS), (one of the most common genetic disorder leading to ASD). Conclusion: We present recent clinical/scientific update on interventions for managing the core symptoms of ASD, incorporating a multi-faceted approach including medications, behavioral therapy and a treatment plan that also takes into consideration, emerging novel predictors of treatment response.

No. 35

Switching the Antipsychotic Is Not an Option? Innovative Trends in Treatment of Antipsychotic- Induced Hyperprolactinemia

Poster Presenter: Joshua Okoronkwo, M.D.

Co-Author: Chidinma Isinguzo

SUMMARY:

Background: Hyperprolactinemia is a possible adverse effect of antipsychotic use.

Hyperprolactinemia is often asymptomatic and might sometimes be associated with a wide variety of side effects including galactorrhea, menstrual cycle disturbances, hypogonadism and sexual dysfunction. Historically, management typically includes decreasing the dose of the offending antipsychotic, discontinuing the antipsychotic, or switching to another antipsychotic associated with a lower risk of hyperprolactinemia. However, in some individuals these options are associated with a risk of relapse, hence necessitating a need for another approach.

Method/Results: A search of recent medical research and literature using key terms . Some medications such as aripiprazole, cabergoline and bromocriptine are effective at decreasing elevated prolactin levels, however cabergoline may be associated with an adverse effect of cardiac valvular abnormalities; metformin causes a mild reduction of prolactin levels; and there are limited data which shows use of herbal medications (such as chamomile, Peony-Glycyrrhiza decoction, and shakuyaku-kanzo-to) **Conclusion:**

Hyperprolactinemia may have an adverse effect on peak bone mass attainment and elevate long-term osteopenia risk, even when asymptomatic. The sexual dysfunction from elevated prolactin may interfere with medication adherence and compliance, hence, needs to be addressed. There are alternative treatments available for antipsychotic-induced hyperprolactinemia in patients who are unable to change their current antipsychotic regimen.

No. 36

Mania in Autoimmune Adrenalitis: Steroids as the Cause or the Cure?

Poster Presenter: Alex Wang, M.D., M.B.A.

Co-Author: John Luo, M.D.

SUMMARY:

We describe a rare case of acute mania in the setting of autoimmune adrenalitis. A 41-year-old male with no previous psychiatric diagnoses presented with impulsivity, grandiosity, delusions of telepathy, and hyper religiosity following a previous hospitalization for acute adrenal crisis and two subsequent days of low-dose corticosteroid treatment. Work up for encephalopathy and lupus cerebritis were negative,

making this presentation concerning for steroid-induced psychosis. However, discontinuation of corticosteroids for 5 days did not resolve the patient's manic episode, suggesting that his clinical presentation was more likely new onset of a primary mood disorder or a psychiatric manifestation of adrenal insufficiency itself. The decision was made to restart corticosteroid treatment for Addison's disease coupled with administration of both risperidone and valproate for mania and psychosis. Over the following 2 weeks the patient's manic symptoms gradually resolved. Final diagnosis upon discharge was acute mania secondary to autoimmune adrenalitis. Although acute mania in adrenal insufficiency is quite rare, clinicians should be aware of the range of psychiatric manifestations associated with Addison's disease so that they can pursue the optimal course of both medical and psychiatric treatment for these patients.

No. 37

WITHDRAWN

No. 38

A Case of Covid-19 Induced Mania

Poster Presenter: Alison Cheng

Co-Author: Swetha Uppalapati

SUMMARY:

INTRODUCTION: There is evidence in the literature that coronavirus subtypes, SARS and MERS, can lead to development of neuropsychiatric symptoms in those who are infected. Symptoms can include encephalitis, manic-depression, agitation, and delirium. SARS-CoV-2 (COVID-19) is in the same group of beta-coronaviruses as SARS and MERS and shares 85% of the same nucleotide sequences seen in the SARS virus. We present a case of new-onset mania in a patient recently infected with COVID-19. Review of the neuropsychiatric manifestations of SARS/MERS infections can provide valuable clinical insight into the symptoms and complications that may arise in COVID-19 patients. **CASE:** A 54-year-old male was admitted for psychiatric evaluation due to a sudden change in behavior suggestive of a manic episode. The patient displayed pressured speech, increased goal-directed activity, psychomotor agitation, flight of ideas, tangentiality, and mood

lability on evaluation. He had no significant past medical, psychiatric, or substance abuse history. Head CT, RPR, Vit B12, Folate, CBC, CMP, EKG, and UA were unremarkable. The only significant history was a recent COVID-19 diagnosis 15 days prior to admission. He reported cold-like symptoms which resolved during isolation. Given the unlikelihood of first-break mania at this patient's age and no other apparent biological cause of his mania, consideration was given to COVID-19 induced mania. **DISCUSSION:** Although COVID-19 is more commonly associated with respiratory symptoms, studies show it can be a multisystemic disease. Manifestation of neuropsychiatric symptoms in COVID-19 is similar to what was seen with the SARS virus in the past, including symptoms ranging from anger, anxiety, depression to hallucinations and mania. COVID-19 treatments, corticosteroids and antivirals, could induce psychosis, but this is less likely in our patient as he self-isolated. Inflammation has been shown to play a role in pathogenesis of mood and thought disorders as well as systemic symptoms of COVID-19. COVID-19 can trigger a cytokine storm with high levels of interleukins, TNF-alpha, CRP, resulting in neuroinflammation. Inflammatory markers were not obtained in our patient, but it would be prudent to order cytokine profiles to help aid in management. Treatment with traditional mood stabilizers and antipsychotics has limited efficacy as demonstrated by this case. Further research is needed to determine the role of immunomodulators and cytokine inhibitors in managing neuropsychiatric symptoms in COVID-19.

No. 39

Racial Discrimination Correlation With ACEs and Flourishing in Black Children With Depression

Poster Presenter: Chika Nwachukwu

Co-Authors: Sarah Martin, M.D., Luis Alvarado

SUMMARY:

Background Adverse Childhood Experiences (ACEs) are traumatic experiences that occur before the age of 18 that can have long lasting effects on a child's life. ACEs are prevalent in the American pediatric population as about 50% of children have experienced at least one ACE. Toxic levels of stress during childhood may be the mechanism by which

ACEs contribute to adverse mental health outcomes. ACEs increases the likelihood of depression. Prolonged stress activates the fight or flight stress response as well as maladaptive coping mechanisms. Prolonged stress and depression can diminish flourishing in a child. Unfortunately, Black youths experience more ACEs than their white peers. Furthermore, racial discrimination is an ACE that causes high levels of distress and increases the risk for depression in Black children. There have been limited studies analyzing the correlations of racial discrimination with other ACEs, depression, and flourishing in Black youths. *Methods* We conducted a retrospective cross-sectional study using the 2019–2020 National Survey of Children’s Health (NSCH) data reported by parents/guardians for Black children ages 6–17 years with depression. Univariate and multivariable relative risk analysis was used to calculate the association between racial discrimination, ACEs, and flourishing in this population. *Results* When Black children are exposed to racial discrimination, they are 3.42 times more likely to experience depression as compared to those who did not experience racial discrimination (95% CI, 2.21-5.31). Black children aged 12-17 years old are 2.75 times more likely to be diagnosed with depression as compared to black children 6-11 years of age (95%, CI 1.69-4.46). Depression was associated with an older age (13.48 vs 11.6 years, $P < .0001$), inability to flourish ($P < .0001$), and ACEs ($P < .05$ for all ACEs). *Conclusion* Our results suggest that racial discrimination exposes Black youths to other ACEs, increases the risk of depression, and worsens the ability to flourish. Further investigations into understanding the multifactorial influences of racial discrimination and ACEs on depression and flourishing must be conducted to improve the overall health of Black youths.

No. 40

Re-Hospitalizations Among Children and Adolescents: An Extended Quality Improvement Analysis for Factors Reducing Recidivism

Poster Presenter: Manisha Yedla, M.D.

Co-Authors: Manasi Rana, M.D., Eugenia Y. Chen, M.D.

SUMMARY:

Objective: Children and adolescents are experiencing escalating rates of mental health disorders with increased suicidality as the second leading cause of death in US adolescents (1). Over the past 15 years, pediatric hospitalizations for mental health reasons have doubled in emergency departments and outside facilities to hospitalizations (2). In addition, the COVID 19 pandemic has caused an increase in mental health issues, especially in children and adolescents (3). Repeat hospitalizations are a good metric to analyze effectiveness of psychiatric care in the area. Youth are enrolled in the Intensive Outpatient Program (IOP) post-hospitalization for ongoing care. Since IOP is uniquely longitudinal, we aim to analyze the rates of repeat hospitalizations from the last 5 years to understand causes of those repeat hospitalizations. **Method:** Data was collected from a large, community-based Northern California health system that includes 55,055 pediatric patients (18 and younger) as part of an ongoing quality improvement project. We examined the total number of hospitalizations and re-hospitalizations for the years 2017-2021. **Results:** We looked at yearly rehospitalizations (RH) as a proportion to the total hospitalizations (H) in our catchment area. We saw a decrease in rehospitalizations (RH) as a proportion to the total hospitalizations (H) from 7% in 2017 (RH n=79, H n=167); to 36.5% in 2018 (RH n=72, H n=196) and then to 30.6% in 2019 (RH n=46, H n=150). However, we saw an increase to 43% in 2020 (RH n=62, H n=144) and to 45% in 2021 (RH n=67, H n=146) **Conclusion:** Although rates of psychiatric hospitalizations among children and adolescents have been declining in our catchment area, rates of rehospitalizations have shown an increase after an initial decline in 2018 and 2019. Reasons for the initial decrease could be explained by the implementation of additional interventions such as family therapy into the intensive outpatient program (IOP) in 2018 as part of quality improvement project. However, several factors may have contributed to the increase in rehospitalizations over 2020 and 2021. The IOP team was restructured several times due to staffing issues during this time. This may have caused disruptions in care. Starting in March 2020, mental health of adolescents and families was significantly impacted by the COVID-19 pandemic. In accordance with national guidelines for social

distancing, IOP services were moved online. Future directions include analysis of these factors which could further provide actionable strategies to target areas of intervention while in IOP.

No. 41

Possible New-Onset Pediatric Psychosis in the Setting of Precocious Puberty

Poster Presenter: Sara Veselinovic

Co-Authors: Catherine Zeba Sunny, Melissa Begolli, M.D.

SUMMARY:

LD is a 10-year-old boy with no prior psychiatric history and a recent diagnosis of precocious puberty with advanced bone age who presented to the Emergency Department referred from school with new onset auditory hallucinations and intrusive thoughts. The patient was endorsing intrusive thoughts of hurting himself including the desire to throw himself out of a window. Patient stated that these thoughts originally began one month prior to the visit with no identifiable trigger when he had the desire to stab a pencil through his hand at school. He also expressed the urge to stick his hand in a pan of hot oil while at home. On exam, patient reported difficulty sleeping due to nightmares of his family dying in natural disasters. His affect appeared flat, and although he denied neurovegetative symptoms of depression - the patient actively endorsed wanting to end his life without a specific plan and was deemed to need Inpatient Psychiatry admission. Patient had full medical clearance including CT imaging of head with no abnormalities or organic causes noted at that time. While on the unit, patient endorsed low mood and remained guarded, isolative, with flat affect, occasional intrusive thoughts, but denied having suicidal ideation, intent, or plan or experiencing auditory/visual hallucinations. Patient's presentation was concerning for an OCD spectrum illness and recommendation for implementation of an SSRI was made, however, mother did not consent to treatment and it was not initiated. Patient's mother placed a 72-hour letter requesting for release. Patient was discharged after three days of admission with outpatient follow up scheduled, however, patient/family did not keep appointments and the case was ultimately closed.

Precocious puberty is defined as pubertal development at earlier than expected age. Aside from physical and social implications including short stature and isolation from peers, it has been shown to be comorbid with multiple psychiatric disorders although the psychological aspects (especially in males) have not been very well studied. (1) Patients with Familial Male Precocious Puberty were found to have increased rates of anxiety spectrum, mood, behavioral, and tic disorders, as well as ADHD. It has been hypothesized that this is due to androgen exposure during early brain development, which can manifest in behavioral changes. (2) In fact, androgen exposure has been postulated to have a role in the male dominance of pervasive developmental disorder, Tourette's syndrome, ADHD, and conduct disorder, which have been associated with the Androgen Receptor gene and abnormal gray matter volume in the striatum and medial temporal lobe. (3) In addition to the possible direct influence of premature androgen exposure on development of juvenile OCD and anxiety-spectrum disorders, puberty marks a significant transition point in mental health among all populations (4) which could explain the comorbid onset of psychiatric illness in our patient.

No. 42

Neuropsychiatric Sequelae of Creutzfeldt-Jakob Disease (CJD)

Poster Presenter: Priyansha Acharya

Co-Authors: Hannah Goddard, Briana Saltstone, Gabriela Kowalski, Raman Marwaha, M.D.

SUMMARY:

Background: CJD, although rare, is a fatal and the most common prion disease, categorized into sporadic, genetic, or acquired types. Patients develop abnormalities in cognitive and neurologic functioning and are most commonly (80-95%) contracted sporadically through a spontaneous single-point mutation in the gene encoding the prion protein.¹ Up to 96% of people experiences neuropsychiatric symptoms, which include behavioral abnormalities, dementia, and deficits in higher cortical function like aphasia, apraxia, and frontal lobe syndromes.² Anxiety/depression, personality changes, and hallucinations/delusions

are psychiatry-specific symptoms that affect 39%, 35%, and 23% of patients, respectively.³ A 25-year analysis revealed that the majority of cases had at least one psychiatric symptom throughout the illness, with approximately one-quarter of patients experiencing symptoms at least once during the prodromal or presenting stage.⁴ Here, we describe a patient who was diagnosed with CJD and had neuropsychiatric symptoms. Case Presentation: A 24-year-old male presented with a 3-day history of episodic painful involuntary spasmodic neck movements and severe sharp headache following a stressful encounter with his spouse. The patient has a history of being hospitalized and intubated for encephalopathy following an overdose of fentanyl and methamphetamine during which a cerebrospinal fluid assay was done and found to be positive for 14-3-3 protein. The patient has past psychiatric diagnoses of anxiety, stimulant use, opioid use, posttraumatic stress, and borderline personality disorders. Physical examination revealed cogwheel rigidity and tremors on the upper extremities, and an inability to maintain normal gait and station with eyes closed. The patient would endorse an anxious mood and a mood-congruent anxious affect but did not exhibit psychotic symptoms. He did not have any suicidal or homicidal thoughts, ideations, or plans. The patient reported a recent change in his behavior and personality, especially characterized by feeling angry and confused most of the time, for a month. He also reported stumbling while walking and having trouble with memory ever since. His medical workup was only significant for mild leukocytosis and elevated levels of Creatinine Kinase, whereas, imaging findings of EEG, MRI head, and head CT were non-contributory. Involuntary spasmodic neck movements would increase when the patient reported experiencing increased levels of anxiety. The patient was discharged on Quetiapine 25 mg BID and 12.5 mg PRN BID for anxiety management and breakthrough anxiety respectively pending a CSF RT-QuIC test ordered by the neurology team. Conclusion: Although rare, CJD can present with psychiatric symptoms and when these symptoms co-occur with symptoms like ataxia or myoclonus, CJD should be kept at high suspicion. An early diagnosis and workup can help with end-of-life planning and facilitate maximum comfort in patients during their final days.

No. 43

Wernicke's Encephalopathy Secondary to Hyperemesis Gravidarum: A Case Report and Review of the Literature

Poster Presenter: Alejandro Rodulfo, M.D.

Co-Authors: Sabina Goldstein, M.D., Madeline Bruman, M.D.

SUMMARY:

Ms. S., a 21-year-old-female with no past psychiatric history, presented to the psychiatric consult service for suspected catatonia. Patient was admitted to the medical floor eight days prior due to intractable nausea and vomiting. She developed a blunted affect for one week, as well as two days of confusion, decreased oral intake, inability to walk and urinary incontinence. Patient had a miscarriage as a primigesta of 18-weeks of pregnancy six weeks prior; the pregnancy was also complicated by hyperemesis gravidarum, as well as a 4-days long hospitalization due to intractable nausea and vomiting two weeks after the spontaneous vaginal delivery. During our initial evaluation patient was disoriented, exhibited bilateral vertical nystagmus and bilateral horizontal ophthalmoplegia, as well as dysmetria on neurological exam. An MRI of the brain revealed increased signal on the medial aspect of the thalami, periaqueductal gray matter, tectum and possibly mammillary bodies, indicating probable Wernicke's encephalopathy. Empiric intravenous thiamine supplementation was initiated and thiamine level obtained, which was low at 50 nmol/L (N = 78 – 185), confirming the diagnosis. Patient scored 8/30 on the MoCA with significant deficits on the visuospatial and attention domains, improving to 10/30 a week after, and 17/30 three weeks after. While in the hospital she exhibited confabulation, telling providers she was having conversations with her deceased father; per collateral information from mother, this was a significant deviation from the patient's baseline. On further examinations patient endorsed symptoms of depression and anxiety, that dated back to the onset of psychosocial stressors related to her complicated pregnancy and miscarriage; though she did not meet full criteria for major depression or generalized anxiety disorder, mirtazapine was initiated to also target nausea, poor

appetite and insomnia, with good effect. As her neurological symptoms improved, patient gained some insight into her deficits and developed worsening anxiety, and she was initiated on buspirone and gabapentin. She was followed as an outpatient after discharge and demonstrated full resolution of ocular movement abnormalities, and partial improvement of ataxia and lower extremities weakness, though requiring utilization of a wheelchair. Her cognitive deficits partially improved, but patient continued to require assistance from caregivers to complete ADLs. This case teaches us the connection between neurological and psychiatric conditions, the importance of performing a neurological exam as part of a psychiatric evaluation, and of being cognizant of atypical presentations seemingly psychiatric in nature. Additionally, this case demonstrates that although Wernicke's encephalopathy is mostly associated to patients with chronic alcohol use disorder, there are less frequently seen and described etiologies, such as intractable nausea and vomiting secondary to hyperemesis gravidarum.

No. 44

Pica Presenting as Acute Autohemophagia: A Case Report

Poster Presenter: Dallas Wolfgang Hamlin, M.D.

Co-Author: Sanjay Yadav, M.D.

SUMMARY:

Pica is a disorder of feeding and eating where non-food items are consumed (1). This disorder is commonly co-morbid with neurodevelopmental disorders such as autism spectrum disorder (ASD) (2). The intentional consumption of one's own blood is a dramatic example of a commonly taboo non-nutritive feeding behavior typically seen in paraphilic disorders or acts of extreme violence (3). However, this case report demonstrates important phenomenological points and highlights the need for careful exploration of symptoms, especially in vulnerable patients with more limited abilities to explain their affective and motivational states. Case: We present the case of an 18 year-old male with past psychiatric history of ASD with accompanying intellectual impairment who presented to the hospital with a two-day history of progressive pallor,

fatigue, abdominal pain, and melena. Hemoglobin was found to be 6 g/dL from a baseline of 14 several months prior. Iron studies also suggested chronic anemia. Other medical workup was unremarkable. After transfusion of packed RBCs, endoscopy revealed a 5 cm gastric ulcer, which was no longer bleeding at time of study. The patient remained in the hospital for monitoring and IV iron transfusion. Psychiatry was consulted on hospital day 4 because the patient removed his IV line and drank 1-2 mL of his own blood, and primary team was concerned for acute psychosis. On evaluation, there was no evidence of delirium or psychosis, but patient engaged in stereotyped, concrete speech consistent with historical ASD diagnosis. Interview was continued with the patient's mother, who stated that this was a new abnormal behavior for the patient. However, she did report that he spontaneously ate both scabs and dirt compulsively over the past 3-4 months, offering only that he "liked it" as an explanation. She denied any history of serious intentional self-injury to drink blood. The inpatient team felt that further transfusion was not medically necessary and discharged the patient with recommendations to follow-up with the gastroenterologist and his outpatient provider. Discussion: Pica is a feeding and eating disorder associated with ASD well as micronutrient deficiencies such as iron or zinc (1,2,4). Conversely, autohemophagia is a dramatic clinical presentation that is likely unfamiliar to most providers, even behavioral health specialists. Nevertheless, the patient in this report demonstrated a behavior of trying to drink his own blood in the setting of past behavior of eating scabs, dirt, and other non-food objects. This suggests that the patient's behavior may be understood as a variant of pica. The clinical picture is further complicated by co-morbidities that predispose to pica, namely ASD with intellectual disability and iron deficiency anemia. This case presents as an exercise in descriptive psychiatry, where even bizarre new symptoms can be understood in the context of other syndromal findings and a thorough evaluation.

No. 45

Two Cases of Thc-Withdrawal, New-Onset Psychosis and Self-Inflicted Gunshot Wounds

Poster Presenter: Gabrielle Williams, M.D.

SUMMARY:

Patient AF is a 44-year-old male with no prior psychiatric history or relevant medical history who was admitted to ICU level-care after self-inflicted gunshot to face in context of new-onset paranoia believing he was being watched by a religious group associated with an MMA fighter. Per patient's wife these paranoid delusions began about one month prior to presentation and around the time he abruptly stopped smoking marijuana (he was previously smoking cannabis every day, multiple times daily for 7 years) and he did not use other confounding substances. This patient recovered from his physical injuries and remains on antipsychotic medications and monitored in an outpatient level of care. Patient RP is a 29-year-old male with no prior psychiatry history who was brought to the emergency department by his family for bizarre behaviors including sitting in the dark reading the same line of the Bible repeatedly, hearing his mother's dead voice and sleeping minimally. Of note, patient endorsed using cannabis several times weekly though abruptly discontinued a few weeks prior to presentation when he contracted Covid (he did not develop Covid-related sequelae or had no other relevant medical history). He was admitted to medicine service for three days and started on 50mg Seroquel prior to discharge as he did not meet criteria for psychiatric admission. Patient never endorsed suicidal ideation during his presentation, although when patient returned home, he shot and killed himself. This poster reviews current research regarding THC-withdrawal and psychiatric symptoms, the potential risks of THC-withdrawal and highlights the importance of screening and counseling patients regarding firearms on a psychiatric consult-liaison service. Additionally, this poster examines cannabis use or withdrawal as a risk factor for suicide and how this information may best be incorporated into a suicide risk assessment.

No. 46

"I Have Multiple Apartments Here!" A Case of Spontaneous Confabulations in the Setting of Repeated Hospitalizations for Uncontrolled Diabetes

Poster Presenter: James Lee

SUMMARY:

Background: Spontaneous confabulations are false memories based on true events with a lack of appreciation to time/place, disorientation, and absolute assuredness in an individual's perceived reality. Typically associated with neurological ailments such as Korsakoff syndrome and ischemic injuries, spontaneous confabulations are thought to be caused by damage to the anterior limbic pathway, specifically the posterior medial orbitofrontal cortex. Another mechanism for neurologic damage includes uncontrolled diabetes, which can result in numerous insults to the CNS. Here we describe a patient with no psychiatric or substance use disorder history and multiple admissions for complications of type I diabetes mellitus who presented in adulthood with sudden, multiple autobiographical inconsistencies with no other indications of broader delusional structure associated with a primary thought disorder, mood symptoms associated with mania, moderate to severe impairments in cognitive domains required for major neurocognitive disorder, or acute attentional deficits with cognitive distortions as seen in delirium. **Case History:** Mr. M was a 49-year-old man who was hospitalized in the medical ICU for diabetic ketoacidosis. This was his twelfth admission in two years due to DKA/life-threatening hypoglycemia. Prior admitting blood glucose levels ranged from a low of 20 to a high of 881. After medical stabilization, our consultation psychiatry service was consulted to assess for grandiose delusions. On interview with the patient, we discovered numerous examples of unprompted confabulations, including beliefs that he owned "multiple apartments," that he was trained in "brain surgery," and that he was a professor of multiple Californian institutions after "studying nuclear physics for 49 years" (the impossibility of this claim tilting the differential towards confabulations over delusions). Chart review revealed one psychiatric hospitalization over the last two years for unspecified psychosis, during which antipsychotics were trialed with no noted improvement in what was seemingly erroneously mislabeled confabulatory behavior. A Nijmegen-Venray Confabulation List (NVCL) was conducted, revealing a score of 27/45 in

the Spontaneous Confabulation category, indicating confabulatory phenomena over a fixed delusion. Thus, we did not recommend antipsychotics, but rather additional neurocognitive, occupational, and physical therapy evaluation after ensuring he received high dose parenteral thiamine supplementation. **Conclusion:** We posit that Mr. M's multiple diabetic decompensations led to ischemic injury of his anterior limbic pathway resulting in spontaneous confabulations. This case is to our knowledge a novel example of spontaneous confabulation outside of classically identified neurologic disease, and points to the need for psychiatrists to keep confabulations within the differential when providing care to our patients in both psychiatric and general medical settings.

No. 47

St. Valentine's Day Massacre Will Kill Us: A Diagnostically Complex Case of Covid19 Delirium Needing Collaborative Care Due to Multiple Co-Morbidities

Poster Presenter: Komal Trivedi

Co-Authors: Sarah Aziz, Saba Afzal, Ashaki Martin

SUMMARY:

Delirium is a common neurological complication that is seen with underlying infection or physiological imbalance. Delirium resulting from the novel SARS-CoV-2 virus (COVID19) specifically has been a common occurrence since the start of the current pandemic. Literature suggests that those afflicted with these COVID-19 manifestations are often under-diagnosed and under-detected, especially those with acute and chronic neurological dysfunction (Manolis et al., 2021). Here we will highlight an interesting and complex case of this condition in a middle-aged female, with a past psychiatric history of major depressive disorder and extensive trauma, who presented to the consult liaison psychiatric service to evaluate psychotic symptoms. The patient presented with a new onset of command auditory hallucinations, paranoia, echolalia, and delusional thinking related to Valentine's Day, as it relates to Catholic backgrounds. Of note, she was diagnosed with severe COVID-19 infection months prior. At this time, the patient's presentation was further complicated by her co-morbidities of thyroid

dysfunction and multiple sclerosis for which her medication regimen was recently changed (Ashraf et al., 2021, Jaisankar et al., 2021). In consideration of patient's past medical history and recent history, neurology, inpatient medicine, and psychiatry were involved in the hospital for her care. Case management was also involved early on as the patient's family and the primary medicine team were concerned that the patient's symptoms were not explained through delirium, despite extensive negative neurological, thyroid, and medical workups. This case will describe how the patient's previous neurological co-morbidities and thyroid dysfunction may have played a predisposing and precipitating role in augmenting her presentation with delirium. Furthermore, we will attempt to describe how there is a distinct difference in presentation between psychotic disorder and delirium, as well as provide further discussion on how isolation and cultural fears from her Catholic background may have played a role in her delirium progression. Finally, we will present how close collaboration with the inpatient medicine service as well as neurology team assisted in providing excellent patient care via creating shared patient goals, improving rapport and trust with the family, and to avoid costly/unnecessary services for the patient.

No. 48

Primary Versus Secondary Psychosis in a Patient With Covid-19 Induced Cytotoxic Lesion of the Corpus Callosum

Poster Presenter: Ayyub Imtiaz, M.D.

Co-Authors: Yuval Levin, Benedicto R. Borja, M.D.

SUMMARY:

Mr. XYZ is a 25-year-old male with a history of asthma and unclear past psychiatric history who presented to the emergency room with shortness of breath, chest pain, and disorganized behavior evidenced by him taking off all his clothes and intrusiveness in other patients' rooms. His COVID-19 PCR was negative, and he was voluntarily admitted to psychiatry for management of unspecified psychosis. Collateral was obtained and revealed that he was discharged stable 12 days ago after a psychiatric hospitalization totaling 9 days for which he was admitted for altered mental status,

auditory hallucinations, and disorganized behavior five days after taking 1 dose of prednisone for an asthma exacerbation that was found to be secondary to a COVID-19 infection. After 1 day on the psychiatry unit, he spiked a fever, diaphoresis, and headache with altered mental status, so he was transferred to medicine for meningitis and encephalitis prophylactic treatment and rule out. COVID-19 PCR came back at this time as positive and cycle threshold indicated infectivity. A brain MRI showed restricted diffusion within the midline of the splenium of the corpus callosum. This finding was not seen in the previous recent hospitalization. He had flat affect, monotonous speech, unspecified grandiosity, unclear auditory hallucinations, loose associations, and echopraxia during initial examinations. Additionally, his Mini-Mental State Examination score was 22/30 and his digit span was 3 digits only. He was started on risperidone and over the next week, his affect improved, his hallucinations resolved, his concentration and cognition improved, but his grandiosity strengthened into delusions of him being "Jesus Christ". A repeat MRI after 8 days from first MRI shows complete resolution of the lesion in the corpus callosum. All medical and neurological workup was negative otherwise. He was re-admitted to psychiatry and his remaining delusion resolved as well after some days. The patient's reversible restricted diffusion in the splenium of the corpus callosum is consistent with other presentations of cytotoxic lesion of the corpus callosum secondary to COVID-19. This case discusses the diagnostic difficulties and treatment options regarding primary versus secondary psychosis in a patient with potential first onset of primary psychosis versus neuropsychiatric manifestations of cytotoxic lesions of the corpus callosum versus COVID-19 delirium. Some neuropsychiatric signs and symptoms of COVID-19 will also be reviewed to allow providers to recognize these syndromes.

No. 49

Diagnostic Challenges in a Patient With Epilepsy and Resected Glioma Presenting With Peri-Ictal Psychosis

Poster Presenter: Ayyub Imtiaz, M.D.

Co-Authors: Samuel Duffly, Karla Chamoun Rosario, Benedicto R. Borja, M.D.

SUMMARY:

Ms. ABC is a 57-year-old woman with a history of epilepsy since childhood, blunt traumatic brain injury, glioma status post right temporoparietal craniotomy and resection, HIV on HAART, depression, and past polysubstance use with alcohol, marijuana, and cocaine. She presented to the emergency room with altered mental status and hallucinations with paranoia, delusions, and agitated behavior after a seizure a few days ago. She had an increase in seizure frequency over the past 9 months, now having one seizure a week. The disorientation, agitation, and hallucinations would resolve spontaneously in a short period of time but have persisted after the recent seizure. Recent MRI revealed focal cortical and subcortical encephalomalacia with gliosis in the right superior temporal gyrus extending into the lingual gyrus, likely secondary to the glioma resection, and mesial temporal sclerosis. Psychiatry was consulted to evaluate for possible primary psychiatric etiology for her presentation and provide antipsychotic medication recommendations. On examination, she was found to have psychomotor agitation, responding to internal stimuli, reporting auditory hallucinations, delusions of paranoia, delusions of reference, and loose associations. Additionally, she reported sudden onset of "clicking sounds" immediately followed by headache, suggestive of seizure aura. The patient was placed on continuous video EEG monitoring, which showed multifocal 1 Hz sharp discharges predominantly from the temporal region in a ratio of 3:1 coming from the right versus the left side, not correlated to any tonic-clonic events. Her antiepileptic medication dose was increased, and her mental status improved significantly allowing for safe discharge back home. Her case has risk factors and has presenting features for both inter-ictal and post-ictal psychosis making accurate diagnostic clarification difficult during her stay. While her presentation did improve significantly on antiepileptic dose increase, it is possible she may have needed an adjunct with an antipsychotic. This report aims to discuss the differences in presentation between pre-ictal, ictal, post-ictal, inter-ictal, and peri-ictal psychosis, as well as provide some

clarification on current evidence for antipsychotic use in these conditions.

No. 50

Stereotypy and Cocaine: A Case of Punding and Residual Psychosis in Severe Stimulant Use Disorder

Poster Presenter: Zachary Bean, M.D.

Co-Authors: Margaret O'Brien, M.D., Marissa Robertson, M.D., Shivani Kumar, M.D., Marie Tobin, M.D.

SUMMARY:

Ms. G., A 30-year-old old female with unknown history presented to the emergency department for bizarre behavior. During our initial evaluation she participated minimally and was unable to offer any identifying information. She repeatedly brought a bowl to her mouth, took her gown on and off to wipe herself with it, and pointed to her vagina with exaggeration. Catatonia was considered, though her Bush-Francis scored 5. She refused to offer urine for toxicology. She was admitted to the medical floor for anemia with hemoglobin of 7.5 (reference range 11.5-15.5) with target cells and spherocytes. On hospital day one, she repeatedly attempted to remove her socks and move the blanket around her head. Olanzapine 5mg Q6H PRN was ordered for agitation and administered frequently. Her anemia was deemed nutritional in etiology. On day two, additional history revealed severe cocaine use over the last five years without significant periods of sobriety. With continually insignificant Bush-Francis scores and no pertinent head imaging, punding behaviors were considered. Punding was not documented during previous encounters. Urine toxicology was positive for cocaine during four previous encounters. Punding subsided on day four. On day five she became more communicative with disorganized thought process and delusions of pregnancy, and was diagnosed with unspecified psychotic disorder. Olanzapine 10mg QHS was scheduled and titrated to 10mg BID. She subsequently accepted IV iron. On day ten she was medically cleared and transferred to an inpatient psychiatric hospital for further treatment and differentiation of her unspecified psychotic disorder. Punding behaviors have been observed in patients with Parkinson's disease that receive dopaminergic

replacement. Fasano's 2008 study was the first to describe the phenomenology of punding in stimulant use and demonstrated that punding lasted even after psychostimulant effects stopped. Recent literature adds that sensitization with dopamine replacement predisposes patients to both punding and psychosis. In our case we present a patient with stimulant use disorder who demonstrated punding attributed to sustained cocaine use and residual psychosis after metabolism, suggesting alteration to the dopaminergic mesocorticolimbic system and a need for further exploration of this pathway.

No. 51

The Utility of Amino Acid Metabolites in the Diagnosis of Major Depressive Disorder and Correlations With Depression Severity

Poster Presenter: Su Hui Ho, M.B.B.S.

SUMMARY:

Objective: Major depressive disorder (MDD) is a highly prevalent and disabling condition with a high disease burden. There are currently no validated biomarkers to assist in diagnosing and treating MDD. This study assessed serum amino acid metabolite changes between MDD patients and healthy controls (HCs) and their association with disease severity and diagnostic utility. Methods: Seventy MDD patients and 70 HCs matched in age, gender, and ethnicity were recruited for the study. For amino acid profiling, serum samples were analysed and quantified by liquid chromatography-mass spectrometry. Receiver-operating characteristic (ROC) curves were used to classify putative candidate biomarkers. Results: MDD patients had significantly higher serum levels of glutamic acid, aspartic acid, and glycine, but lower levels of 3-Hydroxykynurenine, with glutamic acid and phenylalanine levels correlating with depression severity. Using a combination of glutamic acid, aspartic acid, glycine, and 3-Hydroxykynurenine, individuals with MDD could be discriminated accurately from HCs, with 65.7% of depressed patients and 62.9% of HCs correctly classified. Conclusion: The concentrations of glutamic acid, aspartic acid, and glycine were higher in depressed individuals, whereas 3-Hydroxykynurenine was lower. Glutamic acid and phenylalanine may serve as

potential diagnostic biomarkers, whereas glutamic acid and aspartic acid may serve as markers for depression severity. It is necessary to conduct additional studies with larger sample sizes and a spectrum of depressive symptomatology to elucidate the association between these indicators and clinical features.

No. 52

Psychological Impact in Frontline Healthcare Workers in During First Wave Covid-19 and After: A Cross Sectional Study in Tertiary Hospital in Thailand

Poster Presenter: Jammaree Na Bangxang

Co-Author: Panuwat Wongkulab

SUMMARY:

Background Frontline healthcare workers are the first group that exposed unknown threats during COVID-19 pandemic. They have to work with limited knowledge, resources with uncertain ending situations. After the wave, the stress continued as the hospital system was back with the same or more workload. **Method** A cross sectional study was designed to evaluate depression, anxiety, burnout and related factors in frontline healthcare workers in Rajavithi hospital during the first wave of COVID-19 (January-April 2020) and after. Healthcare workers including doctors, nurses, practical nurses, supporting groups (x-ray technician, laboratory technician, porter, cleaning staff) Depression and anxiety were measured with Thai Hospital Anxiety and Depression (Thai HADS). Burnout were measured with Maslach burnout inventory (MBI) Thai version. **Result** Among 86 participants, anxiety was found 12.8 %, 7% during and after the wave. Depression was found 5.8%, 3.5 % during and after the wave. Sleep time less than 6 hours (OR = 7.85, 95%CI: 1.19 - 51.68, p-value = 0.032), using sleeping pills (OR = 12.83, 95%CI: 1.65 - 99.91, p-value = 0.015), working in a critical care unit were related with depression (OR = 0.09, 95%CI: 0.01 - 0.88, p-value = 0.038). High emotional exhaustion was found 31.9%, 35.21% during and after the wave. High depersonalization was found 96.5%, 94.2% during and after the wave. Low personal accomplishment was found 39.5%, 44.% during and after the wave. Supporting group position was related to low

personal accomplishment compared with doctor groups. (OR = 4.25, 95%CI: 1.30 - 13.87, p-value = 0.017). Conclusion Depression and anxiety were decreased after the first wave but high emotional expression and low personal accomplishment were increased. Sleep was related to depression but working in critical care was the protective factor. Hospital should help supporting group healthcare workers to feel sufficient in regards to their work and feel more personal accomplishment.

No. 53

Attitude Toward Depression in Physicians

Poster Presenter: Chawanun Charnsil, M.D.

SUMMARY:

Objectives : This study aims to examine the attitude toward depression in Thai physicians compare with general population. **Methods** : A cross-sectional descriptive study, in Thai physicians and general population. We used the Depression Stigma Scale in Thai version to assess stigma. The Depression stigma scale was distributed via the internet with google form program. **Results** : 2083 participants responded the questionnaire. Comparing Depression stigma scale of general population and physicians by using independent test demonstrated that there was different between two group significantly($p < 0.001$) (table 3) which average total score of physician higher than general population(37.47 and 35.73 respectively). There was significant different in Perceived Stigma Subscale in general population $p < 0.001$ and physician but not in Personal Stigma Subscale. There was significant different between Personal Stigma Subscale of male and female physician($P < 0.05$). But there was not significant different between Perceived Stigma Subscale of male and female physician. But in male and female general population there was not significant different in Depression stigma scale. **Conclusion**: Physicians had higher depression stigma than general population especially in Perceived stigma.

No. 54

Psychological Trait of Korean Hikikomori and Modern Type Depression

Poster Presenter: Jonghun Lee

Co-Authors: Seryoung Je, Jung Yeon Moon

SUMMARY:

Background: Hikikomori and Modern type depression (MTD) have been reported as problematic phenomena in Japan, and recently, international interest in them has arisen. In order to assess hikikomori and MTD, 25-Hikikomori Questionnaire (HQ-25) and 22-item Tarumi's Modern-Type Depression Trait Scale (TACS-22) developed. These self reports were conducted in Korea and compared with other scales. **Methods:** Semi-structured interviews were conducted with individuals who agreed to the study, and self-report questionnaires were conducted for each subject. Self-report questionnaires included HQ-25, TACS-22, Patient Health Questionnaire-9 (PHQ-9), Beck Depression Inventory-II (BDI-II), Young's Internet Addiction Test (YIAT), Short version of the Smartphone Addiction Scale (SAS-SV), Hwabyung scale, Sheehan Disability Scale (SDS), and Revised UCLA Loneliness Scale (RULS). Normality test was performed on the data, and correlation analysis was performed for each scale. In order to understand the pathology of hikikomori and MTD in detail, correlation analysis was performed between three subscales of HQ-25 (socialization, isolation, emotional support) and TACS-22 (social role avoidance, low self-esteem, complaint) with other scales. **Results:** 16 subjects (9 hikikomori, MTD) were collected (mean age = 23.12 43.7% male). In correlation analysis, HQ-25 showed a high positive correlation with RULS ($r=0.744$, $p<0.01$). In subscale analysis, socialization and isolation showed moderate positive correlation with SDS, respectively ($r=0.544$, 0.620 , $p<0.05$). Emotional support showed a strong correlation with RULS ($r=0.769$, $p<0.01$). TACS-22 showed high correlation with PHQ-9 and Hwabyung scale (respectively 0.693 , 0.744 , all $p<0.01$), and subscale analysis showed that low self-esteem and complaints were strongly correlated with the Hwabyung scale (respectively 0.785 , 0.771 , all $p<0.01$). Also, low self-esteem showed a moderate positive correlation with RULS (0.580 , $p<0.05$). **Conclusion:** Korean hikikomori suffered from high levels of loneliness, which was particularly associated with hikikomori's low emotional support. The socialization and isolation problems of hikikomori were also related to the hikikomori's experience of disability in life. In addition, MTD in

Korea seemed to be highly related to the degree of Hwabyung in Korea. In particular, it was thought that the lower self-esteem and the more complaint, the more likely to have a tendency to Hwabyung. These results may raise the possibility that MTD, which occurred in Japan, may share the same pathology as Hwabyung, a cultural syndrome in Korea. This work was supported under the framework of international cooperation program managed by the National Research Foundation of Korea(NRF-2021K2A9A2A08000081).

No. 55**A Comparison Between the Korean Version of the Gotland Male Depression Scale and Conventional Depression Scales in Detecting Depression**

Poster Presenter: Jonghun Lee

Lead Author: Jung Yeon Moon

Co-Author: Seryoung Je

SUMMARY:

Abstract Background: Screening of male depression is important since their symptoms differ from females, such as aggression, alcohol use and suicide attempts. However, there are no tools that have been verified, developed for screening male depression in Korea. **Method** Gotland Male Depression Scale (GMDS) was translated into Korean. The K-GMDS and BDI (Beck Depression Inventory) and PHQ-9 (Patient Health Questionnaire-9) were administered to 258 outpatients who visited department of psychiatry of Daegu Catholic Medical Center for the first time. Internal validity was evaluated using Cronbach's α -coefficient and external validity was evaluated using Pearson's coefficient of correlation. **Results** 233 patients were recruited and 93 patients were diagnosed as depression by psychiatrists. The internal validity of the K-GMDS was demonstrated by a Cronbach's α of 0.92. External validity for the K-GMDS and BDI was demonstrated by an intercorrelation of 0.82, and for the K-GMDS and PHQ-9, intercorrelation of 0.85. The sensitivity of the K-GMDS was 72%, while those of BDI and PHQ-9 were 95.7% and 90.3%. The specificity of the K-GMDS was 74%, while those of BDI and PHQ-9 were 23.6% and 28.6%. The K-GMDS identified one additional case of depression compared with other scales. However, some cases of

depression were missed. **Conclusion** The Gotland Male Depression Scale was proven to be reliable and externally valid. However, GMDS is not a better screening option than other conventional depression scales due to low sensitivity. **Keywords:** Gotland Male Depression Scale, Beck Depression Inventory, Patient Health Questionnaire-9

No. 56

'The Telepsychiatry Clinic on-the-Run': How a Unique Tele-Mental Health Clinic Is Thriving in the Midst of Political Turmoil in Myanmar

Poster Presenter: Nilar Thwin

Co-Authors: Yan Lin Aung, Ei Thin Zar Thwe, Paing Soe, Khin Maylwin

SUMMARY:

The WHO estimated that 1 in 5 people living in conflict areas have some form of mental disorder. On top of this, limited access to mental health care in these areas continue to amplify the issue. However, hope can be found through the increased use of telehealth during COVID-19 pandemic, which has opened the opportunity to apply the platform in conflict zones. Objective: To describe the development of a telepsychiatry clinic amidst the current political turmoil in Myanmar. When the Myanmar military junta staged a coup in February 2021, they prolonged a 60-year long conflict, the world's longest civil war. Since then, the world has witnessed how Myanmar has deteriorated into a failed state. The junta brutally cracks down on nationwide nonviolent civilian protests and civil servants including health care workers (HCW) who joined the pro-democratic 'Civil Disobedience Movement' (CDM). Many HCWs are imprisoned, tortured, killed, or pursued resulting in the collapse of the health care system. This is exemplified in the 3rd wave of COVID-19 in July 2021, where thousands of Myanmar people died due to a lack of access to health care. In reaction to this, the Ministry of Health (MOH) of the National Unity Government (a chosen government formed with democratically elected MPs) developed a system of free telehealth care. The Tele Health Clinic was initially composed of CDM HCWs from the liberated borders of Myanmar and later joined by local/international clinicians. The Tele Mental Health (MH) Clinic was then opened in

August 2021 to address the devastating mental health burden superimposed by the combination of coup and pandemic. The clinic started with a CDM psychiatrist and expanded thus far with 12 psychiatrists. The clinic uses encrypted digital platforms to ensure the safety of patients and HCWs, who risk the threat of being targeted by the military for providing/accessing health care. The HCWs and patients' identities are then coded to form unique identifiers. Additionally, HCWs are recruited via recommendation by an official MOH HCW - a very rigorous process. The telecounseling services were developed simultaneously and work collaboratively with the MH clinic. In one year, around 29,000 patients were seen in the Tele Health clinic and of those, 255 patients were seen by the Tele MH psychiatrists. About 90% of patients seen are from urban areas, where the most common diagnoses are depression, anxiety, PTSD, substance abuse, psychosis and mood disorder. In delivering care, many clinicians report limitations in regards to accessible internet, digital literacy, and a lack of medicines and available acute care services. To conclude, telepsychiatry can be used as a safe and effective way to bridge the barriers to mental health care throughout the current political turmoil in Myanmar. The evidence on the effectiveness, cost-effectiveness, process of implementation and long term measures to overcome challenges are areas of future research interests.

No. 57

"I Don't Have a Mental Health Illness, I Don't Need Medications": The Undeniable Truth of Anosognosia

Poster Presenter: Kamini Singh, M.D.

Co-Author: Pronoy Roy, M.D.

SUMMARY:

S.G is a 38-year-old Jamaican female with a past history of psychosis and cannabis use disorder, presented to the emergency room for a psychiatric evaluation after being disruptive and menacing in a women's shelter. This patient has had two prior psychiatric admissions over the previous 12 months. During her first admission, she had paranoid ideations about her cousin and aunt trying to kill her. Prior to her second admission, she locked herself in

the bathroom with her son claiming her room was infected with clostridium difficile. In this admission she was non-adherent with medications, insisting she did not have a mental illness and in view of persistent delusions, was taken to mental hygiene court for forced medication and a court order for involuntary medication treatment granted. Review of the medical record noted a prior left basal ganglia infarct on the CT brain 6 months prior and further work up of MRI brain noted a chronic infarct in the left caudate head and lentiform nucleus and chronic right cerebellar lacunar infarcts. Neurology recommended extensive work-up for hyper-coagulability and assessment of cardiac risk factors for early onset of multiple strokes. A rheumatology consult was obtained after she was found to have an ANA titer of 1:320 and positive lupus anticoagulant with prolonged partial thromboplastin time. A diagnosis of systemic lupus erythematosus was considered and a statin and hydroxychloroquine were recommended for secondary prophylaxis. She refused to take any medications insisting she did not have SLE. Our case is significant in that patient's psychotic symptoms were initially suspected of being due to an overlay of primary psychosis with an exacerbation of symptoms by concomitant heavy cannabis use. Further work up revealed a further overlay of possible neuropsychiatric manifestations of SLE. Successful resolution of psychotic symptoms was complicated by the presence of Anosognosia where in a person is in denial of an apparent disability or belief, usually consequential after a brain injury or stroke. This is also very prevalent in patients with schizophrenia which leads to hinderance of psychiatric treatments¹. In patients with anosognosia, achieving stability can be challenging or detrimental leading to loss of follow up, occupational loss, exacerbation of psychosis, and risk of violence towards self and others, which can all lead to multiple hospitalizations with no outcome of improving insight. Our patient refused to cut down the use of cannabis insisting she has been using it since 14 and she refused to acknowledge having SLE and refused to follow up with her scheduled medical and rheumatology follow up in spite of extensive psychoeducation. This case highlights how Anosognosia has severely impacted patient's medical and psychiatric compliance and places her at risk for future medical complications. Of note, court ordered

forced medications would not be a viable option for outpatient medical treatment.

No. 58

Trends in Past-Month Cannabis Use Among US Adults Across a Range of Chronic Health Conditions and Functional Impairments, 2015-2019

Poster Presenter: Kevin H. Yang

Co-Authors: Benjamin Han, Alison Moore, Joseph Palamar

SUMMARY:

Introduction: Due to the changing legal landscape and attitudes regarding cannabis in the United States (US), there is increasing interest in use of cannabis to treat a variety of chronic physical and mental health conditions.¹⁻³ While cannabis use has increased significantly among US adults in the past decade,⁴ little is known about trends in cannabis use with respect to chronic health and functional status.

Methods: We examined data from a US representative sample of noninstitutionalized adults age ≥ 18 from the 2015-2019 National Survey on Drug Use and Health (N=214,505). We estimated linear time trends in the prevalence of past-month cannabis use by chronic health (e.g., depression, diabetes, kidney disease) and functional (e.g., difficulty hearing, difficulty seeing) status using logistic regression. Models with year-by-condition status interaction terms were then used to assess differential time trends. **Results:** In 2019, compared to those without each respective condition, prevalence of cannabis use was higher among those with depression, difficulty seeing, difficulty thinking, difficulty dressing, difficulty doing errands, any impairment, ≥ 2 impairments, asthma, bronchitis, hepatitis, and HIV/AIDS, whereas prevalence of cannabis use was lower among those with difficulty hearing, difficulty walking, cancer, diabetes, heart disease, hypertension, kidney disease, and ≥ 2 physical health conditions. From 2015 to 2019, cannabis use increased significantly among adults both with and without each condition examined (with the exception of HIV/AIDS), yet the increase was more rapid among those with (versus without) difficulty hearing (89.8% vs. 37.9% increase, interaction $p=0.015$), difficulty walking (84.1% vs. 36.8% increase, interaction $p<0.001$), ≥ 2 functional

impairments (78.9% vs. 36.9% increase, interaction $p=0.006$), and kidney disease (135.3% vs. 38.4% increase, interaction $p=0.045$). **Conclusion:** Cannabis use has increased over time among those with and without most chronic health conditions, but faster increases in cannabis use was observed among those with functional impairments and kidney disease. Given the potential adverse effects of cannabis,⁵ prevention and harm reduction efforts should be focused on these groups that are at increasingly high risk for use.

No. 59

Emotional Incontinence: A Case Report of Pseudobulbar Affect in the Setting of Alcohol Use Disorder

Poster Presenter: Christian Nwabueze

Co-Authors: Nkolika Jean Odenigbo, M.D., M.P.H., Muhammad Azam, Fahima Banu

SUMMARY:

Introduction: Pseudobulbar affect (PBA) is a neurological condition that is socially debilitating^{1,2}. It is characterized by unstimulated, uncontrolled, and exaggerated emotions such as laughing or crying, even in situations that do not warrant the behavior³. It is secondary to neurologic disorders and traumatic brain injuries (TBI)^{1,2,4}. PBA may result from disorders of the frontal lobe with associated dysregulation and disinhibition⁵. Although the exact cause of PBA is unknown, it is probably related to disturbances in the limbic and paralimbic neural network systems^{4,5}. In the United States, about 1.8 to 7.1 million people are affected by PBA, depending on the diagnostic tool used⁴. Chronic alcohol use is associated with brain atrophy^{6,7}, making it critical to investigate the role of alcohol in the occurrence of PBA. **Case summary:** We present the case of F.D, a 66-year-old female with no past psychiatric history and medical history of gallstones with co-occurring alcohol use disorder, who was admitted to the medical unit for vomiting and fatigue. Patient is a long term alcoholic who has experienced multiple falls. The patient reported sudden, brief, involuntary crying, and laughing for the two years prior to presentation. She stated that she does not understand why she cries and laughs uncontrollably. She reported feeling embarrassed by the crying episodes. She reported

euthymic mood, and denied active suicidal or homicidal ideation, intent, or plan. The Center for Neurologic Study - Laughing Scale (CNS-LS) for pseudobulbar affect was administered to the patient with a score of 28. The patient scored 29 in the Pathological Laughing and Crying Scale (PLCS) interview. CT – head without contrast showed brain volume loss, chronic small vessel ischemic disease, mildly enlarged ventricles, and medial right orbital wall fracture. **Discussion:** Episodes of sudden, involuntary crying, and laughing may be evidence of underlying neurologic or psychiatric conditions^{1,2}. Evidence suggests abnormalities in serotonin, dopamine, and glutamine neurotransmission in patients with PBA^{4,5}. In our patient, there is no reported clinical or radiologic evidence of traumatic brain injury, stroke, multiple sclerosis, or any other neurologic disorders associated with PBA. It is possible that the toxic effects of alcohol on the brain⁷ is responsible for the PBA in this patient. **Conclusion:** PBA is a disorder of disinhibition characterized by a lack of voluntary control over affective expressions. Although our patient has abnormal radiologic findings, the association between these radiologic findings and the PBA is doubtful as there is no well described neurologic damage. It is therefore imperative for clinicians to obtain alcohol use history during psychiatric evaluations of patients with possible PBA as the toxic effects of chronic alcohol use on the brain may be implicated in the development of PBA.

No. 60

Charles Bonnet Syndrome in a Patient With Pseudoexfoliative Glaucoma

Poster Presenter: Jacky Salomon Petion

Co-Authors: Sana Elham Kazi, M.D., Godwin Ifeanyi Orji, M.D., M.P.H., Isaac Kim, M.D.

SUMMARY:

Introduction Charles Bonnet Syndrome is a condition where visual hallucinations occur as a result of damage along the visual pathway. It is usually secondary to glaucoma, cataract, and macular degeneration. People experiencing Charles Bonnet Syndrome have intact cognition, and insight that the visual hallucinations are not real. Generally, no other psychological conditions are

present. The prevalence of Charles Bonnet Syndrome is estimated to be around 2.8% in patients with glaucoma and 11 to 15% in those with sight loss. We present a unique case of Charles Bonnet Syndrome in a patient with glaucoma, and literature review to identify other possible etiologies of visual hallucinations, and effective management strategies. Case Summary Ms. BE is a 71-year-old woman with no known psychiatric history who was admitted to the hospital for visual hallucinations. The patient reported having visual hallucinations of people in her house after coming home from her night shift two weeks prior to admission. She reported seeing females wearing various colored clothing and groups of teenagers sitting in her living room. She reported being frightened by those hallucinations. Whenever the hallucinations occurred, she left the house and called the police almost daily for two weeks. The patient was diagnosed with a moderate stage of pseudoexfoliation glaucoma of both eyes one month before admission. She denied depressive symptoms, substance use, and any other psychotic symptoms. Patient-reported she was on Lexapro 40 mg for anxiety but has not been compliant. In addition, the patient denied any previous psychiatric hospitalization or family history of psychiatric disorders. The patient was managed conservatively without any medications with significant improvement of her symptoms. Discussion Patients with visual hallucinations in Charles Bonnet Syndrome recognize their hallucinations as unreal and have no associated sensory defect affecting other organs. They generally have no known psychiatric or psychological conditions. Patients' intellectual functioning is generally preserved and they have no signs of dementia. The level of distress created by the presence of hallucinations in Charles Bonnet Syndrome differs from one patient to another. Several studies have reported a high prevalence of sleep disturbances in patients with Glaucoma, which is also one of the most prevalent eye problems in patients with Charles Bonnet Syndrome Conclusion **Clinicians should have a high index of suspicion for Charles Bonnet Syndrome when evaluating patients with visual hallucinations and co-existing ophthalmologic conditions like glaucoma. Knowledge of Charles Bonnet Syndrome allows for proper diagnosis and appropriate**

management of patients. Recognizing the symptoms of Charles Bonnet Syndrome permits the healthcare professional to share appropriate information about the condition with patients and their families.

No. 61

A Case Study and Literature Review of the Common Neurobiological Pathways of Huntington's Disease and Depression

Poster Presenter: Nicholas Velmahos, M.D.

SUMMARY:

The patient in review is a 21 year old African American female with Huntington's Disease who presented to the emergency department following a self-aborted suicide attempt, in which she attempted to stab herself in the chest with a knife. This was her first psychiatric presentation in the setting of depression, and her suicide attempt was directly related to severe pain in her arms and legs that is related to her diagnosis of Huntington's Disease. Individuals with HD often experience neuropsychiatric symptoms, with depression and suicidality among the most common. It has been noted that prevalence of depression is higher in individuals with HD compared with the general population and over a quarter of patients with HD will attempt suicide. As a debilitating and inherited neurodegenerative disease with no known cure, one that encompasses both mood and psychomotor dysfunction, Huntington's Disease remains a subject of great interest in the field of neuropsychiatry. Although the connection between Huntington's Disease and depression is fairly well known amongst clinicians, it is often superficially recognized. Brain-derived neurotrophic factor (BDNF) is a highly expressed neurotrophin which primarily functions to regulate neuronal activity by exerting both short, as well as long lasting effects on excitatory and inhibitory synapses. In addition to BDNF, hypothalamic axis dysfunction has also been identified to play an integral role in the neuropathogenesis of both Huntington's Disease, as well as depression. While a wide range of antidepressants are often used to manage the depressive symptoms in Huntington's Disease, there remains to be an identified clinical consensus on

treatment guidelines. A review of the processes in the neurobiological pathways that are found to occur in both Huntington's Disease, as well as clinical depression and suicidality, is integral to an increased understanding of the connection between them, so that future treatments options, as well as treatment guidelines, can be better explored.

No. 62

Resolution of Cotard's Delusions With Treatment of Syphilis

Poster Presenter: Grace Hasell

Co-Authors: Luminita Luca, Safa Angelo Sadeghpour

SUMMARY:

Cotard's syndrome is a rare condition characterized by nihilistic delusions of being dead. It has been reported in association with several neuropsychiatric diagnoses. Neurosyphilis can present with a variety of psychiatric symptoms, and while also rare, has recently increased in prevalence. In this case, Cotard's delusions were seen in a patient with a history of neurosyphilis and improved after treatment for latent syphilis. A 74 year old male with a past medical history of alcohol use disorder, unspecified neurocognitive disorder with psychosis, history of syphilis and hypertension was admitted involuntarily due to aggressive behavior. During this admission, he endorsed delusions characteristic of Cotard's syndrome, stating that he needed to be treated urgently for "being dead" and repeatedly stating that he was missing blood and organs. He had no insight or ability to explain why he was still alive. Workup for acute psychosis ruled out delirium and brain imaging was consistent with small vessel ischemic disease and age-appropriate brain involutinal changes. Routine labs were unremarkable except for mild chronic anemia (unchanged with improvement of psychiatric symptoms) and 1:1 RPR titer, unchanged from previous titer 6 months prior to this admission, when patient received incomplete treatment for latent syphilis. Initial treatment with antipsychotic medications was unsuccessful in dissipating the fixed false beliefs. Addition of antibiotic treatment to the antipsychotic was associated with resolution of psychosis, including nihilistic delusions. Understanding that a variety of etiologies may be

associated with Cotard's delusions is helpful in identifying the appropriate treatment.

No. 63

Neuropsychiatric Manifestations of Sydenham's Chorea: A Case Report

Poster Presenter: Catherine Lindsay Rutledge, M.D.

Co-Author: Rayad Hakim Barakat, M.D.

SUMMARY:

Patient is a 14yo female dependent of active duty United States Air Force retiree with history of depression, anxiety, and developmental dyspraxia who was flown from Air Force Base Japan to Oahu for inpatient psychiatric treatment for worsening suicidal thoughts, depression, and behavioral concerns. Upon discharge the patient was continued on the previous regimen of Aripiprazole 3mg daily and sent for follow up with an outpatient behavioral health clinic on Oahu. On intake patient and mother reported improvements in emotional regulation, irritability, and decreased intensity and frequency of tantrums since initiation of Aripiprazole earlier that year in Japan. They noted diagnosis of developmental dyspraxia made when the patient was 3yo in Ireland with previous MRIs and EEGs reported to have been within normal limits. Patient endorsed experiencing depressed mood since 6yo largely due to low self esteem and frustration from her developmental dyspraxia. On exam, the patient was noted to have mild erratic abnormal involuntary movements in all four extremities. These were reported to be unchanged and present prior to initiation of Aripiprazole. The patient was distressed by these movements and she was largely unable to perform activities of daily living without significant effort, concentration, and frustration. Patient and mom declined antidepressant medication and opted to continue Aripiprazole and pursue psychotherapy. An outpatient neurology referral was placed. Later that week the patient was again admitted to inpatient psychiatry for an episode of wrapping a seat belt around her neck while in the car in the context of a verbal argument with her mother. On admission neurology was consulted for further evaluation and work up of the patient's abnormal movements. Throughout the course of admission the patient's movements were thought to be

inconsistent with any possible underlying neurologic pathology. The primary working diagnosis was functional neurologic symptom disorder while various labs, MRI, and EEG were all ordered. In this case report we will demonstrate a variety of neuropsychiatric manifestations of Sydenham's Chorea as well as highlight the importance of maintaining a broad differential, performing thorough and consistent medical workup, all while performing patient-centered collaborative care.

No. 64

Ovarian Dermoid Cyst Leading to Anti- NMDAR Encephalitis

Poster Presenter: Samita Chandi, M.D.

SUMMARY:

Anti-NMDA receptor encephalitis caused by an ovarian teratoma is a rare and potential fatal condition. The disease is caused when antibodies bind to extracellular epitopes on the neuronal cell-surface, causing an internalization of NMDA-receptors. Our patient is an 18yo female that was originally diagnosed with viral meningitis and presented to the hospital with altered mental status, agitation, delusions, erratic behavior, incoherent speech, brief episodes of aphasia, delusions, and hallucinations. She had extensive testing including NMDA, M/E panel, HIV, Syphilis, TPA, infectious mononucleosis and TSH were negative. Additionally serum Paraneoplastic antibodies (ANA, anti dsDNA, ACE, SSA and B) were negative. There was a strong concern for autoimmune encephalopathy and patient was started on IVIG and IVCS. There was some initial improvement. An ovarian teratoma was found on imaging and removed. Our patients hospital course was complicated by cardiac arrest, ventilator dependent respiratory failure, multiple respiratory infections, aspiration pneumonia, peg tube, perforated colon. In conclusion, anti- NMDA receptor encephalopathy is a potential fatal condition is most common among women in their 20s and 30s. Early treatment improves prognosis and treatment includes surgical removal of the tumor and immune modulators.

No. 65

Neurosyphilis or Schizophrenic Disorder? A Subtle, Yet Crucial Clinical Distinction

Poster Presenter: Trace Huang

SUMMARY:

Ms. N is a 45 year-old homeless woman with a past medical history of syphilis who was brought in by police to the inpatient psychiatric hospital. She presented with manic and psychotic symptoms, and was also RPR positive. She was placed on depakote for mood stabilization, risperdal for psychosis, and given a one-time benzathine penicillin injection for possible syphilis. The medications were titrated to an adequate level over the course of 3 weeks, however the patient failed to show improvement. On the contrary, the patient's mental status declined from A&Ox3 on initial presentation to A&Ox1 and began requiring PRN haloperidol for agitation, and on several occasions, a 1:1 sitter for constant watch. The psychiatric and medicine teams together decided to send the patient to the E.R. for neurosyphilis workup, however, unfortunately a CSF tap was not performed. Instead, a head CT was obtained and was unremarkable, so the patient returned to the psychiatric hospital. The patient was resumed on her prior medications and her behavior spontaneously improved and no longer required constant redirection. However, she remained A&Ox1 and was sent to a skilled nursing facility for further neurosyphilis workup and treatment. Through this case, we will review the overlapping and distinguishing signs and symptoms of neurosyphilis versus schizophrenia spectrum disorders. In the inpatient psychiatric setting, recognizing the full range of the psychiatric symptoms of neurosyphilis is crucial, in addition to practicing the habit of considering medical conditions in the differential diagnosis for psychosis in elderly patients.

No. 66

Role of Tele-Psychiatry in Improving Access to Mental Health Services Among Resident Physicians at Montefiore Medical Center

Poster Presenter: Alaa Elnajjar, M.D.

SUMMARY:

Background: Professional burnout among physicians has been a growing concern before COVID-19, but it has been heightened by the pandemic (1). A recent survey in the Journal of the American Medical Association reported that of 1,250 healthcare workers who worked in hospitals with COVID-19 patients, many reported symptoms of depression (50.4%), anxiety (44.6%), insomnia (34.0%) and distress (71.5%)(2). Studies also showed (before the pandemic) increased concerns regarding risk factors for major depression and suicide in physicians, especially in early stage of their career (3). 28% of residents experience a major depressive episode during training versus 7–8 percent of similarly aged individuals in the U.S. general population(4). A recent survey reported that 42% of physicians suffered from burnout. Expectedly, medscape reported an increase in burnout prevalence to 47% after the COVID-19 pandemic [5]. Studies showed that opt out strategies for mental health access to physicians have been way more effective than the opt in ones(6). Objective is to quantify the need for tele-psychiatry as an accessible mental health service among resident physicians. The data can be used to improve access to care and to raise awareness of existing resources for physician mental health. The results will be used to propose future therapeutic measures and promote resident wellbeing. This protocol was presented at the 2020 APA research colloquium. Methodology: An anonymous survey with a set of 4 questions was emailed to 96 Montefiore ACGME (American College of Graduate Medical Education) accredited residency and fellowship programs along with Maslach Burnout Inventory (7). This survey was assessing the impact of switching to telepsychiatry services on the access to mental health care among residents, and opinions on the use and utility of tele-psychiatry for mental health care needs during training. IRB approval was granted by Einstein school of medicine. The survey was sent to 1500 resident's work emails via the Graduate Medical Education (GME) database. (Survey questions) Results: A total of 144 resident physicians were included in our study. An anonymous survey was conducted with a sample size of 144. All the participants were resident doctors training at ACGME accredited programs. Each

question was presented as a 5 point Likert item and the results were recorded on the basis of response to said points. 54.2% doctors agreed that tele psychiatry visits would save time from visiting in person clinics. 47.9% of resident physicians believed that there was considerable ease of scheduling telepsychiatry to fit into one's schedule. 71% found the presence of family at home to be very helpful during residency training. Future consideration: Increase the duration of the survey window for better participation rate. Have protected time during work hours to fill the survey. Have focus groups to discuss the results and brainstorm solutions.

No. 67**Impact of Psychotherapy Versus Medication on the Frequency of Evaluations in the Psychiatric Emergency Room in the Child and Adolescent Population**

Poster Presenter: Brett Kramer, D.O.

Co-Authors: Sarah Nasra, M.D., Ramkrishna Makani, M.D.

SUMMARY:

Introduction/Objective: The youth mental health crisis has increased at an alarming rate in the last decade, prompting the U.S. surgeon general to issue an official advisory. This increase in crisis visits is unsustainable from a clinical & economic perspective. It is imperative to examine parameters & treatment modalities that can help ease this crisis. This study's purpose is to determine if there is a difference between the traditional outpatient treatment modalities in prevention of psychiatric emergency evaluations in the child & adolescent population. Methods: A retrospective chart review was used to identify patients between the ages of 5-17 who are receiving treatment on an outpatient basis in the community setting from 12/31/19 to 12/31/21. 1,065 participants met criteria & were grouped into one of three treatment modalities; psychotherapy only, medication management only, & combined psychotherapy and medication management. Data analysis for each subgroup included presence of psychiatric emergency room visits, gender, & race. After these values were calculated for each treatment group they were compared for a statistically significant difference. Results: The

psychotherapy only group had the lowest rate of psychiatric emergency evaluations, at only 11%. The medication only group had an ER evaluation rate of 25%. The combined group of therapy & medication had an ER evaluation rate of 37%. In comparison to the therapy only group, the medication only group had more than double the rate of PIP evaluations. The only treatment group that had more males than females was the medication only group, at 64% males. The highest race self-identification out of the treatment groups was caucasian. Conclusion: Our results indicated that the psychotherapy only group had the lowest rates of emergency psychiatry visits as compared to medication only & combined group. The chart review suggests that a history of psychotherapy enrollment may decrease crises that necessitate a psychiatric ER visit. A major limitation of the study is that this retrospective chart review study had no longitudinal follow up so future studies should be done in randomized trial form to evaluate this result.

No. 68

The Lebanese-American Effects of Generational, Adverse Childhood, and Immigration Experiences (LEGACI) Study of Stress Transmission and Moderators

Poster Presenter: Diab Ali

Co-Authors: Cynthia Epperson, M.D., Susan Mikulich-Gilbertson

SUMMARY:

Background: There is burgeoning evidence on the generational psychiatric effects of adverse childhood and pre-conception stress, including sex differences in risk and resilience. This has been underexplored in human transgenerational models, especially in groups of non-Western cultural and non-European racial descent. Lebanese-Americans (LAs) are of interest due to the reliable presence of severe collective stress to children and adolescents in Lebanon during the Lebanese Civil War (1975-1990) followed by their subsequent migration to the United States, with many of these immigrants now having adult children and grandchildren. **Objectives:** Within three generations of LA families (e.g. F0 "grandparent," F1 "parent," and F2 "child" populations), we aim to determine whether F0

preconception war exposure and subsequent forced migration to the U.S. is associated with psychiatric features in the F1 and F2 progeny. Additionally, we will evaluate potential moderators of these relationships in exploratory analyses. **Methods:** Using a retrospective cohort design, in Phase 1 (completed throughout Fall 2022), we will collect psychiatric data (initial interview followed by emailed surveys) on F1 LA men and women, age 21-45 years, living in the Detroit Metropolitan Area who self-identify as the children of two F0 LAs. F1 participants will provide comprehensive data on themselves, demographic and exposure data on their parents (F0s), and initial descriptive data on their children (F2s). Relationships between F1 outcomes (e.g. psychiatric symptoms) and F0 war exposure will be assessed and potential modification with the inclusion of covariates. These include sex, age, sociocultural attitudes, experience of additional life stressors, immigration experience, parenting style, and several social/structural determinants of health. Variables that are both associated with the outcome variable and with war exposure will be included in models for that outcome in forward multiple regressions, evaluating each covariate singly and then combining significant covariates in larger models. **Results:** We will report initial Phase 1 findings of this study, including a thorough characterization of the F1 LA sample. Associations of war exposure in the F0 generation to psychiatric disorder symptoms/scores in the F1 will be reported, both unadjusted for and adjusted for significant moderators. **Conclusion:** In addition to thorough characterization of these F1 LA psychiatric dynamics, collection of tracking information will facilitate Phase 2 of this study: longitudinal, prospective assessment of F1 and F2 mental health outcomes and further collection of retrospective information on the F0 sample. Combining findings of this ambidirectional cohort study as they relate to F0 preconception stress and potential moderators may lay groundwork evidence on how disparities in generational stress transmission and psychiatric predisposition may be affected at the clinical to public health levels.

No. 69**Efficacy of Tetris Gameplay in Reducing Trauma-Related Intrusive Mental Imagery Through Post-Exposure Intervention: A Review of Current Studies**

Poster Presenter: Trevor Hawks

Co-Author: Joseph Chien

SUMMARY:

Intrusive, vivid, and disturbing visual memories are among the most distressing symptoms experienced by patients suffering from PTSD. Treatments such as eye movement desensitization and reprocessing (EMDR), exposure therapy, and pharmacotherapy are effective in treating PTSD symptoms in 60% of cases. This shortfall in treatment leaves 40% of individuals who develop PTSD with few options. Postexposure prophylaxis for PTSD is an area of growing interest. The current literature review answers the question: In adults exposed to traumatic events, can performing a highly demanding visuospatial tasks such as playing “Tetris” reduce the frequency or severity of PTSD-related symptoms when used within 72 hours of exposure to the traumatic event when compared to those who do not play “Tetris” during the same period? A PubMed search was conducted for all items published in the last 5 years using the terms “ptsd” AND “tetris”. The studies reviewed include a case control randomized proof-of-concept trial examining MVA victims reporting to the ED. Participants either played “Tetris” for 20 minutes or performed a trauma unrelated activity log for 20 minutes with no trauma cue. Individuals who played “Tetris” reported fewer intrusive memories in the week following ED admission when compared to controls. ($M=8.73$ vs $M=23.26$, $t(69)=2.80$, $P=0.005$, $d=0.67$, 95% CI: 0.18, 1.14) Replication and expansion of Iyadurai et al. 2018 study mentioned above by Kanstrup et al. in 2021 included a 5-week follow-up period and a longer window allowed between trauma exposure and “Tetris” intervention. Results were consistent with the prior study’s findings. The “Tetris” conditions mean number of intrusive memories reported for week 1 ($M = 3.85$, $SD = 8.57$, $n = 20$) were 3.52 fewer than those reported by the control condition participants ($M = 7.37$, $SD = 7.88$, $n = 19$), ($d = 0.43$, 95% CI: -0.23 , 1.08 .) Kanstrup et al. also demonstrated a 90% difference in intrusive memories between the two groups at 5 week follow-

up: “Tetris” group ($M = 0.28$, $SD = 0.57$, $n = 18$) vs the control group ($M = 2.89$, $SD = 6.43$, $n = 18$), ($d = 0.57$, 95% CI: -0.12 , 1.26). The present studies demonstrate that visuospatial demanding tasks, when administer soon after trauma exposure can reduce the frequency of intrusive memories for up to 5 weeks. Though the above studies are well designed and seem to provide good evidence for their claims, some limitations should be considered when interpreting their findings. These include small samples sizes, short follow-up period, self-reported measures, and lack of multicenter involvement. Given the frequency of exposure to trauma and lack of effective evidence-based postexposure prophylactic treatments for PTSD, the above studies demonstrate a significant contribution to the field of trauma research and their findings warrant further investigation and replication.

No. 70**The Ganymede Study: Nonconsensual Sexual Experiences and Mental Health in Men and Nonbinary People**

Poster Presenter: Seena Ounsinegad, M.D.

Co-Authors: J. Chase Findley, M.D., Ana Ugueto, Ph.D.

SUMMARY:

Sexual violence is a prominent issue in the U.S. and worldwide. Although the majority of research has focused on women, 1 in 6 men in the U.S. have experienced sexual violence, which is likely an underestimate due to markedly low rates of men identifying and reporting these experiences as sexual assault, rape, or sexual abuse. Although research has been conducted on men who have experienced nonconsensual sexual experiences (NSEs), and separately on attitudes toward help-seeking behaviors, gender roles, and sexuality, the interplay of these constructs has not been examined. Particularly, men and nonbinary people who are sexual and gender minorities are disproportionately represented within the survivor community. This minority stress is further exacerbated by other life stressors, such as low socioeconomic status or living in a country with limited resources, which together can cause disastrous outcomes for this population following NSEs.¹ It is also unclear how the disclosure of NSEs may lead to a spectrum of effects from

retraumatizing to therapeutic in LGBTQ+ men, and this warrants further investigation with special attention given to the language used to describe these experiences.² The current study investigates the relationship among NSEs and men and nonbinary people's attitudes toward mental health, general help-seeking behaviors, gender roles, and sexual identity. The role of marginalized groups, including sexual and gender minorities and people of color, is also examined. The study was conducted at the UTHealth Houston Harris County Psychiatric Center, an acute psychiatric hospital in a large metropolitan city. Patients (N = 66) completed a battery of measures, including the Nonconsensual Sexual Experiences Interview-Revised (NSEI-R); Outcome Questionnaire 45.2 (OQ-45.2); Inventory of Attitudes Toward Seeking Mental Health Services (IASMHS); Barriers to Help-Seeking Scale (BHSS); Support Preferences Questionnaire (SPQ); Stereotypes About Male Sexuality Scale (SAMSS); Conformity to Masculine Norms Inventory (CMNI); LGBTQ+ Identity Scale (LGBTQIS); and Heterosexist Harassment, Rejection, and Discrimination Scale (HHRDS). Participants were 96% male and 4% nonbinary, 23% identified as sexual and/or gender minorities, 61% were people of color including 26% Black, the average age was 38 years, and 63% had a household income under \$15,000. Analyses will include multivariate regression to determine the relationship among the identified variables. Findings and implications, especially related to decreasing barriers to mental healthcare, discrimination faced by marginalized individuals, and treatment considerations, will be discussed. It is imperative to establish targeted treatment modalities to improve outcomes in this vulnerable population, especially for those who have been grappling with child or adolescent abuse for decades after.³

No. 71

Factors Affecting Stress and Mental Health During the Covid-19 Pandemic

Poster Presenter: Hye In Jeong

Lead Author: Shin Gyeom Kim

Co-Author: Jae Kwang Shim

SUMMARY:

Objective: This study examined the factors influencing stress and mental health of people during the COVID-19 pandemic. **Methods:** Six hundred participants were enrolled in this anonymous questionnaire survey which included questions on demographic profiles, experiences related to COVID-19. COVID-19 Stress Scale for Korean People (CSSK), Warwick-Edinburgh Mental Wellbeing Scales (WEMWBS), Generalized Anxiety Disorder-7 (GAD-7), Patient Health Questionnaire-9 (PHQ-9), Insomnia Severity Index (ISI), Multidimensional Scale of Perceived Social Support (MSPSS) scales were included. The data were analyzed using multiple regression to identify factors affecting total CSSK scores and the scores for each of three subscales of CSSK. **Results:** As the result of multiple regression analysis, the severity of insomnia, gender, degree of income decline, occupations, religion, education level, marital status, residential status, level of social support, degree of depression and anxiety were found to have significant relationships with COVID-19 related stress. **Conclusion:** We identified factors affecting stress and mental health of the general population during the COVID-19 pandemic. Our findings might be helpful to provide individualized approaches in managing mental health of the public. In addition, we expect that the result of this study will be used to screen high risk vulnerable to the stress and establish policies related to the public health crisis.

No. 72

Using Osteopathic Principles in Psychiatric Practice: Indications, Contraindications, Current Literature and Evidence-Base

Poster Presenter: Jeena Kar

Co-Author: Liliam Santiesteban, D.O.

SUMMARY:

Introduction: Osteopathic applicants to psychiatry have been drastically increasing, (Apagoff, 2018), making it critical to investigate how physicians can utilize OMT (Osteopathic Manipulative Treatment) skills in this specialty. Traditionally, OMT is viewed only in the context of neuromusculoskeletal medicine. This paper seeks to refute this misconception by demonstrating that osteopathic

principles and practice can extend to psychiatry. We reviewed the evidence-base behind OMT in treating psychiatric conditions by reviewing trials and case reports. We also examined principles emphasized through osteopathic training including patient-centered care and empathy may make DO physicians uniquely suited for psychiatry. Methods: As there are limited meta-analysis and systematic reviews on this topic, QUORUM or PRISMA methodology was not used. Instead, a search was conducted on PubMed, Google Scholar, and APA Database PsychInfo using index terms "OMT", "Osteopathic", or "Osteopathic Manipulative Treatment", or "Osteopathy" and either "Psychiatry" or "Mental Health" between years 2012-2022. PsychInfo yielded 1 result. Google Scholar yielded 409 results. PubMed yielded 1 result. Papers that did not include these topics but were mentioning "osteopathic" when describing the school of the author/location of study, were extracted. Studies discussing chiropractic care instead of OMT were excluded. After careful review and extractions- the total number of papers reviewed was 28. Discussion/Results: OA Decompression, Cranial OMT, and soft tissue techniques can be used to alleviate symptoms of psychiatric disorders such as depression and anxiety, PTSD, insomnia, and in some cases reports even ADHD, OCD, and Anorexia Nervosa per 22 studies and papers. There were also studies that demonstrated higher levels of empathy and connectedness in osteopathic trained physicians which yielded 6 papers. Studies excluded from the review that are still relevant to psychiatry were categorized into three sections. [1] OMT in Substance Use (Opioid use disorder and pain relief through OMT) yielded 5 papers; [2] OMT use in Neuropsychiatry (TBIs, Alzheimer's, Parkinson's) which yielded 11 papers; and [3] OMT to treat psychiatric symptoms due to a Primary Medical Condition (IBS, PCOS, Atypical Facial Pain) which yielded 7 papers. Two papers outlined the biological mechanisms of action behind OMT affecting psychiatry. No papers were found to outline contraindications and indications for OMT in specific psychiatric diagnoses. Conclusion: Research on the connection between osteopathy and psychiatry is limited; a major gap has been identified in the literature. Our team's future directions are to postulate a list of indications and contraindications

of OMT use in specific psychiatric disorders, so physicians can feel comfortable in applying OMT skills in a clinical setting. This project creates a springboard for further research and paves the way for OMT promotion in psychiatry.

No. 73

Hindu Hyper-Religiosity: A Spiritual Experience or a Manic Episode? Case Report of a Hare Krishna Priest With Bipolar Disorder

Poster Presenter: Jeena Kar

SUMMARY:

Introduction: One of the most difficult components in psychiatric diagnosis is discerning between appropriate religious belief and hyper-religiosity. There is no set consensus on how to make this distinction, as it ventures into the nebulous area of belief intersecting with behavior. Up to 1 in 4 clinicians report having discomfort in discussing religion in spirituality in mental health treatment (Drew, 2022). Hospital Course: A 67 year old Hispanic male with no prior psychiatric history brought in to ER by family for acute mental status and memory changes over 1 month. Neurological workup and MRI negative in the hospital, including MSE 26/30, labs unremarkable. Psychiatry was consulted when pt's wife mentioned that pt was spending more than usual, and that they come from a simple household as pt is a priest in the Hare Krishna faith. Pt was placed under a baker act for concerns of mania. He continually reports his place of birth as "Vrindavan, India" instead of El Salvador. On admission, states he is able to "shrink and grow" when he is meditating. When asked about future plans, states "Kalyug will explode and restart as Satyuga". He denied any auditory or visual hallucinations. Pt's wife in collateral call described an episode where pt spent 14 hours cutting down every tree in sight to clear the land, and that he had a vision to do so. When asked about this later, pt states Krishna speaks to him. Inpatient, pt had grandiosity, poor sleep inpatient, and continued auditory command hallucinations. Family was very hesitant about non-ayurvedic medications, but eventually consented to Zyprexa 5mg and Lithium 300mg qAM and 600mg qPM. Over time, pt's command hallucinations subsided and sleep improved. BA was released. Pt was discharged

with the same day outpatient follow up. Discussion: This case is interesting because of the unique cultural context that needed to be taken into consideration for diagnosis. Many of the concepts described by the patient could be misconstrued as psychotic if the interviewer did not know about his faith and priesthood. The references to Satyug and Kalyug, which are life cycles of the universe in Hinduism, were consistent with his faith. His belief that he was born elsewhere in a previous life was also consistent with reincarnation as described in Hinduism. Obtaining collateral made it clear that he was not functioning at his baseline. Pt initially denies auditory or visual hallucinations, but discussion with family prompted careful interviewing to elicit that the patient was having continued command hallucinations from Krishna which went beyond his cultural context. This case highlights the importance of collateral and also highlights the continued social stigma in certain communities with regards to mental illness.

No. 74

Coordination of Pet Rescue During Emergency Hospitalizations of Psychiatric Patients

Poster Presenter: Adam Takatsuka

Co-Author: Sandra Swantek

SUMMARY:

Ms. W., a 35-year-old African American female with no past psychiatric history, is admitted to the inpatient psychiatric unit due to psychotic features. During her hospitalization, her dog was left alone unattended in her apartment. The patient's disorganization, tangentiality, thought blocking, and speech latency made it difficult for the treatment team to redirect her to the issue of the unattended dog. Her paranoia manifested as distrust in her family, friends, and neighbors, and for several days she refused to provide contact information for anyone to check on the dog. She admitted to changing her apartment locks without her landlord's permission, as she was also distrustful of her landlord. Legal problems provided additional barriers to coordinating a wellness check on the dog, as Case Managers were continually redirected between the police, 311, and Animal Control. A wellness check was finally coordinated on the eighth day of her

hospitalization; the dog was found dead in her bedroom. Pet ownership is common in the United States, with estimates as high as 48% of adults owning dogs and 38% of adults owning cats¹. Existing literature supports the positive association between pet ownership and physiological outcomes, such as increased cardiovascular health and decreased odds of stroke^{1,3}. The literature further supports the benefits of pet ownership on mental health, with owners reporting decreased anxiety and increased feelings of comfort, safety, and social inclusion^{1,2}. Studies of pet owners with mental illness found that the companionship of pets can provide similar benefits to those who are socially isolated^{4,5}. Due to the compounding and inter-related nature of mental illness and isolation, patients with mental illnesses may be especially vulnerable to the consequences of social withdrawal⁶. Finally, the mental anguish endured following the loss of a pet cannot be understated. Evidence from those who experienced pet death demonstrates significant acute trauma and increased risk for chronic mental illness⁷. There is demonstrated interest in a low/no-cost pet-boarding or foster program for hospitalized patients struggling to find pet care assistance⁸. Patients have reported that the challenges they have encountered when trying to secure pet care during a hospitalization resulted in perceived negative effects on their health, recovery, or decision to receive medical care^{8,9}. This problem is especially pertinent to unsheltered patients; for some, the relationship with a pet is their primary social bond, and choosing to be with their pet versus separation via hospitalization creates a painful conflict^{8,9}. Given these findings, it is vital to ensure pet wellbeing to complement patient wellbeing and provide patient-centered care. In this poster, we discuss a Quality Improvement project aimed at supporting and expanding pet-friendly accommodation options for pet owners experiencing emergency hospitalizations.

No. 75

Quetiapine Use and Resulting Complex Parasomnias: A Case Series

Poster Presenter: Justin Gandee, M.D.

Co-Authors: Jacob Shumac, D.O., Julia Preusch, Katherine Citak Phelps, Meredith Brown, M.D.

SUMMARY:

Quetiapine ranked as the 64th most frequently prescribed medication in the United States in 2020 with an estimated ten and a half million prescriptions written for over one and three quarters million Americans¹. Somnolence is commonly associated with quetiapine due to the drug's antagonism of H1 receptors and therefore the medication is frequently written as an adjunct for symptomatic treatment of insomnia. While somnolence is often associated with quetiapine, parasomnias are not and reported cases are scarce in the literature. This poster will discuss the following two cases of parasomnia associated with use of quetiapine in an academic outpatient clinic, and explore potential explanations for the behaviors. Patient 1 is a 44-year-old male being seen in an outpatient clinic attached to an academic institution. Patient was being treated for Major depressive disorder and Tobacco Use disorder. Medical history significant for hypothyroidism, epilepsy, and untreated sleep apnea. Quetiapine was started at 50mg at bedtime as adjunctive treatment for mood, insomnia, and agitation. Patient tolerated this dose well, but had little benefit, so he was titrated to 150mg at bedtime. At this time patient started exhibiting bizarre parasomnia behavior that he had never exhibited before. Patient was sleepwalking, unlocking his door, and going outside his home and smoking before returning to bed, with no recollection of these events. Plan was made to stop the quetiapine due to these events, but patient misunderstood this plan and continued to use the medication. He also received a CPAP machine for his sleep apnea during this time, and started to use it regularly. With regular use of CPAP, his parasomnia resolved, despite continuing to use the same dose of quetiapine that had caused his parasomnia behaviors. Patient 2 is a 42-year-old female seen at the same institution. Patient was being treated for Bipolar 1 disorder. Patient was titrated to quetiapine 200mg qhs to assist with mood stabilization and sleep, and demonstrated temporary parasomnia behavior of making sandwiches. This resolved, and dose was titrated to 600mg, where she demonstrated behaviors of sleep walking and food preparation again. Over a period of 3 years the patient was variably demonstrating parasomnia behavior in what appeared to be a dose dependent

manner; generally tolerating doses of 400mg and below. Patient was eventually tapered off of this medication when she demonstrated parasomnia at 400mg dosing; making popcorn and putting oil in a pan over a stove on high heat. This poster plans to discuss parasomnia as a rare side effect while being on quetiapine, as well as explore potential explanations for this behavior, such as why the first case resolved with treatment of sleep apnea. Many psychiatric patients on quetiapine deal with obesity, sleep apnea, and can be on complicated treatment regimens. Parasomnia is not reported in initial trials, and reported cases are uncommon in the literature.

No. 76**Narcolepsy Associated With an Increased Risk of Pregnancy Complications: Based on a Nationwide Healthcare System Database in South Korea**

Poster Presenter: Suhyung Kim

Co-Author: Seung-Chul Hong

SUMMARY:

Abstract Study Objectives: Narcolepsy is known as an autoimmune disease which altered metabolic functions. It is believed that narcolepsy makes more pregnancy complications. However clinical evidence in narcolepsy patients, especially in pregnant women, is limited. We aim to find out whether there is relationship between narcolepsy and pregnancy complications. **Methods:** We examined data from the South Korean nationwide health insurance claims database from 2010 to 2019. Our study included women narcolepsy patients who gave birth, and age- and sex- matched controls without narcolepsy. We estimated the odds ratio of narcolepsy with pregnancy complications and control group with pregnancy complications using multivariate logistic regression analysis. **Results:** Our study included 1,836 women with narcolepsy who gave birth and 28,796 women who gave birth without narcolepsy. We found that women with narcolepsy have a slightly high risk of preterm birth (OR, 1.191; 95% CI, 1.034-1.372). Patients with narcolepsy were at a significantly lower risk of spontaneous abortion, caesarean and gestational diabetes (OR, 0.763; 0.682-0.854, OR, 0.679; 95% CI, 0.560-0.824 and OR, 0.656; 95% CI, 0.556-0.774, respectively).

Conclusions: This study is the first study about

pregnancy complications in narcolepsy patients in South Korea. We found that preterm birth happened more in the patient with narcolepsy during pregnancy. But patient had lower risk of spontaneous abortion, caesarean, gestational diabetes compared to health control group. These findings suggest that narcolepsy is not a definite risk factor for pregnancy complications. Further research is needed to investigate the reasons why narcolepsy patients had lower risk of spontaneous abortion, caesarean, gestational diabetes compared to health control.

No. 77

Buspirone Induced Psychosis in a Patient With Anxiety

Poster Presenter: Taher Kapadia

Co-Authors: Joshua Chen, Caesa Nagpal, M.D.

SUMMARY:

Background: The global prevalence of anxiety disorders is roughly 7.5%. Current treatment regimen includes benzodiazepines (BZPs), beta blockers, and SSRIs. Despite the efficacy, BZPs have risk/side effect profile making it difficult to prescribe for long-term management. Buspirone can be a good choice in such patients due to its low risk of sedation, addiction, and fewer interactions with other medications. There is, however, some evidence in the literature that Buspirone may induce psychosis in select patients. We present such a case of a patient with Buspirone induced psychosis. **Method:** A 38-year-old female with past psychiatric history of Bipolar disorder presented to an acute inpatient psychiatric unit for severe depressive symptoms with suicidal thoughts, aggressive at times, auditory and visual hallucinations (AVH) of devil telling her to do terrible things in the setting of medication non-compliance. She was started on Quetiapine 300 mg PO at bedtime which was helpful for her symptoms resulting in resolution of AVH, her mood was less depressed with no aggressive episodes. However, she continued to report generalized anxiety about the things she needs to do after discharge. She was started on Gabapentin 300 mg PO three times daily for anxiety. She reported past treatment with Hydroxyzine which was effective but no benefit this time. She was then started on Buspirone 5 mg PO

twice daily (reported to have helped her in the past). Two days later, she became very aggressive, paranoid, and started endorsing AVH. She even had an altercation with another patient as she was paranoid of the peer. Buspirone was stopped due to sudden increase in psychotic symptoms in a patient who has been stable. Quetiapine was increased to 400 mg at bedtime which was effective in resolving AVH and helping with her mood. Gabapentin was also increased to 600 mg PO three times daily to help with anxiety. Following this patient was observed for another 5 days and remained compliant to medications, with no aggressive outbursts, full resolution of psychotic symptoms. At this point, she was discharged to continue follow up as an outpatient. **Discussion:** Buspirone is thought to act on presynaptic 5-HT_{1A} receptors and acts as a weak antagonist on dopamine D₂ autoreceptors. While the underlying mechanism behind the effect of 5-HT_{1A} agonism and the clinical effects remains unknown, Buspirone's activity on dopamine receptors, possibly in combination with its serotonergic activity, may play a role in the development of psychosis in select populations. Given the potential for acute behavior change in our patient, it is important for clinicians to watch for signs of acute deterioration, especially when first starting Buspirone in patients with a history of psychosis. Further research is needed to elucidate the exact mechanism behind Buspirone's role in the development of psychosis. **Conclusion:** This case highlights that Buspirone can be a cause of psychosis in some patients

No. 78

Treating Phentermine Induced Psychosis

Poster Presenter: Kelsey Junek

Co-Authors: Andrew Mason, Jenna Przybylowski, Andrew Rumble

SUMMARY:

Introduction Phentermine, one of the most frequently used weight loss medications, is a sympathomimetic amine which is used for weight loss via blockade of the dopamine and norepinephrine transporters. This mechanism is similar to that of amphetamines. Phentermine's half-life elimination is approximately 20 hours and time to peak effect is 3 to 4.4 hours. The literature

recognizes an array of psychiatric adverse effects including insomnia, irritability, and anxiety in 24% to 27% of users. The literature also reports that phentermine can induce psychotic symptoms which typically resolve once phentermine is discontinued. However, there is a dearth of literature discussing additional management options for phentermine-induced psychosis. In this case report, we will review medical and therapeutic interventions in a patient with phentermine-precipitated psychosis. Case Presentation This patient is a 50 year old male with a past psychiatric history of post-traumatic stress disorder presenting with delusions and auditory hallucinations in the context of consuming his wife's phentermine. This patient's paranoid delusions included delusions of control, thought broadcasting, persecutory, paranoid, bizarre, and non-bizarre delusions. He reported visual Lilliputian hallucinations and auditory hallucinations. Collateral from his wife confirmed the consumption of phentermine, and his urine drug screen [UDS] showed an unconfirmed positive for amphetamines, which can be seen with phentermine use. The treatment plan included second-generation antipsychotics, family therapy, and individual therapy focus on reality testing. The patient's psychosis resolved during his hospital stay. Discussion Considering that the half-life of phentermine is approximately 20 hours and this patient was hospitalized for five days, this was a case of phentermine-precipitated psychosis rather than a case of just phentermine intoxication. Administration of an antipsychotic and reality testing likely contributed to expediting the recovery process for this patient. A family meeting contributed to the likelihood of future prevention through psychoeducation on medication adherence and the risk of phentermine use. Conclusion Although cessation of the medication is the most important component of phentermine-precipitated psychosis treatment, this case study demonstrates the benefit of treatment through use of antipsychotic medications, daily reality testing therapy, and family support and psychoeducation. Future studies could compare patients who are treated by cessation of the medication alone and those with multi-module treatment to further assess objective benefit from the treatment.

No. 79

A Systematic Review of the Impact of the Use of Pharmacological Agents for the Treatment of ADHD on the Course of Epilepsy

Poster Presenter: Priscilla Granja Machado

Co-Authors: Antonio Teixeira, M.D., Ph.D., M.Sc.,

David Vivas Villarreal

SUMMARY:

Introduction: In pediatrics, findings have documented raised psychiatric conditions in children with epilepsy. Attention-deficit/hyperactivity disorder (ADHD) is the most common comorbidity in children with epilepsy. The relationship between epilepsy and ADHD is complex, and it remains unclear whether ADHD symptoms are the result of the epileptic activity itself or whether both ADHD and epilepsy represent a result of shared etiological factors. The effect of medications for treating ADHD has long been discussed in the context of epilepsy, but so far there is no systematic review addressing whether the use of medications for treating ADHD has an impact on the course of epilepsy in children. Methods: We performed a literature search of trials using Pubmed and PsycINFO from inception to September 2022. We combined search terms using Boolean operators to derive the search strategy. We included studies that enrolled patients under 18 years. Only papers in English, Spanish, or Portuguese were considered. We also performed a hand-searching of the reference lists of included articles. Two authors independently reviewed all abstracts and selected articles to evaluate whether the study would meet the criteria for inclusion in the systematic review. Disagreements about the inclusion of a study were resolved by consensus or the involvement of a third author as necessary. Eligibility criteria for inclusion in the systematic review were as follows: studies were cohort, case-control, or cross-sectional designs assessing ADHD treatment among children and adolescents in the context of epilepsy; data had to be original and published in the peer-reviewed literature; ADHD could be determined by semistructured interviews, specific scales, clinical diagnosis, or a proxy definition of receiving specific medication for ADHD. Four authors independently extracted data from eligible studies using a standardized form. Discrepancies were discussed with a fifth author. The risk of bias

was assessed regarding randomization, allocation sequence concealment, blinding, incomplete outcome data, selective outcome reporting, and other biases. Results: A total of 20 studies were identified, comprising around 62,500 subjects. Studies were highly heterogenous regarding diagnostic methods, stimulant use, and symptom quantification. In general, only one study detected worsening of epilepsy in 20% of participants (total n= 105). Findings suggest stimulant treatment of ADHD in children and adolescents with epilepsy to be well tolerated, with low rates of worsening seizure activity. Conclusion: The vast majority of studies (95%) support the use of pharmacological agents to safely treat ADHD in patients with comorbid epilepsy, such as stimulants and Atomoxetine. However, the lack of randomized clinical trials prevents a definitive conclusion. This systematic review highlights the need for a greater number of studies on the subject and larger trials.

No. 80

Overshadowed and Under-Connected: A Case of Agenesis of the Corpus Callosum Eclipsed by Autistic Symptomatology

Poster Presenter: Adam Takatsuka

Co-Authors: Jacob Cross, M.D., Chandrika Shankar

SUMMARY:

Background: Agenesis of the corpus callosum (AgCC) is a congenital, cerebral malformation in which the corpus callosum, a thick tract of nerve fibers connecting the two brain hemispheres, is completely or partially absent (1). AgCC may present with behavioral deficits, such as emotional immaturity and impairments in communication and abstract reasoning¹. Some symptoms of AgCC overlap with those of autism spectrum disorder (ASD), a heterogenous group of childhood neurodevelopmental disorders with multiple etiologies (2). We describe a case of AgCC incidentally discovered in a patient diagnosed with ASD. **Case Summary:** A 20-year-old Latin-American, Spanish-speaking man with a chart history of ASD and developmental delay was admitted to a psychiatric hospital due to concern for acute psychosis. He presented with auditory and visual hallucinations, paranoia, and aggression towards his

family. He also demonstrated manic symptoms including insomnia, distractibility, hyperactivity, and hypersexuality. During this admission, his brain imaging showed AgCC. Upon starting sodium valproate, his aggression, impulsivity, and restlessness subsided. With an increase to his home risperidone, he was no longer distressed by his hallucinations nor his delusions. **Discussion:** The overlapping presentations of AgCC and ASD may be explained by their mutual categorization as disorders of neural disconnectivity. A leading hypothesis explains the etiology of ASD as a consequence of the disconnection of higher-order association areas in the brain from one another (2). The congenital disruption of the corpus callosum poses a risk factor for subsequent development of autistic symptomatology at a later age than is typically seen in primary ASD (3,4). Notably, while up to a third of adults with AgCC exhibit autistic symptomatology, few meet formal criteria for the diagnosis of ASD (3). Anchoring on a neuropsychiatric diagnosis such as ASD may delay a necessary investigation into medical causes of other symptoms such as psychosis. The prevailing theories connecting autistic symptomatology and psychosis further implicate aberrant connections between brain regions (5,6). It is proposed that the deficient communication between brain hemispheres causes each half to consider the other as “non-self”, resulting in influence by a seemingly external force and the subsequent development of Schneiderian first-rank symptoms of schizophrenia (7). There is further evidence linking structural and genetic abnormalities of the corpus callosum in psychosis; the disrupted-in-schizophrenia 1 (DISC1) gene is associated with AgCC and psychosis, and decreased corpus callosum size and volume have been correlated with positive psychotic symptoms (1,8,9,10,5). **Implications:** - Autistic symptomatology may overshadow the presence of AgCC - Increased severity of psychosis should raise concern for comorbid AgCC - Relatively few patients with AgCC carry a true diagnosis of ASD

No. 81

Treatment Refractory Psychosis With Severe Hyperostosis Frontalis Interna: A Case Report

Poster Presenter: Sungsu Lee, M.D., Ph.D.

Co-Author: Samantha Kamp, M.D.

SUMMARY:

We present the case of a 64-year-old female admitted to the hospital for recurrent command auditory hallucination and depressive symptoms, who initially became symptomatic at the age of 57. Initial medical workup at that presentation 7 years prior was negative, and an MRI of the head was unremarkable. The patient's symptoms then remained treatment refractory even after an extensive trial of medications, including Haldol, Seroquel, Zyprexa, Abilify, Risperdal, Thorazine and Clozapine. For this presentation, patient complained of worsening command auditory hallucinations, with suicidal and homicidal ideation when compared to her initial presentation. On a repeat medical workup, MRI and CT of the head showed extensive, bilateral internal bone growth of frontal and temporal bones, consistent with severe hyperostosis frontalis interna (HFI). This work follows her treatment and the various interdisciplinary services that were involved in her care with ultimate outcomes. HFI is a condition that is characterized by a continuous overgrowth of the internal surface of the frontal bone. The etiology of HFI is poorly understood, but is often described as a benign, incidental finding. However, a review of the literature challenges this assertion that HFI is a harmless finding of little consequence. We will explore the symptoms associated with severe HFI and the findings seen in this patient as well as highlight the importance of HFI in psychiatric symptoms.

No. 82**Esketamine Treatment Triggering Mania, Psychosis, and Catatonia in a Patient With Bipolar Depression**

Poster Presenter: Margarita Aulet-Leon, M.D.

SUMMARY:

Mr. X is a 68-year-old man with refractory bipolar depression who was admitted to our inpatient psychiatric unit in the setting of a nine-year depressive episode and worsening suicidal ideation with intent. He had failed multiple oral therapies and declined ECT due to cognitive impairment during prior treatment. He was initiated on intranasal esketamine therapy for treatment-resistant bipolar depression. We observed a strong and rapid antidepressant and anti-suicidal effect, followed by a

rapidly fluctuating course of catatonia, mania, psychosis, and self harm. Bipolar depression remains one of the more difficult and refractory illnesses that impact our patient populations. The intranasal use of esketamine has been FDA-approved for treatment-resistant depression as well as MDD with suicidal ideation. However, there is insufficient data in the use of esketamine for the treatment of bipolar depression (Grady 2018 et al, Wilkowska et al 2020, Bennett, 2022). In this poster we will further discuss the patient's clinical course and share our hypotheses as to why esketamine therapy resulted in this outcome, with specific emphasis on esketamine's potent NMDA receptor antagonism. Our case report highlights possible adverse outcomes associated with the use of esketamine in patients with bipolar disorder. We must increase our understanding of this topic as the use of esketamine proliferates and our specialty considers which patient populations may benefit from this novel therapy.

No. 83**Characteristics of Youth Aggression Among a Child and Adolescent Inpatient Cohort During Covid-19**

Poster Presenter: Paige Staudenmaier, M.D.

Co-Author: Alicia Leong

SUMMARY:

BACKGROUND Much is known concerning youth aggression from community samples, though characteristics of youth aggression among the psychiatrically hospitalized are less-well understood. Moreover, the impact of the COVID-19 epidemic on aggression is not fully understood. The aim of this research is to explore demographic and clinical factors associated with pediatric psychiatric admissions for aggression during various phases of the COVID-19 epidemic. **METHODS** Research was IRB approved under an exempt status. A retrospective chart review was conducted of 1,101 child/adolescent patients admitted to the inpatient unit at Mount Sinai between June 2018 to November 2021. Of the total sample, 224 admissions were for aggression. Demographic and clinical differences between patients admitted was explored. **RESULTS** History of violence ($p < 0.001$), a diagnosis of an impulsive/behavioral disorder ($p < 0.01$), history of

ACS involvement ($p = 0.04$), number of psychiatric medications at time of admission ($p < 0.001$), and history of a CPEP visit within the past year ($p = 0.03$) were found to be positive predictors of inpatient admission for aggression. Older age ($p = 0.01$), female ($p < 0.001$) or transgender/non-binary gender ($p = 0.02$), and a diagnosis of a mood disorder ($p < 0.01$) were found to be negative predictors. Patients admitted for violence were also more likely to have longer hospitalizations ($p < 0.001$), receive PRN medications ($p < 0.001$), and be discharged on a greater number of medications ($p < 0.001$). Additionally, over the course of the COVID-19 pandemic (separated into pre-pandemic, quarantine, post quarantine), patients admitted for aggression were prescribed an increasing number of psychiatric medications at time of admission ($p = 0.41$).

CONCLUSION and SIGNIFICANCE Multiple risk factors are associated with pediatric inpatient admissions for aggression. Additionally, while COVID-19 did not directly impact the number of admissions for aggression, clinical differences were found between patients at various stages of the pandemic.

Monday, May 22, 2023

An Evidence-Based Approach to Psychopharmacology for Generalized Anxiety Disorder (GAD)-2022 Update, With Emphasis on Older Adults

Poster Presenter: Anderson Chen, M.D.

Co-Authors: Dora Geving, Soyung Lee, Eran Daniel Metzger, M.D., David N. Osser, M.D.

SUMMARY:

This is an update to the previous algorithms for the pharmacotherapy of generalized anxiety disorder (GAD) developed by the Psychopharmacology Algorithm Project at the Harvard South Shore Program, with a focus on the elderly population. Algorithms from 1999, 2010, and 2016 and associated references were re-evaluated. Newer studies and reviews published from 2015 to December 2022 were obtained from PubMed and analyzed with focus on their potential to justify changes in the recommendations for elderly patients with GAD. Though certain comorbidities could change the basic recommendations, selective serotonin reuptake inhibitors are still the basic first-

line medication, with a preference for sertraline or escitalopram. An early alternative is buspirone. If response is inadequate, then the second recommended intervention is to try a different SSRI or duloxetine. For a third medication trial, additional alternatives now include pregabalin/gabapentin, lavender oil, or agomelatine (not available in the United States). If there is an unsatisfactory response to the third SSRI or alternative, then the recommendation is to consider more side-effect-prone options that could be justified given the level of treatment-resistance at this point. One could consider venlafaxine, quetiapine, risperidone, or aripiprazole. We decided to recommend not using the following in this population: benzodiazepines, hydroxyzine, olanzapine, vortioxetine, or, vilazodone.

Poster Session 10

No. 1

ADHD Knowledge, Perception, and Misconceptions Among Elementary School Teachers in the Locality of Khartoum: A Cross-Sectional Study From Sudan (2022)

Poster Presenter: Mohamed Elhadi

Co-Author: Mohammednour Mukhtar

SUMMARY:

Background: Attention deficit hyperactivity disorder (ADHD) is impaired functioning in at least two settings: home and school due to impulsivity, hyperactivity, and inattention. It is one of the most commonly diagnosed childhood psychiatric disorders. It has three types: a hyperactive type, an inattentive type, and a combined hyperactive and inattentive type. Primary school teachers play an essential role in the assessment of children's behavior and they are often the first ones to recognize a child with ADHD as they are exposed daily to children, they also play a major role in evaluating treatment plans at school. Objective: To assess knowledge, perception, and misconceptions of elementary school teachers in the locality of Khartoum regarding ADHD. Method: The study utilizes a Descriptive cross-sectional study design conducted at 37 randomly selected Elementary schools in the locality of Khartoum in October/November 2022. We applied cluster

sampling and used a structured self-administered two-part questionnaire consisting of demographic data and the Knowledge of attention deficit disorder scale (KADDS). Results: The study included 321 teachers with 270 (84.1%) females and 51(15.9%) males. The mean age of participants was 47.9 (SD = 8.5) years with an average teaching experience of 21.94 (SD = 10.2) years. The majority of the teachers knew that most ADHD children evidence some degree of poor performance in the elementary school years (71.7%). Moreover, most of the teachers were aware that ADHD children often fidget in their seats (96.3%) and that to be diagnosed with ADHD, a child must exhibit relevant symptoms in two or more settings (e.g., home, school) (90.2%). Unfortunately, only 40.4% of the teachers were convinced that ADHD isn't the result of ineffective parenting skills. Misconceptions were also common, 60.9% of the teachers believed that children with ADHD tend to be physically cruel to others and 47.5% of them were convinced that children with ADHD have a history of stealing and destroying other people's things which reflects a tendency to attribute anything negative to ADHD and stigmatize the disorder. The overall knowledge about ADHD was 48.53% (SD = 9.71). Teachers tend to show higher knowledge about ADHD symptoms and relatively poor knowledge regarding ADHD treatment. Teachers who had previous experience with a child with ADHD had a higher level of knowledge. Conclusion: Knowledge regarding ADHD among Elementary school teachers in the locality of Khartoum was suboptimal, particularly regarding ADHD treatment. Teachers with previous experience with ADHD were more knowledgeable. Many of the teachers had several misconceptions regarding ADHD.

No. 2

Esketamine Nasal Spray Versus Psychoactive Comparator for Rapid Reduction of Depressive Symptoms in Adolescents at Imminent Suicide Risk

Poster Presenter: Dong Jing Fu, M.D., Ph.D.

Co-Authors: Colette Kosik-Gonzalez, M.A., Li Chen, Ph.D., Carla M. Canuso, M.D., Wayne C. Drevets, M.D.

SUMMARY:

Background: Increasing rates of major depressive disorder (MDD) and suicidal behavior in adolescents pose a major public health concern; as of 2020, suicide was the second leading cause of death among adolescents in the US. Esketamine nasal spray is approved for use in conjunction with an oral antidepressant for the treatment of depressive symptoms in *adults* with MDD with acute suicidal ideation or behavior. The current study evaluated the efficacy and safety of esketamine nasal spray in conjunction with comprehensive standard-of-care (SOC) treatment in acutely ill adolescents with MDD who were at imminent risk for suicide. This study is the first pharmacological treatment trial conducted in this under-studied and vulnerable patient population. **Methods:** This double-blind (DB), double-dummy, multicenter, global phase 2b study randomized (1:1:1:2 ratio) adolescents (12 to <18 years old) to esketamine nasal spray (28, 56, or 84 mg) or psychoactive comparator (oral midazolam) twice-weekly for 4 weeks. All participants were treated in the context of comprehensive SOC treatment, including initial hospitalization, an oral antidepressant, and psychological therapy. The primary efficacy endpoint is change from baseline to 24 hours post-initial dose (day 2) in Children's Depression Rating Scale-Revised (CDRS-R) total score. Other endpoints include improvement in depressive symptoms based on change in CDRS-R and Montgomery-Asberg Depression Rating Scale (MADRS) total score and change in severity of suicidality based on Clinical Global Impression of Severity of Suicidality-Revised (CGI-SS-R) from the Suicide Ideation and Behavior Assessment Tool (SIBAT), which are being assessed throughout 25 days of the DB treatment phase. **Results:** The full analysis population includes 82 adolescents in the combined esketamine plus SOC groups (28 mg, n=28; 56 mg, n=31; 84 mg, n=23) and 63 in the midazolam plus SOC group. Mean age of all participants is 14.9 years, the majority (78%) female. At baseline, mean CDRS-R and MADRS total scores are 76.3 and 39.8, respectively, with 94% of participants moderately-to-extremely suicidal per CGI-SS-R, and 80% of participants having a lifetime suicide attempt, 54% within the past month. Analyses of efficacy and safety data are ongoing and will be presented. Conclusion: Findings from this first-in-kind study will

inform on an acutely ill, highly vulnerable population and on whether esketamine nasal spray may hold a therapeutic role when given in addition to comprehensive SOC, for rapid improvement in depressive symptoms, including measures of suicidal ideation, among depressed adolescents at imminent risk for suicide.

No. 3

Acne and Suicide: Controversial History and Updates on Complex Co-Occurring Conditions

Poster Presenter: Mayank Gupta

Co-Authors: Claire Cohen, Nihit Gupta, M.D.

SUMMARY:

The controversy started thirty years ago after a French original paper titled “Isotretinoine et Depression: Soyons vigilants” raised concerns about treatment with isotretinoin in individuals with mental disorders¹. Subsequently, it led to two decades of scientific inquiries, negative media coverage, and debates, until a 2010 influential methodologically strong study reported an association between severe acne and an increased risk of a suicide attempt. The risk for suicide was increased several years before treatment with isotretinoin; additional risk due to the treatment of isotretinoin cannot be established². The heightened risk was for six months after its completion and therefore clinical monitoring was suggested for up to a year after treatment has ended. These findings were instrumental in the investigation by regulatory agencies. The UK’s Medicines and Healthcare Products Regulatory Agency (MHRA) in 2014 concluded “insufficient to establish a causal association but could not rule out an association between isotretinoin and psychiatric disorders”³. Therefore, it's critical to review the empirical data to integrate it into clinical practice to enhance safety and risk management⁴. The worldwide suicide rate for 10 to 19-year-old is around 3.77/100 000 and in those aged 10 to 24 increased by nearly 60% between 2007 and 2018. Acne affects 9.4% of the global population and post-pubertal boys are most frequently affected and have severe forms of the disease. Likewise, about 85 % of people between the ages of 12-24 experience at least minor acne in the US. A large population-based study reported suicidal

ideation remained significantly associated with substantial acne (odds ratio 1.80, 95% confidence interval 1.30–2.50), and mental health symptoms, were all associated with substantial acne⁵. The authors emphasized the psychiatric adverse effects associated with acne treatment may reflect the burden of substantial acne rather than the effects of medication. However, the controversy continued in the UK after twelve deaths were recorded in 2019, 10 by suicide in individuals who had been prescribed Roaccutane(isotretinoin). Following this, another inquiry has been opened by the MHRA. There is strict clinical guidance is to use of isotretinoin for severe acne, and a recent review supports warning patients of the risks of neuropsychiatric side effects with isotretinoin⁶. A 2021 meta-analysis was conducted excluding the studies of treatment with isotretinoin, results showed that acne was positively associated with suicide (odds ratio (OR) 1.50, 95% confidence interval (95% CI): 1.09–2.06, P = .004, I² = 74.1%). **Conclusion:** The relationship between acne and suicide is not clearly understood. It's imperative for clinicians working with these individuals to recognize these highly prevalent clinical conditions and engage in informed evidence-based approaches to improve overall outcomes.

No. 4

Caregiver Resilience, Psychopathology, and the Relation With Social-Emotional Adjustment of Young Children Affected by Armed Conflict in Colombia

Poster Presenter: Isaac Johnson, M.D.

Lead Author: Sascha Hein, Ph.D.

Co-Authors: Liliana Ponguta, Ph.D., Lina Gonzalez, James Leckman, M.D., Ph.D.

SUMMARY:

Sascha Hein, L. Angelica Ponguta, José M. Flores, Amalia Londono Tobon, Isaac Johnson, Julie Larran, Ana M. Ortiz Hoyos, Oscar Gomez, Lina M. González Ballesteros and James F. Leckman Objectives: The first aim was to quantify levels of anxiety, depression, and PTSD among Colombian caregivers, along with rates of comorbidities of these conditions. The second aim was to examine the associations between caregiver psychopathology and social-emotional challenges of children. Third, we

examined interactions between caregiver psychopathology and child gender and their associations with child social-emotional problems. Finally, no prior studies have examined caregiver resilience as a buffering factor in the relationship between caregiver psychopathology and child social-emotional challenges. Our fourth aim was to probe interactions between caregiver resilience and psychopathology, that may predict child social-emotional challenges. Methods: A total of 1133 caregivers from 18 municipalities in Colombia participated in this study, which is a subsample of a large-scale epidemiological survey. 44.0% and 20.4% of caregivers and 41.6% and 34.9% of the children are victims of forced displacement and armed conflict, respectively. The Ages and Stages Questionnaire was used to measure caregiver-reported social and emotional development of their children filled out at 24, 36, and 48-month intervals. The Whooley, Hamilton-A, PCL-C, and CD-RISC instruments were used to evaluate for depression, anxiety, PTSD, and resilience, respectively. Results: Concerning children's social-emotional challenges, 11.9%, 22.8% and 10.8% received scores above the ASQ-SE cutoff on the 24, 36, and 48-month screenings, respectively. Among caregivers, 44.7% screened positive for depression, 24.5% screened positive for PTSD, and 12.84% screened positive for anxiety. We found higher levels of caregiver self-reported PTSD symptoms to be related to more social-emotional challenges of the participating children. Conclusions: We found higher levels of caregiver psychopathology to be associated with higher levels of child social-emotional challenges. However, child gender moderated this such that boys were more vulnerable to the effects of caregiver depression on their social-emotional challenges. Finally, resilience buffered for the negative effect of caregiver psychopathology on child social-emotional problems, but this interaction was specific to girls.

No. 5

Epigenetic Changes in Post-Operative Delirium: Comparing Brain and Peripheral Tissues From Neurosurgical Cohort

Poster Presenter: Nadiyah Wahba, M.D.

Co-Authors: Yoshitaka Nishizawa, M.D., Ph.D., Kaitlyn Crutchley, B.S., Gen Shinozaki, M.D.

SUMMARY:

Purpose: Delirium is a highly prevalent condition associated with poor prognostic outcomes, however no reliable biomarkers exist to aid in detection. Epigenetic changes found in blood suggest involvement of pathways associated with immune system activation. These findings are consistent in post-operative delirium (POD) patients as well. This study aims to compare brain tissue samples from a neurosurgical cohort to peripheral tissues including blood, saliva, and buccal samples. **Methods:** In this retrospective cohort study, 37 subjects scheduled to undergo neurosurgical resection for treatment-resistant epilepsy were recruited. Brain tissue, blood, saliva, and buccal samples were obtained post-surgical intervention. DNA methylation (DNAm) patterns were observed using EPIC Array, while gene enrichment pathways were compared via Gene Ontology (GO) and Kyoto Encyclopedia of Genes and Genomes (KEGG). Relationships between those developed POD vs. those who did not were investigated. **Main findings:** Brain tissue samples (n=36) revealed altered activity in ADAMTS9 gene ($p < 5.7E-08$) associated with POD ($p < 5.7E-08$). Gene enrichment in brain tissue was notable, but not significant for, pathways such as "positive glial cell activation" and "positive regulation of astrocyte differentiation" ($p < 1.1E-04$). Blood (n=37) enrichment analysis revealed pathways related to positive regulation of CD-8 T-cells ($p < 3.0E-04$). Saliva (n=22) and buccal (n=26) analyses reported top pathways including "neuron-neuron synaptic transmission" and "Circadian entrainment", however findings were not statistically significant ($p < 4.2E-04$, 0.09, respectively). **Conclusions:** No overlapping genomic pathways showing epigenetic modification are found when comparing brain and peripheral tissues of POD patients. Our findings suggest upregulation of glial cells and integrity of the cellular matrix to be involved in the development of delirium.

No. 6

Management of Psychiatric Diagnoses in Reversible Cerebral Vasoconstriction Syndrome: A Case Series and Literature Review

Poster Presenter: Chris Wang, M.D.

SUMMARY:

Background: Reversible cerebral vasoconstriction syndrome (RCVS) represents a group of conditions that show reversible multifocal narrowing or constriction of the cerebral arteries that supply blood to the brain. RCVS' initial manifestation often includes a "thunderclap" headache that is sudden, severe, and often disabling. The majority of patients are expected to achieve full recovery within days to weeks; however, if the insult is progressive or prolonged, there can be moderate to severe complications in an estimated 5-10% of patients with a 2% mortality rate (Singhal, 2021). Stimulants, SSRIs, SNRIs and antipsychotics with serotonergic activity can alter cerebral arterial tone, trigger vasoconstriction, and place patients at risk of a cerebrovascular accident. Thus, psychiatric medications are commonly discontinued on admission for RCVS, and psychiatry is often consulted for input on acute medication management and longitudinal treatment options. Currently, there is a dearth of psychiatric literature on managing patients with mental health comorbidities in the setting of RCVS. This results in variable practice patterns that place patients at risk of withdrawal, acute decompensation, and/or relapse of RCVS and their psychiatric condition. Cases: Case 1: RCVS symptoms were mild and psychiatric comorbidities were well controlled. Thus, serotonergic medications were discontinued with no plan to restart. Case 2: The patient also had a severe psychiatric history with an elevated risk of acute decompensation. Therefore, there was a sense of urgency with the timing of her psychotropic medication re-initiation. Case 3: The patient experienced severe serotonin withdrawal leading to a disagreement between psychiatry and neurology which ended with an unclear timeframe for appropriate medication discontinuation and re-initiation. Discussion: RCVS can be bidirectionally comorbid with psychiatric illnesses. There is a clear concern for worsening and even lethal consequences due to serotonin or stimulant-induced vasospasm both during an acute episode and in long-term management of RCVS. We aim to consolidate the limited data and literature surrounding RCVS and management of psychiatric comorbidities. We will discuss the underlying pathophysiologic mechanisms proposed for serotonergic, noradrenergic, and dopaminergic induced cerebral vasospasm and how

this correlates to clinical management of patients on psychiatric medications. This data will then be composed into a risks vs benefits conversation to equip psychiatrists for discussions involving patients and the multidisciplinary teams with the goal of coming to an individualized decision on when to stop and when to restart psychiatric medications in the setting of RCVS. Conclusion: RCVS is a serious medical condition with limited research around management of psychiatric comorbidities. We aim to consolidate the data, create an informed risk vs benefits conversation, and encourage further research in this area.

No. 7**Female Insanity Acquittes Charged With Violent Offenses in the State of North Carolina: A Qualitative Analysis of 25 Years of Data**

Poster Presenter: Sara Banoo Feizi, M.D.

Co-Author: Nicole F. Wolfe

SUMMARY:

There is limited data available on female insanity acquittes especially regarding length of stay, rates of criminal reconviction or rehospitalization post NGRI hospital release. We conducted a qualitative review of female patients records who had been found NGRI for violent offenses in the state of NC over the last two decades to better understand female violence risk assessment. Approximately 150 NGRI acquittes were admitted to the state's only Forensic Treatment Program in North Carolina between 1996 – 2022. Most NGRI acquittes are male, and NC has few NGRI patients, so the female sample is small; this does not allow data to be reviewed for statistical significance, so the data was examined for associations. We also compared this data to the male counterparts to examine any gender differences in length of stay. We found that women were less likely to have history of substance use and did not have history of prior violent offense. Compared with the men, the women were more commonly married, living with an intimate partner, and/or had children at the time of the violent act (in many cases the child was the victim). The criminal and psychological variables of violent women are often different than violent men. Being aware of gender differences in the risk factor profiles of

women is essential to accurate detection and prevention of violence.

No. 8

The International Criminal Court's Ongwen Decision: A (Dissenting) Judge Highlights the Trauma of an Ex-Child Soldier in a War Crimes Case

Poster Presenter: Lee Hiromoto, M.D., J.D.

Co-Author: Zachariah Adham

SUMMARY:

This poster highlights the exceptionally thoughtful consideration of childhood trauma by a judge of the International Criminal Court (ICC), which in December of 2022 affirmed the war crimes conviction of a former child soldier. Sitting in the Appeals Chamber of the ICC, Judge Luz del Carmen Ibáñez Carranza voted to uphold the conviction of Dominic Ongwen for crimes committed as an adult in the brutal Lord's Resistance Army (LRA). However, Judge Carranza also argued in a partial dissent that Mr. Ongwen's childhood trauma—being kidnapped at age 9 and forced into the LRA at that age—should receive “significant weight in mitigation” (i.e. sentence reduction). Previously, the ICC's Trial Chamber (the lower court), had issued a 25-year sentencing decision that offered some recognition of Mr. Ongwen's abduction as a child. Nevertheless, Judge Carranza's dissent in Ongwen stands out in its robust discussion of childhood trauma and Mr. Ongwen's victim-perpetrator status, making it the most sympathetic ICC opinion (albeit dissenting) dealing with such early life adversity to date. This poster reviews Judge Carranza's dissenting opinion, which may provide a model for greater judicial consideration of the biopsychosocial impact of early life adversity on criminal behavior in future cases.

No. 9

Perceived Control and Work-Related Stress Mediate the Effects of Grit on Anxiety Among Employees

Poster Presenter: Suh Eun Lee

Co-Authors: Kang Seob Oh, Sra Jung, Hyejeong Jeon, Sung Joon Cho

SUMMARY:

This study aimed to develop and evaluate a correlational model of anxiety among employees

where passion and perseverance affect occupational stress and perceived control over work, which in turn affect risk of anxiety. The participants were employees of 56 private companies and local government organizations in Korea aged 19 to 65 years. A total of 11,421 participants completed questionnaires including the Korean version of the Grit scale, the occupational stress scale, the perceived control subscale in the perceived stress scale, and the Clinically Useful Anxiety Outcome Scale. SPSS PROCESS macro was used to determine relationships among passion and perseverance, work-related stress, perceived control, and anxiety. Passion and perseverance preceded anxiety in employees. Higher occupational stress and lower perceived control mediated both the association between passion and anxiety and the association between perseverance and anxiety. Passion and perseverance exert preventative effect on anxiety by reducing workplace stress and strengthening perceived control. Future studies would benefit focusing on investigating effects of psychological characteristics on development of anxiety in employees.

No. 10

Towards Digitalization of Therapy and Diagnostics in Anxiety Disorders: Results From an RCT Evaluating App-Guided Vr-Augmented Therapy

Poster Presenter: Bartosz Zurowski

SUMMARY:

Introduction: Anxiety disorders are among the most prevalent mental disorders. However, only a minority of patients receives adequate psychotherapeutic treatment despite strong empirical evidence for the efficacy of CBT. App-supported psychotherapy may reduce this massive treatment gap, with majority of apps being lacking both scientific evaluation and a strong focus on exposure as core intervention, however. **Objectives:** We aimed at evaluating the efficacy of an app-guided treatment for anxiety disorders including exposure in virtual reality (VR). **Methods:** An RCT was conducted in two university outpatient units in Northern Germany. Patients were diagnosed with agoraphobia (AP; with or without panic disorder; n=103), panic disorder (PD; n=84) or social anxiety disorder (SAD; n=110) and were

randomly assigned to either the app-based intervention (*Invirto*; www.invirto.de) or treatment as usual (TAU; up to 6 sessions of supportive therapy). The app was developed upon evaluated CBT manuals and includes 14 hours of audio and video content and 15 disorder specific VR exposure scenarios. Participants received two appointments with a therapist during the app-guided treatment. Primary outcome was the change in Beck Anxiety Inventory (BAI) score after 6 months. ITT and completer analyses were conducted. Secondary outcomes were disorder specific questionnaires (Liebowitz Social Anxiety Scale LSAS for SAD and Panic and Agoraphobia Scale PAS for AP and PD). **Results:** Dropout rates were 18, 21, and 21 percent, respectively, for the intervention arms. In the ITT analysis employing multiple imputation, the group by time interaction was significant for all 3 diagnoses with mean score difference of 6.64 ($p = 0.0029$) for AP, 6.55 ($p = 0.0137$) for PD, and 3.42 ($p = 0.0499$) for SAD, respectively. Moreover, significance was even higher in all secondary outcome questionnaires. In particular, mean LSAS score difference in SAD was 15.1; $p = 0.0002$. **Conclusions:** A significantly greater symptom reduction in the app-based intervention group compared to the control group could be found in patients with agoraphobia (BAI/PAS), panic disorder (BAI/PAS) and social anxiety disorder (BAI/LSAS). As expected, the effects were markedly stronger on disorder specific scales, throughout. Together, the results are particularly remarkable as we randomly assigned participants to *app-guided* therapy or to an active control with up to 6 sessions of *face-to-face* psychotherapy. Effect sizes of app-guided therapy were comparable to those found in studies comparing face-to-face CBT to an active control group. Implementation of digitalized diagnostics involving machine learning approaches is currently being evaluated.

No. 11

Antidepressants Are Most Effective in Patients Who Would Experience a Partial Response to Placebo: Quantile Treatment Effect Meta-Analysis of 232 RCTs

Poster Presenter: William Meyerson, M.D., Ph.D.

Co-Authors: Carl Pieper, John L. Beyer, M.D., Rick H. Hoyle, Ph.D.

SUMMARY:

Background: Meta-analyses of RCTs report that *on average* antidepressants modestly improve depressive symptoms [1]. Is this due to a distributed benefit across many patients, a large effect in a few patients, or a mixture of patients helped and hurt by drug? Recent work addressed this using finite mixture models [2], but these models assume that there are a few identifiable subtypes of depression responses; if the reality is that depression responses fall along a continuous spectrum, then the mixture models can be misleading [3]. Another approach that allows for a continuous spectrum of depression responses is the quantile treatment effects (QTE) framework [4]. In QTE analysis under the rank similarity assumption, the difference in response at a given quantile (e.g. the 90th percentile) conditional on baseline status in the treatment arm of a randomized intervention versus the response at the same quantile of the control arm is interpreted as the effect of treatment in individuals at the quantile. We applied QTE analysis to analyze the distribution of antidepressant effects across the full spectrum of responses. **Methods:** The baseline depression severity score, final severity score, and arm assignment of 73,388 participants from 232 published and unpublished randomized, placebo-controlled trials submitted to the FDA between 1979 and 2016 for antidepressant monotherapy for unipolar depression were obtained from Stone *et al.* [2]. Depression severity scores had been converted to HAMD-17 equivalents. In our analysis, the response was coded as the fractional improvement of HAMD-17 from baseline to final conditions, conditioned on baseline depression severity. Quantile treatment effects were calculated through the R *qte* package (version 1.3.1). **Results:** Depression responses were higher in the treatment arm than placebo arm at all reported quantiles, especially towards the center of the distribution. The absolute fractional improvement in drug responses compared to placebo responses at the 10th, 25th, 50th, 75th, and 90th percentile were 3.0% (2.6%-3.5%), 7.7% (6.9%-8.5%), 14.0% (12.8%-14.8%), 8.3% (7.5%-9.2%), and 4.1% (3.6%-4.5%), respectively, p -value < 0.05 at all reported quantiles. **Conclusions:** These results together with the rank similarity assumption suggest that antidepressants confer at least some benefit to many patients but that the benefits are

more clinically meaningful in patients who would otherwise experience a partial placebo response. Consistent with clinical experience, patients with transient depression that would otherwise nearly resolve with placebo get little additional benefit from active treatment. Patients with resistant depression that barely improves with placebo also get less benefit from antidepressant. A limitation of this work is that it relies on the rank similarity assumption. Future studies can investigate if depression trajectory prior to antidepressant administration is associated with antidepressant response.

No. 12

Sleep Phenotypes and Response to IV Ketamine / in Esketamine in Patients With Treatment Resistant Depression

Poster Presenter: Edith Liliana Patarroyo Rodriguez

Lead Author: Balwinder Singh, M.D., M.S.

Co-Authors: Vanessa Pazdernik, Jennifer Vande Voort

SUMMARY:

Sleep phenotypes and time to response to IV ketamine/IN esketamine in patients with treatment resistant depression. Patarroyo-Rodriguez E, M.D. M.S., Pazdernik V, M.S., Vande Voort J, M.D., Singh B, M.D. **Background:** Sleep disturbances are highly prevalent in depressive disorders and depression severity is often correlated with symptoms of insomnia. Current evidence suggests that intravenous (IV) ketamine improves sleep symptoms in patients with treatment resistant depression (TRD) and that sleep improvement correlates with clinical response to ketamine. There are similar findings for intranasal (IN) esketamine though the evidence is less robust. This study evaluated the differences in time to response to IV ketamine and IN esketamine among sleep phenotypes in patients with TRD.

Methods: We performed a retrospective cohort study of adult patients with TRD who received up to six IV ketamine or up to eight IN esketamine treatments. Depressive symptoms were measured using the 16-item Quick Inventory of Depressive Symptomatology self-reported (QIDS-SR). Sleep phenotypes were defined by a score of 2 or higher in the sleep domain items (early insomnia, middle insomnia, late insomnia, and hypersomnia) in the initial QIDS-SR. We also defined a mixed sleep

phenotype for those patients who scored two or more in at most one item, exactly two items, or three or four items. Time to response was defined as number of treatments to achieve a 50% reduction on initial QIDS score. Univariable and multivariable Cox proportional hazard models were used to evaluate associations between time to response. **Results:** Fifty-two adults (37 received IV ketamine, 15 received IN esketamine, median age=49) were included in our analysis. The baseline median score was 1 to 2 for all sleep items. 94% of patients scored two or more on at least one sleep item. Thirty-four patients had a mixed sleep phenotype. Among all patients, a majority (67%) scored two or more in the middle insomnia item, followed by early insomnia (48%), late insomnia (44%) and hypersomnia (39%). There was a 52% response rate to treatment with a median number of treatments needed to achieve response of 4 and 7 for IV ketamine and IN esketamine respectively. There was significant faster response in patients with hypersomnia at baseline (HR=2.6 [CI 1.2-5.6]; P=.02); however, after adjusting for age, BMI, treatment type, sex, and sleep-excluded-QIDS-SR score, the relationship was no longer statistically significant (P=.06). No other sleep phenotypes were associated (all P>0.36) with differences in time to response. **Conclusion:** In our study most of the patients presented more than one sleep symptom limiting further analysis by a predominant sleep phenotype. However, our data suggests that patients who present hypersomnia may respond faster to IV ketamine or IN esketamine. Fully powered prospective investigations are needed to validate these observations.

No. 13

A Comparison of Two Proteomic Platforms for Assessing Biomarkers in Moderate to Severe Major Depression

Poster Presenter: Isaac B. Satz

SUMMARY:

Background: Several studies have previously pointed to differences between individuals with major depressive disorder (MDD) and healthy controls (HC's) in levels of inflammatory biomarkers and growth factors. These studies, however, vary in their methods, and are not uniformly in agreement;

the possible effect of these methods on the resulting data has not been fully established. We sought to examine these differences by studying two commonly used assays and how they relate to biomarkers and depression. **Methods:** Two proteomic platforms were compared: an immunofluorescent multiplex platform (Luminex) and an aptamer-based method (SomaLogic). Both platforms were used to assess 32 protein analytes from a cohort of moderate to severe MDD patients and HCs (Ages 18-70). Blood samples were taken from fasting participants and centrifuged to isolate the plasma layer. All MDD patients met the DSM 5th edition criteria for a current major depressive episode without psychotic features, diagnosed using the Structured Clinical Interview for the DSM (SCID). Severity was established via a minimum score of 21 on the 21-item Hamilton Depression Rating Scale and a minimum required score on the 7-item Thase Core Endogenomorphic Scale. HCs were required to score less than six on the Hamilton, have no psychotic symptoms, and no current or past psychiatric disorders. **Results:** 166 individuals were initially recruited across three study sites, with 13 excluded prior to analysis, resulting in a sample of 153 participants (72 MDD, 81 HC). Both groups were similar in sex, education, and BMI, with MDD patients being slightly older than HCs (HC Mean=38.9; MDD Mean=46.0, $p < 0.005$). Individually, five chemokines and growth factors demonstrated a high level of correlation across assays ($r > 0.4$), with additional analytes exhibiting smaller associations ($r > 0.2$). Multiple analytes failed to significantly correlate, including several interleukins (ILs). Additionally, when examined via logistic regression, no analyte was significantly associated with case status. Principal component analysis yielded more robust results, with three PCs significantly predicting case status: SomaLogic PC3 (Odds Ratio: 1.65, 95% CI: 1.05, 2.59), PC4 (Odds Ratio: 1.54, 95% CI: 1.01, 2.34), and Luminex PC4 (Odds Ratio: 1.86, 95% CI: 1.22, 2.83) — all $ps < 0.05$. PCs for each assay included all 32 proteins, age, and BMI, and odds were determined using logistic regression. These PCs also inter-correlated — Luminex PC4 with SomaLogic PC3 ($r=0.51$, $p < 0.01$) and with SomaLogic PC4 ($r=0.24$, $p < 0.01$). Of note, multiple ILs contributed to both SomaLogic PCs, but not the Luminex PC. **Conclusion:** While no individual analyte or assay

uniquely predicted case status in our sample, our generated PCs significantly differentiated between HCs and MDD patients, and were moderately correlated with each other. Both assays yield unique differences in data, and future studies employing these methods should be cognizant of this fact.

No. 14

Evaluating Efficacy of Proactive Psychiatric E-Consultation in Primary Care Patients With Moderate to Severe Depression

Poster Presenter: George Schelzel

Co-Authors: Andrew Bodlak, Jenny Xiao, Cyle Johnson, M.D., Shannon Kinnan, M.D.

SUMMARY:

Background: Utilizing chart review of primary care electronic healthcare records (EHR) to identify patients with major depressive disorder (MDD) and track disease management has been shown to improve MDD remission rates.¹⁻⁴ The primary objective of this project was to evaluate if proactive psychiatric e-consultation to primary care providers (PCP) improved patients' depression symptoms. A secondary objective was to assess the likeability of the intervention by PCPs. **Methods:** From 06/03/21 to 4/28/22 systematic EHR review was conducted on 437 adult patients experiencing MDD. Patients with PHQ9 scores >10 who were scheduled with their PCPs and were not already receiving psychiatric specialty care were prioritized for review. 229 patients met this criteria and their MDD management was compared to an evidence based algorithm for MDD treatment created by the integrated psychiatry team. 104 of these patients were not receiving evidence-based care and were selected for the proactive psychiatric e-consult intervention. An electronic health message was sent by the integrated psychiatric team to the PCP with patient-specific recommendations for their upcoming visit. Post-intervention EHR review was done for all 104 patients. PHQ9 data from the initial appointment and 6 months after were recorded for each patient. 49 patients had PHQ9 data from both initial and subsequent appointments and were included for data analysis. On 4/25/22 a survey was sent to PCPs to evaluate the perceived usefulness of psychiatric e-consults and their confidence in

treating psychiatric illnesses. **Results:** The average PHQ9 score of MDD patients who received a psychiatric e-consult was 17.43. To examine PHQ9 scores over time, a mixed effects model was estimated with random intercepts to account for the correlation of repeated observations within a patient. Fixed effect estimate for days was included to estimate the average score changes. On average, PHQ9 scores decreased by 0.16 pts for every 10 days, a statistically significant finding ($p = 0.025$). 13 (26%) patients saw at least a 50% decrease in their PHQ9 score from initial to final PHQ9. 7 (14%) saw a reduction to 5 or less with final PHQ9 score. 22 PCPs completed the provider survey. 7 providers rated the e-consult as “extremely helpful”, 9 chose “somewhat helpful”, 5 chose “neutral” and 1 chose “extremely unhelpful”. Survey results showed 17 PCPs (77%) felt “somewhat confident” in prescribing psychiatric medication. **Conclusion:** Results show a statistically significant decrease in average PHQ9 score between patient’s initial appointment and 6 months post-consultation across a sample of 49 patients who received proactive psychiatric e-consultation. The majority of responding PCPs rated this intervention positively. These results are promising and could encourage further research to determine the benefits of proactive psychiatric e-consultation on a larger scale.

No. 15

Early Mental Health Assessment and Support in Disaster Relief Settings: Integrated Medical and Psychiatric Screening for Afghan Evacuees

Poster Presenter: Rebecca C. Grossman-Kahn, M.D.

Co-Authors: William Carlson, Patricia Shannon

SUMMARY:

Background: Refugees are at high risk of depression, anxiety and other mood disorders following the severe stress of evacuating their home country. Beginning in August 2021, Afghans arrived in the United States during Operation Allies Welcome. This research evaluated a process for rapid mental health assessment and support during the resettlement process. Methods: As part of the resettlement process for Afghan refugees in Minnesota, the initial medical exam included screening for mental health distress. When indicated, a referral to licensed

mental health professionals for further assessment and support was offered. Women were also offered group sessions to learn stress reduction techniques. Semi-structured interviews with an interpreter were conducted with individuals who participated in these interventions. Questions were developed using focused ethnography methods and sought to elicit experiences of the screening questions, understanding and appraisal of the subsequent social support assessment, evaluation of the psychoeducation and referral, and recommendations for improvements. Qualitative data was analyzed using grounded theory and informed by Spradley’s Developmental Research Sequence. Results: 521 individuals were screened through the integrated medical assessments, of which 170 (32.6%) endorsed at least one screener item (feeling worry or sad). Of those who screened positive, 123 completed a mental health assessment and support session, and 71 were provided with referrals to community providers for further psychiatric services or psychotherapy. Six months after the intervention, interviews were conducted with 11 individuals who participated in a social support session (5 men and 6 women). Key findings included: 1) Few participants recalled the psychoeducation around stress responses in traumatic and evacuation settings. 2) Female participants recalled the coping skills taught in group settings, particularly those involving physical movements and found them helpful. 3) Many noted their distress was impacted by lack of access to practical needs such as housing, culturally appropriate food, social norms orientation, and language classes. 4) Hope for the future was cited frequently as the most helpful outcome of social support meetings. Discussion: During the emergency evacuation of Afghans in 2021, the rapid resettlement of families occurred without usual medical screening. In this poster we describe an integrated medical and mental health screening process. The results support the feasibility of early and universal mental health screening, with assessment and support during disaster relief efforts. Skills-based interventions such as stress relief activities were more salient six months later and assessed to be more helpful than individual supportive talk sessions. This research also underscores the importance of providing practical,

culturally-specific resources to support the mental health needs of refugee trauma survivors.

No. 16

Creativity Camp: Parents' Perceptions of the Impact of a Creative Arts Intervention for Adolescents With Depression

Poster Presenter: Rebecca C. Grossman-Kahn, M.D.

Co-Authors: Kathryn Cullen, Yuko Taniguchi

SUMMARY:

Background: Adolescent depression is a serious and growing public health problem in need of novel treatments, particularly interventions designed to promote strengths. Existing treatments typically require patients to work through negative cognitions maintaining their symptoms, but many adolescents resist such a direct approach. Standard treatments have been criticized for their focus on alleviating symptoms rather than promoting flexibility and resilience. Periods of depression are associated with reductions in problem solving and cognitive flexibility. **Methods:** In this study, adolescents with depressive disorders were invited to participate in an 8-day Creativity Camp, in which they completed various creative arts and writing tasks as well as activities that promote flexible thinking, multiple perspective-taking, play and experimentation. The participants' ages ranged from 12 to 17 years old. For each adolescent participant, one parent was invited to complete a semi-structured interview immediately following the completion of camp. Interview questions probed each parent's perception of their child's creativity, flexibility, mood and behavior, and how they understand their child's creative work. The interviews sought to understand whether parents saw changes in their child as a result of the intervention, and the nature and extent of those changes. **Results:** 14 interviews were completed and transcribed. Data were analyzed using Grounded Theory. Codes that reflected common patterns in the transcripts were developed; similar codes were assembled into categories. During the camp, parents noticed changes in the participants related to their physical activity, interpersonal interactions both with family members and peers, engagement in activities, perspective changes, and frequency of maladaptive behaviors.

Parents perceived that the participants had improved mood, more energy and more willingness to try new things. They did not see changes in confidence or joy. Parents frequently expressed surprise in relation to observing their child during camp and noticed increased curiosity about their child. Some parents felt they gained a deeper understanding of their child by seeing their child's artwork. **Discussion:** The intervention described in this poster was designed to help depressed adolescents shift out of rigid negative thinking through engagement in creative activities. In this study, we found that a short, intensive creativity intervention was perceived to impact adolescents' behaviors, as observed by a parent. Parents noticed decreased maladaptive behaviors, increased physical activity, changes in peer and family interactions. Interestingly, many parents gained a new perspective on their child as a result of the camp. The results indicate promise for the role that creativity interventions may play in benefitting adolescents with depression.

No. 17

Duration of Untreated Illness and Clinical Correlates in First-Episode and Drug-Naïve Patients With Major Depressive Disorder

Poster Presenter: Guoshuai Luo

Co-Author: Jie Li

SUMMARY:

Backgrounds: The notion that a prolonged duration of untreated illness (DUI) leads to poorer outcomes has contributed to extensive changes in mental health services worldwide (Galimberti et al., 2020; Nkire et al., 2021). However, most studies on DUI have focused on schizophrenia and related psychosis (Murru & Carpiniello, 2018). This study aimed to assess the possible relationship between DUI and certain clinical correlates in first-episode and drug-naïve patients with major depressive disorder (MDD). **Methods:** This cross-sectional study recruited 1718 first-episode and drug-naïve MDD outpatients. All participants were scored on the Hamilton Depression Rating Scale and Hamilton Anxiety Rating Scale, and thyroid hormones and metabolic parameters were measured. In this study, we divided the DUI into three groups based on the

25% and 75% quartile: < 3 months, 3 - 8 months, and \geq 8 months. **Results:** Out of a total of 1718 participants, 331 (19.3%) received their first treatment within three months and 492 (28.6%) received their first treatment eight months after onset. Participants who were older, with lower education level, and married were less likely to seek a timely treatment compared to the counterparts. In bivariate analyses, participants who had been untreated for longer had higher HAMD scores and were more likely to have severe anxiety symptoms and suicide attempts (all $p < 0.05$). In terms of physical measures, longer DUI was associated with higher rates of elevated TPOAb and TSH levels and hypercholesterolemia, HDL-C hypolipidemia, and LDL-C hyperlipidemia ($P < 0.05$), normal blood pressure ($P < 0.001$). One-month longer untreated duration was associated with 2% to 9% higher odds of being with most of the investigated clinical conditions. For those with the longest DUI, the risk was increased for most of the investigated clinical conditions, with absolute risk differences ranging from 5.19% to 29.48%. **Conclusions:** In conclusion, clinical features in patients with MDD were more severe in the context of prolonged DUI, including severe depressive and anxiety symptoms, especially suicide attempts. Our results further suggested that thyroid hormone disturbances, dyslipidemia, and overweight were associated with prolonged DUI. In addition, untreated duration of up to one month was associated with a 2% to 9% higher probability of suffering from almost all the clinical conditions. Therefore, to reduce DUI, MDD patients need earlier psychiatric interventions, especially for those older, less educated, and married MDD patients. Future research should also investigate the mechanisms underlying the relationship between DUI and clinical features, and control for potential confounders, particularly interrelated correlates variables, mode of presentation and diagnosis, in order to make more definitive inferences about causality.

No. 18

Effects of Vortioxetine on Inflammatory Factors in Perimenopausal Depression

Poster Presenter: Guoshuai Luo

Co-Author: Jie Li

SUMMARY:

Background: Inflammatory factor abnormalities in depression have been extensively studied (Liu et al., 2020). In addition, pharmacological treatment of perimenopausal depression has received increasing attention (Maki et al., 2019). However, the effect of vortioxetine on inflammatory factors in patients with perimenopausal depression remains unexplored (Talmon et al., 2018). In the current study, we examined the therapeutic effects of vortioxetine in patients with perimenopausal depression and the consequences of vortioxetine on interleukin-6 (IL-6), interleukin-8 (IL-8), and high-sensitivity C-reactive protein (hs-CRP). Methods: The 173 patients with perimenopausal depression enrolled were randomly divided into the vortioxetine group (study group, $n=86$) and the paroxetine group (control group, $n=87$). The study group was given oral vortioxetine treatment, and the control group was assigned oral paroxetine treatment for eight weeks. A self-administered general demographic questionnaire was used to collect demographic information about the subjects, including patients' age, years of education, marital status, and suicidal status. A homemade satisfaction questionnaire was used to survey the subjects who participated in this study. The satisfaction level was divided into five levels: very satisfied, satisfied, average, dissatisfied, and very dissatisfied. The treatment efficiency, Hamilton depression scale (HAMD) scores, suicidality, treatment satisfaction, and IL-6, IL-8, and hs-CRP levels before and after treatment in the two groups were analyzed and compared. Results: After treatment, there was no significant difference between the study group and the control group regarding the total effective rate ($P > 0.05$). There was no interaction effect of treatment method and time on the HAMD score ($P > 0.05$), and the significant impact of the treatment method on the HAMD score was not significant ($P > 0.05$). In contrast, the main effect of treatment time on the HAMD score was significant ($P < 0.001$). After treatment, suicidal thoughts were significantly lower in both groups than before treatment ($P < 0.05$). In contrast, suicidal behavior was not significantly different between the two groups compared to before treatment ($P > 0.05$). After treatment, the levels of IL-6, IL-8, and hs-CRP concentrations were significantly lower in both groups compared with

those before treatment ($P < 0.05$); IL-6, IL-8, and hs-CRP were lower in the study group compared with the control group, and the differences were statistically significant ($P < 0.05$). Treatment satisfaction was higher in both groups after treatment, and the difference between them was insignificant ($P > 0.05$). Conclusion: Vortioxetine is highly effective in treating perimenopausal depression and reduces serum inflammatory factor levels. In addition, vortioxetine reduces suicidal thoughts and has a high level of satisfaction.

No. 19

Exploring Cardio-Vascular-Metabolic Link and Neurocognition Impact in Anti-Psychotic-Related Parkinsonism and Tardive Dyskinesia in Schizophrenia

Poster Presenter: Simon S. Chiu, M.D., Ph.D.

Co-Authors: Michel Woodbury-Farina, M.D., Mariwan Husni, M.D., D.P.M., Mujeeb Uddin Shad, M.D., M.S.

SUMMARY:

Background and Objective: Spontaneous extrapyramidal motor signs (s-EPS) were first described in drug-naïve schizophrenic patients. With the emerging role of insulin resistance (IR) in Parkinson disease (PD) and cognitive impairment and Alzheimer Dementia (AD), the issue is raised .whether anti-psychotic-related Parkinsonism (aPD) and tardive dyskinesia(TD) are linked to cognitive deficits in Schizophrenia; 2. whether aPD and TD resemble PD regarding the impact of cardio-vascular-metabolic (CVM) profile and IR on clinical phenotype in domains of EPS and neurocognitive impairment. The subjects were treated with both first generation of antipsychotics (FGA) and Second generation of antipsychotics (SGA) including clozapine. We used Abnormal involuntary Scale (AIMS) for TD measure and Simpson-Augus Scale (SAS) for aPD symptoms and Framingham risk score (FRS) for cardio-vascular risk estimates and HOMA-IR estimate for IR. For cognitive function evaluation, we administered computerized Neurocog@ battery (R Gur U PA USA) to Treatment resistant schizophrenia:TRS subjects. **Results:** Our sample comprised TRS subjects treated with Second Generation Antipsychotics:SGA (n = 44; mean age: 38 yrs , male/female:29/15).. None of the

subjects were diagnosed as Type II diabetes. with BMI categorized in moderate obesity The mean SAS score was 4.2 : 52.3 % (23/44) : SAS score > 3.0 and 34.3 % (15/44) SAS score > 6.0. Person Spearman correlation coefficient was calculated on correlates of aPD and TD. We found that aPD correlated significantly with FRS score ($r=0.6$, $p<0.001$). The baseline SAS scores (mean =4.2 SD=3.9) correlated significantly with log-IR ($r=0.44$, $p=0.007$) and FRS scores ($r=0.60$, $p<0.001$) independent of BMI. SAS correlated inversely with HDL (High density lipoprotein) lipid ($r=0.57$ $p<0.0001$) and directly with LDL (Low density lipoprotein) ($r=0.50$, $p<0.001$) and tryglyceride($r=0.5$, $p<0.05$).Higher SAS scores correlated significantly ($P < 0.05$) with impaired composite neurocognitive index and selected cognitive domains. Baseline AIMS scores correlated significantly with FRS scores ($r=0.36$, $p=0.0001$) and working memory score in the Neurocog@ battery of test ($r=0.32$, $p=0.037$). **Conclusion:** Our finding that both aPD and TD in TRS are related to CVM risks and IR warrant further longitudinal studies to validate the model that metabolic syndrome, aPD, TD and psychosis in schizophrenia and PD converge at the cortico-striatal-hippocampal neural network. Targeting CVM and IR signal via lifestyle changes :diet and exercise and pharmacological approaches may enhance TRS schizophrenia treatment outcome. (RCT trial was supported by Stanley Medical Research Institute MD USA)

No. 20

Review of the Taar1 Agonist Ulotaront: Part I - From Discovery to Clinic

Poster Presenter: Nina Dedic

Co-Authors: Colleen Synan, Kenneth Koblan

SUMMARY:

Background: Trace amine-associated receptors (TAARs) are a family of G-protein-coupled receptors (GPCRs). TAAR1 has emerged as a promising therapeutic target for several neuropsychiatric disorders due to its ability to modulate monoaminergic and glutamatergic neurotransmission. Ulotaront is the first therapeutic agent in this class to complete Phase 2 clinical trials. Here we provide a brief review of the discovery of ulotaront and the preclinical research suggesting its

efficacy in schizophrenia [1], leading to the first clinical trial resulting in FDA designation of ulotaront as a Breakthrough Therapy [2,3]. **Methods:** Candidate compounds were screened using a high-throughput, mouse-behavior phenotyping platform (SmartCube®) in combination with *in vitro* anti-target screening designed to identify compounds exhibiting antipsychotic-like activity in the absence of dopamine (D2) and serotonin (5-HT_{2A}) receptor activity. Ulotaront was identified and subsequently studied in established preclinical models of schizophrenia and tested against several panels of known molecular targets. Follow-up studies, including *in vitro* and *in vivo* electrophysiology recordings, as well as PET imaging, were conducted to elucidate the underlying mechanism of action. **Results:** The high-throughput, mouse-behavior phenotyping methodology identified ulotaront as a promising drug candidate. *In vivo*, ulotaront demonstrated efficacy in preclinical models of schizophrenia, including phencyclidine (PCP)-induced hyperactivity, prepulse inhibition of the acoustic startle response, and subchronic PCP-induced deficits in social interaction. Although not fully elucidated, the mechanism is thought to be largely mediated by agonism at TAAR1 and 5-HT_{1A} receptors. This was further corroborated with whole cell patch clamp recordings, demonstrating inhibition of dorsal raphe nucleus (DRN) and ventral tegmental area (VTA) neuronal firing via 5-HT_{1A} and TAAR1 receptors. Furthermore, ulotaront attenuated the ketamine-induced increase in striatal dopamine synthesis capacity, suggesting that it may modulate presynaptic dopamine dysfunction, hypothesized to contribute to the pathophysiology of schizophrenia. The results of a standard preclinical abuse liability battery suggest that ulotaront is not likely to pose a risk for abuse in humans and may even have potential therapeutic utility as a treatment of substance use disorders. **Conclusions:** Findings from *in vitro* and *in vivo* studies have identified ulotaront as a TAAR1 agonist with robust antipsychotic-like activity in rodent models. Ulotaront's unique target profile led to its designation as a member of the new "-taront" class of TAAR1 agonists, distinct from the approved D2/5-HT_{2A} class of antipsychotics. A companion poster will summarize the broad-spectrum efficacy, tolerability, and safety features of

ulotaront based on initial clinical trials in patients with schizophrenia.

No. 21

Racial/Ethnic Disparities in Long-Acting Injectable Antipsychotic Use in a National Sample of Medicare Beneficiaries With Schizophrenia

Poster Presenter: Charmi Patel

Co-Authors: Carmela Benson, Pengxiang Li, Jalpa Doshi, Sanghyuk Seo, Pharm.D., M.S., Zhi Geng

SUMMARY:

Background: Despite its importance in preventing relapse and hospitalization, adherence to antipsychotic medications (APs) is a challenge for many patients with schizophrenia. Long-acting injectable APs (LAIs) offer a major advantage over traditional once-daily oral APs (OAPs) given the need for less frequent administration.¹ Furthermore, while first-generation (FGA) LAIs are typically administered monthly, newer second-generation (SGA) LAIs offer even longer dosing intervals and/or better side effect profile.² Limited research exists on racial disparities in LAI use and none on Medicare, which insures half of US patients with schizophrenia.³ **Methods:** National 2018-2019 Medicare claims were used to identify all continuously enrolled fee-for-service Medicare Part D beneficiaries with schizophrenia with ³1 claim for an AP in 2019. The two study outcomes were any LAI use among all AP users in 2019 and any SGA LAI use among all LAI users in 2019. Logistic regression models controlling for patient sociodemographic factors, clinical history, and Part D plan policy variables were used to examine the adjusted differences in outcomes by the race/ethnicity categories (White, Black, Hispanic, and Other) available in the data. Analyses were repeated among two subgroups (i) those with a greater need for LAIs (i.e., history of no LAI use or poor AP adherence, schizophrenia-related hospitalization and/or ER visit in 2018) and (ii) those with minimal out-of-pocket costs for LAIs (i.e., full low-income subsidy under Part D). **Results:** The final sample included 210,686 beneficiaries (mean (SD) age: 56.1 (14.1), 60.6% male, 66.4% White). Overall, 22.6% beneficiaries used a LAI; two-thirds (66.4%) of the LAI users received an SGA LAI. Prior to adjustment, large racial/ethnic differences were observed in any

LAI use (19.3% White, 30.7% Black, 26.0% Hispanic, and 25.8% Other) and SGA LAI use (69.2% White, 59.3% Black, 71.0% Hispanic, and 73.3% Other). After adjustment, the differences narrowed substantially in any LAI use (22.2% White, 23.5% Black, 23.0% Hispanic, and 22.9% Other). However, among LAI users, Blacks (60.1%) continued to have a substantially lower rate of SGA LAI use than Whites (69.9%) [adj-OR: 0.63, 95%: 0.60-0.66]. Hispanics (64.9%) also showed a lower rate of SGA LAI use relative to Whites (69.9%) [adj-OR: 0.79, 95%: 0.71-0.87]. Similar findings were observed in both subgroups. **Conclusions:** In this real-world national study of Medicare beneficiaries with schizophrenia, small differences were observed in any LAI use by race/ethnicity. However, among patients using a LAI, Blacks and Hispanics were less likely to use SGA LAIs (and more likely to use FGA LAIs) relative to Whites. Similar disparities existed in subgroups wherein patients had a potential need for LAIs or faced lower cost barriers for accessing LAIs. Future research should examine reasons for these disparities and their impact on clinical and economic outcomes. This study was funded by Janssen.

No. 22

Cognitive Reappraisal Mediates the Relationship Between Neuroticism and Loneliness

Poster Presenter: Nathan Lwo

Co-Author: Changiz Mohiyeddini, Ph.D.

SUMMARY:

Background Loneliness has recently become more widespread in our society because of forced and lengthy periods of isolation from the COVID-19 pandemic. Due to a rise in negative health outcomes linked to increased loneliness – such as anxiety and depression – explaining how loneliness develops differently between individuals is now especially important. On this matter, studies examining the role of personality traits have yielded interesting clues. Using the five-factor model of personality traits, previous studies indicate that neuroticism is associated with and predictive of loneliness. Currently, however, the mechanism through which neuroticism predisposes one to develop loneliness is unknown. Therefore, we aim to investigate emotion regulation – how one responds to emotional

situations and manages consequent feelings – as a potential mediating factor of the link between neuroticism and loneliness among medical students, a risk group for developing loneliness and associated psychopathologies. **Methods** Using a cross-sectional survey-based design, the Big Five Personality Inventory, UCLA Loneliness Questionnaire, and the Emotion Regulation Questionnaire were used to investigate the key hypothesis of the study. These surveys were administered via Qualtrics. Medical students were recruited to participate in the study via email for approximately six months. Our analytic approach consisted of using hierarchical regression analysis. Power analyses based on normative standard deviations for a primary outcome measure (UCLA Loneliness scale), at a significance level of 0.05, a desired power of 0.95, and a small to medium effect size indicated a total sample size between $N = 111$ persons (Cohen's $d = 0.3$) and $N = 79$ persons (Cohen's $d = 0.35$) would be required to establish the function of emotion regulation as a mediator. **Results** The final sample consists of 113 medical students. The results of a mediation analysis using hierarchical regression showed that cognitive reappraisal – a healthy emotion regulation strategy – had a significant negative association with both neuroticism ($\beta = -0.51$, $p < 0.001$) and loneliness ($\beta = -0.29$, $p < 0.001$); in addition, the positive correlation between neuroticism and loneliness was decreased when considering cognitive reappraisal in the mediation analysis versus without ($\beta = 0.38$ versus $\beta = 0.49$). **Conclusions** Cognitive reappraisal as a healthy emotion regulation skill is associated with a lower level of loneliness, thus suggesting changing emotion regulation behavior might have a beneficial impact in reducing feelings of loneliness. Therefore, it is plausible to suggest that psychological interventions against loneliness and related issues (e.g., depression, anxiety) should incorporate techniques that enhance cognitive reappraisal. Thus, the results of our study offer an economic, non-invasive, and feasible approach that suggests developing positive emotion regulation skills may shield individuals from loneliness.

No. 23

Psychosis as a Manifestation of Amyotrophic Lateral Sclerosis: A Case Report

Poster Presenter: Ramy Elsayah, M.D.

Co-Author: Ashaki Martin

SUMMARY:

Mr. G is a 55-year-old Caucasian male with a past psychiatric history of anxiety and alcohol use disorder, in remission, and a past medical history of Amyotrophic Lateral Sclerosis (ALS) who presented to the psychiatric crisis unit via police with symptoms of impairing paranoid delusions and disorganized behavior for the span of a week. The patient went to the police station and expressed persecutory and incoherent delusions with an elaborate map he had drawn, which led to police bringing the patient to the hospital for evaluation. In the crisis unit, he endorsed ongoing feelings of paranoia, stating that people were poisoning his food and acting like he had eaten nails from the sandwich he received at the hospital. The patient was admitted to the inpatient psychiatric unit where he received antipsychotic treatment, eventually reducing the delusions and disorganized behavior. Amyotrophic Lateral Sclerosis is mostly known to be restricted to cognitive dysfunction and depressive disorders in addition to motor decompensation¹. Although there have been reports linking schizophrenia as a predisposing factor to ALS^{2,3}, there are few cases in the literature regarding psychosis as a prominent consequence of this disease. We discuss a unique case of a patient who developed paranoid delusions and disorganized behavior during the course of his ALS. We detail the treatment, outcomes, and link between ALS and psychiatric syndromes.

No. 24

Medical Comorbidities in Patients With Schizophrenia and Bipolar Disorder Are Higher but Can Differ: Results From Genomic Psychiatric Cohort (GPC)

Poster Presenter: Mohammed S. Farooqui

Co-Author: Michele Pato, M.D.

SUMMARY:

Background: Patients with serious mental illness (SMI) are more likely to smoke and use antipsychotics, which may increase the risk for conditions such as diabetes and hypertension. In this study, we sought to compare the prevalence of common medical conditions in patients with

schizophrenia and bipolar disorder with each other and the general population. **Methods:** Participants aged 30-75 came from the Genomic Psychiatric Cohort (GPC), a large, racially diverse sample of patients, and were categorized into three groups: schizophrenia and schizoaffective disorder-depressed type (SZ; n=8,188, Mage=47.6 ± 9.75, 33.60% female), bipolar with and without psychosis and schizoaffective disorder-bipolar type (BD; n=5,577 Mage=47.1 ± 9.6, 50.80% female), and controls (CON; n=10,850, Mage=48.1 ± 11.1, 54.70% female). Both age and self-reported sex were included as covariates and controlled for in our models. At screening, participants were asked if they had ever been diagnosed with heart problems (e.g., coronary artery disease), hypertension, high blood sugar, high cholesterol, or cancer. We used general linear models to examine the effect of case (SZ or BD) vs control (CON) status and BD vs SZ status on the health outcomes of interest. **Results:** For the SZ cases, the odds of having heart problems (OR: 2.38, CI: 2.14-2.65), hypertension (OR: 1.94, CI: 1.81-2.07), high blood sugar (OR: 2.32, CI: 2.13-2.52), high cholesterol (OR: 2.17, CI: 2.03-2.33), and cancer (OR: 1.61, CI: 1.40-1.85) were significantly (p<0.001) higher than the CON sample. For the BD cases, the odds of having heart problems (OR: 3.14, CI: 2.81-3.51), hypertension (OR: 2.08, CI: 1.94-2.24), high blood sugar (OR: 2.15, CI: 1.95-2.36), high cholesterol (OR: 2.36, CI: 2.18-2.55), and cancer (OR: 2.27, CI: 1.98-2.61) were significantly (p<0.001) higher than the CON sample. When comparing BD vs SZ, the odds of having heart problems (OR: 1.27, CI: 1.15-1.40) and cancer (OR: 1.40, CI: 1.22-1.61) were significantly (p<0.001) higher for the BD group when compared to the SZ group. But there was not a significant difference between BD and SZ cases for hypertension (OR: 1.08, p= 0.0436, CI: 1.00-1.16), high blood sugar (OR: 0.92, p= 0.0632, CI: 0.84-1.00) and high cholesterol (OR: 1.06, p= 0.125, CI: 0.98-1.14). **Conclusion:** Our findings support previous reports of elevated medical comorbidities in patients with SMI when compared with controls. In addition, this is one of the few recent studies that reports significant differences between SZ and BD with regards to heart problems and cancer. The effects of sex and variance in alcohol use and tobacco use will be reviewed to account for some of these differences in the SZ and BD samples.

No. 25

Comorbid Psychiatric Disorders Are Associated With Lesser Use of Transcatheter Aortic Valve Replacement in Aortic Stenosis Patients

Poster Presenter: *Alsu Zagorulko*

Co-Authors: *Ahmad Raja, Pavel Sinyagovskiy*

SUMMARY:

Background: Transcatheter aortic valve replacement (TAVR) is a gold standard interventional treatment for severe aortic stenosis in elderly patients. Our goal was to identify if comorbid psychiatric diseases in patients with aortic stenosis are associated with different chances of receiving TAVR. **Methods:** Using National Inpatient Sample, we retrospectively identified patients with aortic stenosis who had been admitted between 2017 and 2019. Clinical classification software (CCS) diagnostic categories were used to divide patients with psychiatric comorbidities into the five major diagnostic groups: anxiety and fear related disorders, bipolar and related disorders, depressive disorders, schizophrenia spectrum and other psychotic disorders, and substance use disorder. Using multivariable logistic regression, we evaluated the association between TAVR and psychiatric diseases, while controlling for individual and hospital-related factors. **Results:** In the primary cohort of 1,549,785 patients with aortic stenosis, we identified 407,160 (26%) with psychiatric diseases. TAVR was used in 25,660 (18%) of those with, and in 116,440 of those without psychiatric disorders (82%, $p < 0.001$). Compared to patients who didn't have any psychiatric comorbidities, having any number of them was associated with a lesser chance of getting TAVR: one psychiatric comorbidity (aOR=0.76, 95%CI: 0.72-0.81, $p < 0.001$), two psychiatric comorbidities (aOR=0.80, 95%CI: 0.73, 0.89, $p < 0.001$), and having two plus comorbid mental disorders (aOR=0.46, 95%CI: 0.33-0.64, $p < 0.001$). Comparing to patients without any mental disorders, patients from any of psychiatric groups, defined by CCS, had lower chance of getting TAVR: depressive disorders (aOR=0.79, 95%CI: 0.75-0.84, $p < 0.001$), anxiety and fear related disorders (aOR=0.79, 95%CI: 0.74-0.84, $p < 0.001$), bipolar and related disorders (0.74, 95%CI: 0.59-0.93, $p = 0.011$), substance use disorder (aOR=0.73, 95%CI:

0.68-0.79, $p < 0.001$), and schizophrenia spectrum and other psychotic disorders (aOR=0.61, 95%CI: 0.45-0.81, $p < 0.001$). There was no statistically significant interaction between race or gender and the number of psychiatric comorbidities in the chances of getting TAVR ($p > 0.05$). **Conclusions:** Patients with aortic stenosis and concurrent psychiatric disease have lower odds of receiving TAVR. The effect is especially pronounced in patients with multiple psychiatric conditions, schizophrenia spectrum and other psychotic disorders, and substance use disorder.

No. 26

Applying a Process-Improvement Framework to Racial Disparities in Emergency Department Psychiatry: Program Description and Preliminary Data

Poster Presenter: *Jonathan P. Zebrowski, M.D.*

Co-Authors: *Nicole Benson, M.D., Stephanie Pinder-Amaker, Ph.D.*

SUMMARY:

Racial disparities in clinical care have been described across many psychiatric treatment settings. Patients presenting to emergency departments (EDs) with psychiatric complaints may encounter multiple structural factors that can lead to differential outcomes by race, separate from implicit/explicit clinician bias or barriers based primarily on insurance status. We describe a multi-phase project applying process-improvement approaches to identify and address structural contributors to race-based differences in ED psychiatric dispositions, and share lessons learned from the process. - **Phase 1:** We first assessed baseline differences in disposition outcomes through a retrospective review of all adult psychiatry visits July 2018-June 2020 (N = 13,723) in a high-volume academic ED. Patient characteristics, including self-reported race, ED disposition, and admitting facility, if applicable, were obtained. Compared to White patients, Black patients had a lower admission rate and, if admitted, had a higher likelihood of admission to a for-profit or non-teaching psychiatric facility than to an academic medical center (AMC). Asian patients did not differ by admission rate but had a higher rate of admission to an AMC. Hispanic and Multiracial patients did not differ statistically from White patients. These findings

persisted when adjusted for age, gender, payor type, involuntary vs. voluntary status, restraint in ED, and primary diagnosis category. - **Phase 2:** We then characterized potential process factors contributing to the baseline disparity. A detailed process map of the ED psychiatry evaluation and admission referral workflows was created. A list of 15 structural factors that could contribute to racial disparities was generated, and a check-sheet methodology was used to observe and document presence of these factors over 13 days. Many of the hypothesized factors were routinely present in our observations. - **Phase 3:** Next, we iteratively developed a data collection process to routinely code these additional factors as patients were being seen and referred for admission. This is now consistently coded for over 80% of emergency psychiatry patients. Interim analysis from April – May 2022 showed that violent behavior in the ED and history of prior violence were the most significantly different factors, coded more frequently for Black and Hispanic patients compared to White patients. Furthermore, of patients with documented current or historical violence, White patients were psychiatrically hospitalized more frequently than Black or Hispanic patients. **Lessons Learned and Ongoing work:** We describe lessons learned from using iterative process-improvement methodology and describe next steps including creation of structured assessment criteria for current and historical violent behavior to decrease subjectivity. Ongoing data collection will track the effectiveness of these changes, and further interventions will be developed and tested as the project continues.

No. 27

Childhood Trauma Severity as a Key Predictor of Impulsive Behavior in Bipolar Disorder

Poster Presenter: Mirona Dobri

Co-Authors: Natasha Topolski, Jair Soares, M.D.

SUMMARY:

Background: Bipolar disorder is a chronic illness characterized by intermittent episodes of depression, mania and hypomania. Impulsivity is a key aspect of behavior that is prominent in bipolar disorder, has been found across various phases of the illness and can be associated with negative outcomes such as increased hospitalizations and suicide attempts.

Additionally, bipolar disorder is the psychiatric diagnosis most often associated with the presence of childhood trauma. The aim of this analysis was to evaluate the additional impact of childhood trauma severity on the degree of impulsive behavior in patients with bipolar disorder. Methods: The study was conducted in adult patients with bipolar disorder and healthy controls. All participants completed the Barratt Impulsiveness Scale (BIS-11) and the Early Trauma Inventory (ETI). Impulsivity was assessed using the Barratt Impulsiveness Scale (BIS-11), a self-report instrument designed to measure impulsivity on three different domains: motor impulsivity, defined as acting without thinking; attentional impulsivity, defined as making quick decisions, and non-planning impulsivity, defined as a lack of concern for the future. Childhood trauma was assessed using the Early Trauma Inventory Short Form (ETI-SR-SF), a self-report instrument for retrospectively assessing domains of childhood trauma including general, physical, emotional, sexual trauma. A hierarchical multiple regression was run to determine if the addition of childhood trauma severity is predictive of impulsivity level. Age and gender were included in the model first, followed by the presence of bipolar disorder diagnosis, current mood state and childhood trauma score. Results: This analysis included 171 subjects, which consisted of 110 patients with bipolar disorder (mean age=36.0, male 34.5%) and 61 healthy controls (mean age=35.6, male 37.7%). At the time of the study, 34.3% patients were euthymic, 44.8% were depressed, 3.8% manic, 9.5% hypomanic, 6.7% mixed and 1% undetermined, while all controls were euthymic. Patients with bipolar disorder displayed significantly higher BIS-11 scores compared with controls ($F=1.753$, $p<0.001$), as well as higher ETI-SR-SF scores ($F=29.635$, $p<0.001$). The model of gender, age, presence of bipolar disorder diagnosis and current mood state was statistically significant, $R^2=.206$, $F(5,148)=2.486$, $p=0.034$; adjusted $R^2=.163$. The addition of childhood trauma to the prediction of impulsivity level led to a significant increase in R^2 of $R^2=.235$, $F(1,147)=5.622$, $p=0.019$; adjusted $R^2=.188$. Conclusion: In adults with bipolar disorder, increased severity of childhood trauma predicts an increase in impulsive behavior. Future research should include assessments of the presence of childhood trauma in this patient population and

focus on developing personalized interventions that target these effects.

No. 28

Study of the Mechanisms of Cell Survival and Cell Death in Schizophrenia and Bipolar Disorder to Find a Potential Biomarker

Poster Presenter: Maria Paz Garcia-Portilla, M.D., Ph.D.

Lead Author: Claudia Garcia-Gonzalez

Co-Authors: Eduardo Antuña, Iván Menéndez Valle, Cristina Cachán Vega

SUMMARY:

Background: Psychological stress has related to oxidative stress, and specifically has been described in schizophrenia (SCH) and bipolar disorder (BD). High levels of oxidative stress can trigger survival mechanisms such as autophagy, and if these mechanisms are not sufficiently effective, apoptosis (cell death) is activated. This cellular response is different depending on the pathology, and the characterization of autophagy and apoptosis in SCH and BD may open a way to find potential biomarkers to discriminate both disorders at early stages. **Methods:** The study carried out 50 subjects: 14 diagnosed with BD, 22 diagnosed with SCH and 14 not previously diagnosed with severe mental disorders. Characterization of autophagy and apoptosis was conducted in peripheral blood mononuclear cell (PBMCs). Autophagy was evaluated by Western Blot immunoassays of the main macroautophagy markers Beclin-1 and LC3 ratio, autophagosome accumulation marker p62 and chaperone-mediated autophagy marker LAMP2A. Apoptosis was assessed by measuring of Caspases 3 and 7 activities, the main effectors of apoptosis in the cell. **Results:** In SCH significant maximum levels of autophagy marker Beclin-1 ($p < 0,001$), LC3-II/LC3-I ($p < 0,01$), p62 ($p < 0,001$) and LAMP2A ($p < 0,01$) were observed. The BD group showed lower levels than SCH and these were similar to results of control group. Caspases 3 and 7 activities showed again the maximum levels in SCH group ($p < 0,001$), however we detected no difference between BD group and control group. **Conclusions:** This work reveals that in PBMCs of patients with SCH, large number of accumulated damaged proteins are not

compensated by the increase in autophagosomal activity, and this causes an increase in apoptotic activity. However, this alteration has not been observed in patients with BD, so it may be a preliminary differential biomarker.

No. 29

The Impact of Exclusionary Immigration Policies Climate on the Mental Health of Undocumented Immigrants and People of Color in the US

Poster Presenter: Crystal Obi-Azuike

Co-Author: Hesham Hamoda

SUMMARY:

Introduction: The poor living conditions combined with long and stressful work schedules, lack of health benefits, fear of deportation, discrimination, and being a person of ethnic minority are key factors in the poor mental health outcomes observed among undocumented immigrants. Exclusionary immigration policies (EIP) exacerbate undocumented immigrants' fears of being arrested and deported, which is a known factor associated with heightened depression and PTSD among this group. While undocumented immigrants are a major target of EIP, because citizenship and undocumented are "concealable status", people of color, regardless of citizenship status, might be exposed to the same racialized practices that target undocumented immigrants. **Objectives and Methods:** In this poster, we provide a snapshot of the mental health outcomes associated with EIP on undocumented immigrants, including minors and people of color, using peer-reviewed, relevant articles. **Results:** Compared to US-born white adults, the implementation of ICE provisions was associated with an increased proportion and severity of psychological distress among Latino families with at least one undocumented member by 14.7%, and 15%, respectively. Undocumented children's constant fears of being arrested or deported, difficulty in attaining education, or imprisonment of undocumented family members were associated with significant childhood trauma, PTSD, anxiety, and depression. The forced separation of children after a traumatic event, such as at the US borders, was associated with a higher score on the Avoidant Attachment scale (a predictor of adulthood PTSD),

heightened distress, dysthymia, and anxiety. In states with EIP, Latinos have a higher likelihood of experiencing days with poor mental health compared to non-Latinos and compared to Latinos who reside in more inclusive states regardless of their citizenship status. Trump's exclusionary policies have been attributed to heightened psychological distress among people of color, and this distress was higher among people of color who identified with an additional marginalized identity. **Conclusions and recommendations:** Exclusionary immigration policies are associated with deleterious mental health consequences among undocumented immigrants, including minors and people of color. This work has important implications for educating clinical providers on the mental health needs of undocumented immigrants and people of color during a heightened immigration climate. We encourage providers to tailor their therapeutic approaches to meet the unique need of this population, and we call for researchers to use an intersectional approach and longitudinal studies to better understand the impact of exclusionary immigration policies on the targeted groups and people who might be perceived as immigrants. Policymakers should consider the negative externalities of exclusionary immigration policies and how inclusive reforms will likely benefit society at large.

No. 30

Correlations of Dietary Sugar Intake With Depression Levels in Patients With Multiple Chronic Illnesses and Low Health Literacy

Poster Presenter: Michelle Lanspa, D.O., M.B.A., M.S.

SUMMARY:

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<p>**Background & Objective:** Given the mounting evidence on the effectiveness of nutritional interventions in the prevention and management of chronic diseases and their common comorbidities, including depression, analysis of dietary intake within the context of chronic disease management is warranted. Added sugars have been the focus of several meta-analyses, which have found a nonlinear dose-response relationship between consumption of

sugar-sweetened beverages and depression. Added sugars in the diet increase production of inflammatory cytokines IL-6 and TNF- α , which ultimately decrease levels of brain neurotrophic factor (BDNF). Added sugars also alter the gut microbiome, which affects neurotransmitter conversion. Patients with low health literacy have been documented to have an overall lower quality of dietary intake and an increased chronic disease burden. This analysis sought to evaluate dietary patterns associated with comorbid depression in low-income patients with multiple chronic illnesses and low health literacy enrolled in a chronic disease self-management program. **Methods:** Data was collected from patients age 40 years or older, receiving treatment for at least one of the conditions in the Functional Comorbidity Index, with at least one medication, and having health literacy at or below the 8th-grade level from project sites in Florida and Georgia on dietary frequency recalls and depression scores at baseline and at a 3-month follow-up appointment after the completion of a computer-based chronic disease self-management training. The Center for Epidemiological Studies Depression scale (CESD) was used to score depression levels. Data from the questionnaires were transferred to SPSS statistical software v28.0 for final analysis. Outcomes were evaluated with tests of statistical significance. **Results:** A total of 334 individuals completed the study with a nearly even split between male and female participants. Over 70% of participants reported an annual income less than \$19,000 USD. At baseline, the mean CESD scale depression score of participants was 23.72 (SD 9.22). Depression levels (CESD scores) were found to be positively correlated both with predicted intake of total added sugars (teaspoon equivalents) per day and with predicted intake of added sugars from sugar-sweetened beverages (teaspoon equivalents) per day at baseline, and at the three-month follow-up appointment ($p=0.008$, $r = 0.173$, $d=0.35$; $p=0.027$, $r = 0.145$, $d=0.29$). **Conclusions:** There were statistically significant correlations, even after adjusting for age, gender, race, and years of education, with sugar consumption and higher scores of depression. Results support current literature on the inflammatory nature of added sugars in the diet, which contribute to

symptomatology including depression, perceived stress, and fatigue. </p>

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No. 31

Seasonal Variation in 5-HT_{1B} Receptor Availability in Healthy Individuals

Poster Presenter: Waleed Ibrahim, M.D.

Co-Authors: Takuya Toyonaga, Yanghong Yang, M.D., Marc Potenza, M.D., Ph.D., David Matuskey, M.D.

SUMMARY:

Authors: Waleed Ibrahim, Takuya Toyonaga, Yanghong Yang, Marc N. Potenza, David Matuskey*

Objective: To explore the significance of seasonal variation of 5-HT (serotonin) in healthy individuals using 5-HT_{1B} PET imaging of the brain. **Background:** A decrease in 5-HT levels has been implicated as a potential cause of Seasonal Affective Disorder (SAD)[1]. Here we used *in vivo* positron emission tomography (PET) imaging with the [¹¹C]CE142 (aka – [¹¹C] P943) tracer, that has increased sensitivity to 5-HT[2], to assess seasonal variations in relevant brain regions. **Methods:** Sixty-six individuals (mean age (SD) = 30.1 (±9) years; males = 43, females = 23) participated in PET scans. PET imaging was performed with the selective 5-HT_{1B} antagonist radiotracer ¹¹C-P943. All scanning was performed on a high-resolution research tomograph (HRRT). *BP_{ND}* (binding potential non-displacement) values were calculated as the primary outcome measure for regions of interest (ROIs) including the raphe, anterior cingulate cortex, frontal lobe, putamen and caudate. The results were compared by applying 2-tailed t-tests to calculate group differences between months with high sunlight (April – September) vs. low sunlight (October – March). Correlations were also determined using the mean hours of sunlight exposure in New Haven, CT for the month (www.timeanddate.com – servers operated by the National Institute of Standards and Technology) and the mean *BP_{ND}* values of the ROIs for each month using Graph-pad PRISM software 9.4.1. **Results:** We obtained a statistically significant, higher *BP_{ND}* in the raphe with high sunlight vs. low sunlight months (i.e., 0.532, 0.435; (p = 0.02)). However, there were no significant differences in the anterior cingulate

cortex (0.986, 0.989; (p = 0.94)), frontal cortex (1.066, 1.053; (p = 0.74)), caudate (0.595, 0.623; (p=0.51)) or putamen (1.035, 1.101; (p= 0.20)). The raphe also showed a significant negative correlation $r = -0.6984$ (p = 0.01) with the amount of sunlight exposure, whereas all other regions were non-significant. **Conclusion:** This is the first study to investigate seasonal differences in human brain 5-HT_{1B} receptor availability. These preliminary findings reveal statistically significant results in the serotonin-rich raphe with amount of sunlight exposure and seasonal variation in healthy individuals. The results suggest a role of the raphe in regulating circadian rhythms, adding to data that the raphe may modify serotonergic responses in healthy [3] and possibly seasonality-affected individuals [4]. Further, as 5-HT_{1B} receptors have been implicated in major depressive disorder, the findings suggest a potential mechanistic and therapeutic link to SAD [5]. Further studies involving SAD and 5-HT_{1B} are warranted to investigate these possibilities.

No. 32

Cytokine Dysregulation in Cerebrospinal Fluid and Blood Samples in Schizophrenia: Biofluid Correlations and Sex Effects

Poster Presenter: Laura Daniela Jimenez

Lead Author: Juan Andres Gallego, M.D., M.S.

SUMMARY:

Background: Most of the human studies in schizophrenia have investigated cytokine levels in peripheral blood but relatively few have done so in cerebrospinal fluid, given its intimate contact with the brain is a better biofluid to study. Additionally, few studies have examined the impact of sex on CSF cytokine levels. **Methods:** Thirty-three patients with schizophrenia-spectrum disorders and 23 healthy volunteers underwent a lumbar puncture. CSF cytokine (IL-1 β , IL-2, IL-4, IL-6, IL-8, TNF α) concentrations were determined in duplicate by enzyme-linked immunosorbent assay (ELISA) and a high-sensitivity MilliplexTM Multiplex kit. Raw cytokine values were square root-transformed. Comparisons in cytokine levels between groups were performed using either t-test for normally distributed variables. Multivariable regression analyses were conducted to determine the

association between cytokines and subject type (patient vs. control) while adjusting for sex, age and BMI. Correlation analyses were conducted for individual cytokines between CSF and plasma levels. Stratified analysis by sex was conducted to determine the effects of sex on cytokine levels and their association with diagnosis. Result: Thirty SSD patients and 23 healthy volunteers were included in the analysis. Thirty-seven out of 53 subjects were male (69.8%). Expectedly, patients had higher body mass index values (mean: 30.0, SD=8.1 vs. mean: 26.3, SD=2.9, $p=0.04$) and lower MCCB composite scores (mean=25.1, SD=16.1 vs. mean: 44.5, SD=11.3, $p<0.0001$) compared to healthy volunteers. In a series of multivariable linear regression analyses using individual cytokines as the dependent outcome, a schizophrenia spectrum disorder (SSD) diagnosis was associated with CSF IL4 levels ($p=0.039$) and CSF TNF α levels ($p=0.001$) after adjusting by sex, age and BMI. In stratified analysis by sex, we observed that TNF α was statistically significantly associated with SSD in males (N=32, OR:7.03, 95%CI: 1.46-33.89, $p=0.015$) but not in females (N=14, OR=4.82, 95%CI: 0=4.82, 95%CI: 056-41.44, $p=0.15$) in the presence of age and BMI. In plasma analysis, there were no statistically significant differences in cytokine levels between patients and HV, neither in bivariate nor in the regression analysis after adjusting for sex, age, and BMI. Correlation analysis did not show any significant correlations in any of the cytokines between CSF and blood. Conclusion: TNF α and IL-4 were significantly associated with schizophrenia spectrum disorder diagnoses compared to healthy volunteers when measured in CSF but not in peripheral blood. TNF α was significantly associated with an SSD diagnosis in males but not in females, which may be partly due to the protection of estradiol in schizophrenia. CSF cytokine levels did not correlate with plasma cytokines levels. Therefore, CSF cytokine levels, compared to blood cytokine levels, may be a better marker of the immunologic abnormalities in the CNS of patients with schizophrenia.

No. 33

Lamina-Specific Association Between Reduced mRNA Levels of Trk-B and GAD-67 in the Orbitofrontal Cortex in Bipolar Disorder

Poster Presenter: Jaechang Lee

Lead Author: Joo Eon Park

Co-Author: Yoon Young Nam

SUMMARY:

Background Lamina-specific alterations of inhibitory circuitries have been considered the crucial pathogenesis of perceptual, cognitive and behavioral symptoms presented in schizophrenia and mood disorders. Especially, with emerging evidences indicating the close lamina-specific relationship between synaptic defects and γ -Aminobutyric acid(GABA)-related gene dysfunctions, it has been suggested the mRNA dysregulations of Tyrosine kinase B(TrkB) and Glutamate decarboxylase 67(GAD67) could particularly be implicated in middle and deep layers of neocortex of patients with major psychiatric disorders. Orbitofrontal cortex(OFC), as part of 6-layered neocortex, is thought to control socially and emotionally refined behaviors, giving inquiries of whether defects of these mRNA levels in OFC would also be involved as lamina-specific patterns in individuals with schizophrenia and mood disorders. **METHODS** We examined mRNA levels of BDNF, TrkB and GAD67 in each OFC layer I through VI. We analyzed data from postmortem brain tissue of the Stanley Neuropathology Consortium Integrative Database(SNCID). SNCID consists of 15 subjects in each of four groups(schizophrenia, bipolar disorder, major depression without psychotic features, and unaffected controls). All groups were matched for age, sex, race, brain pH and post-mortem interval. **RESULTS** of covariance comparing the mRNA levels among 4 groups revealed no significant alteration in BDNF mRNA in all layers. We found TrkB mRNA levels to be significantly reduced in layer VI in both groups with schizophrenia(25.8%) and bipolar disorder(35.7%) compared with controls. GAD67 mRNA levels were also significantly reduced in layer III and IV in patients with schizophrenia(23.4% and 22.7%, respectively) and bipolar disorder(31.2% and 24.9%, respectively) compared with controls. Individuals with major depression showed only trends toward decreased mRNA levels of GAD67 in layer III and IV and of TrkB in layer VI compared with controls. TrkB mRNA levels in layer VI were significantly correlated with GAD67 mRNA levels in layer III($p=0.581$, $p=0.037$) and IV($p=0.857$, $p<0.001$) in subjects with bipolar disorder, but not in those with schizophrenia. When

analyzed with partial correlation controlling the effects of pH and PMI, significance of correlation remained only between GAD67 mRNA in layer IV and TrkB mRNA in layer VI in individuals with bipolar disorder ($p=0.768$, $p=0.006$). **CONCLUSION** The resulting lamina-specific decreases in inhibitory tone across layers of OFC may contribute to the unrestrained irritability and violent behaviors in common shared by both patients with schizophrenia and bipolar disorder. Nonetheless, our findings indicate the obvious correlations between lamina-specifically altered TrkB and GAD67 mRNA levels in OFC might be a candidate for endophenotype of bipolar disorder.

No. 34

Mindfulness and the Default Mode

Poster Presenter: Reham Fahmy, M.D., Ph.D., M.Sc.

SUMMARY:

Mindfulness-based programs have shown promising clinical effects in the treatment of substance-use disorders (SUD). While several studies linked mindfulness to decreased default mode network (DMN) connectivity in meditators, only a few studies investigated its effects in patients with SUD. This study aimed to detect changes in DMN connectivity in opiate dependent patients receiving mindfulness based therapy (MBT) during their first month of treatment. Data from 32 patients that were assigned to MBT or treatment as usual (TAU) groups was investigated using resting-state functional MRI at 1.5 T before and after four weeks of treatment. Independent Component Analysis was used to investigate distinct (anterior vs. posterior) DMN subsystems. Connectivity changes after treatment were related to measures of impulsivity, distress tolerance and mindfulness. Increased mindfulness scores after treatment were found in patients receiving MBT compared to TAU. Within the anterior DMN, decreased right inferior frontal cortical connectivity was detected in patients who received MBT compared to TAU. In addition, within the MBT-group decreased right superior frontal cortex connectivity was detected after treatment. Inferior frontal cortex function was significantly associated with mindfulness measures. The data suggest that MBT can be useful during abstinence from opiates. In

opiate-dependent patients distinct functional connectivity changes within the DMN are associated with MBT.

No. 35

Higher White Matter Microstructure Could Be Associated With Higher Cortical Activity in Connecting Regions

Poster Presenter: Anthony Gagnon

Co-Authors: Marie A. Brunet, Maxime Descoteaux, Larissa Takser

SUMMARY:

Background. Inhibition capabilities are at the core of social behaviour and many cognitive constructs such as attention and impulsivity. Previous work showed reduced axonal density and microstructural complexity on specific white matter (WM) connections in children with higher impulsive behaviour (Gagnon et al., 2022). These WM alterations raised questions regarding the activity of the connecting cortical regions. **Methods.** 171 children aged 9-13 years old underwent an MRI exam as part of the GESTE cohort. Diffusion MRI was used to assess WM microstructure as described in previous work (Gagnon et al., 2022). Resting-state functional MRI was processed using the CONN Connectivity Toolbox combined with the Brainnetome atlas to obtain functional connectivity (FC) metrics between brain parcellations. In python, a multivariate linear regression between WM and FC was performed using the sex, age, handedness, and IQ covariates. **Results.** Higher microstructural complexity was associated with higher cortical functional connectivity in the connection between the right medial area 6 and right posterior parietal thalamus and between the right dorsal caudate nucleus and right lateral prefrontal thalamus ($\beta = 0.018$, $p = 0.037$, $R^2 = 0.05$; $\beta = 0.058$, $p = 0.0003$, $R^2 = 0.11$, respectively). All eight remaining connections did not reach the significance threshold. When incorporating resting-state functional connectivity in regression models between WM microstructure and attention/impulsivity, no clear pattern of model improvement was found, although some showed an improved coefficient of determination (R^2) indicating a higher explained variance. The analysis is still ongoing. **Conclusion.** We identified a relationship

between higher WM microstructure and higher cortical functional connectivity in two connections using multimodal imaging. Since resting-state fMRI is mostly evaluating the default mode network, better results could be obtained with task-based fMRI acquisitions.

No. 36

Walking on a Maladaptive Daydream: Predictors and Correlates of Ethereal Paracosms

Poster Presenter: Lauren Moment

SUMMARY:

Maladaptive daydreaming (MD) is an under-researched psychological condition affecting people in all countries and ages. Researchers describe the phenomenon as an escape into a paracosm, an inner fantasy world created by dreamers with elaborate plots, characters, and personalities that can become so immersive that the sufferer confuses fantasy with reality, spends hours, or even days, in a dissociative state, and neglects relationships, academics, and occupational tasks. These paracosms can be anxiety-reducing or dark depending on the patient's mood and circumstances. Although the characters and plots can benefit the patient's mood, hours spent daydreaming can be distressing. In addition, MD can be borne of events in one's real life that have been stressful or traumatic. The researchers studied MD as a predicate of adverse life experiences (ACEs) in childhood and adulthood. ACEs can include abuse, neglect, an incarcerated parent, or other incidents. Negative experiences in adulthood are anxiety and depression. Personality traits such as extraversion, agreeableness, openness, conscientiousness, and neuroticism were also measured. The researchers utilized the Maladaptive Daydreaming Scale (MDS-16); The Brief Coping Orientation For Problem Experiences (COPE); The Patient Health Questionnaire-4 (PHQ-4); Adverse Childhood Experiences (ACES); and the Big Five Index (BFI). I posted the surveys on Facebook, Reddit, Twitter, and fellow students in classes at the University of Colorado - Denver. After 286 responses were received, these data were analyzed via regression and correlation analyses in the Statistical Program for the Social Sciences (SPSS). There is a strong, positive relationship between adverse childhood experiences,

depression, anxiety, neuroticism, and maladaptive daydreaming. To ascertain themes of daydreams, the researcher interviewed four self-identified maladaptive daydreamers. Themes included a grandiose sense of self, retribution towards real-life antagonists, and aspirations for one's future and current environment. Future goals will focus on sleep and mindfulness.

No. 37

Imaging of Non-Accidental Trauma: What the Psychiatrist Should Know

Poster Presenter: Shveta Kansal, M.D.

Co-Authors: Tazeen Azfar, M.D., Neil Anand

SUMMARY:

Objectives: Nonaccidental trauma is an important social and medical problem which represents a major cause of morbidity and mortality among children. We aim to educate psychiatrists and trainees regarding the imaging findings of non-accidental trauma to ensure no diagnosis goes missed. We also aim to educate psychiatrists and trainees in differentiating between accidental and non-accidental trauma in the pediatric population. **Methods:** Non-accidental trauma findings (i.e. "metaphyseal corner fracture", "subdural hematoma", etc.) were entered into a search of all radiology reports at our institution. Filters were placed to only include pediatric patients. All applicable radiology reports were read and pertinent pathological cases were compiled for use in this exhibit. **Results:** We aim to educate psychiatrists and clinicians regarding the normal anatomy, clinical presentation, and imaging findings of non-accidental trauma. Knowledge of the different anatomic structures, as well their associated pathological imaging findings, can help psychiatrists arrive at a diagnosis which may not be perceived without this knowledge. Topics for discussion and review of original images include, but are not limited to:

Normal anatomy
Clinical Presentation
Imaging findings

Specific topics (with original images) include, but are not limited to:

Metaphyseal corner fractures Skull fractures Posterior rib fractures Subdural hematomas Retinal hemorrhages Shaken baby syndrome Multiple fractures in pediatric patients Injury in non-ambulatory/totally dependent child Injury and history inconsistency Delay in seeking medical attention Bilateral fractures with fractures of different ages

Conclusions: To conclude, we aim to educate psychiatrists and trainees regarding imaging findings of non-accidental trauma, as well as how to differentiate this from accidental trauma. Knowledge of the different anatomic structures and recognizable patterns of injury is imperative to this goal. This will allow psychiatrists and trainees to arrive at an accurate diagnosis and ensure children receive the correct diagnosis, which may prevent further harm. The psychiatrist's role as a consultant also necessitates that imaging findings be communicated in the most clinically relevant way to ensure effective early intervention.

No. 38

Psychiatric evaluation and management of malnutrition in patients with hypermobile Ehlers-Danlos syndrome (hEDS)

Poster Presenter: Rachel Pacilio, M.D.

Co-Authors: Amy Leigh Humrichouser, M.D., Amy B. Rosinski, M.D., Jessica Pierce, M.D., Elizabeth Hoffman, M.D.

SUMMARY:

Hypermobile Ehlers-Danlos Syndrome (hEDS), the most common subtype of EDS, is a heritable condition affecting collagen production characterized by joint hypermobility. It is the only subtype without a corresponding genetic marker and the mechanism of GI pathophysiology in hEDS is unknown. Symptoms and signs overlapping with restrictive eating disorders include gastrointestinal dysmotility, food intolerances, malnutrition, and autonomic aberrancies. It has been hypothesized that these symptoms may play a role in the development of disordered eating in patients with hEDS (2). A higher incidence of multiple psychiatric comorbidities has been observed in hEDS, including anxiety disorders,

anorexia nervosa, and increased somatization and interoceptive awareness. Managing restrictive eating disordered patients with comorbid hEDS presents unique challenges to the consulting psychiatrist in differentiating organic from psychosomatic pathology in the development of disordered habits. Additionally, weight restoration can become exceedingly complex when physiological limitations to enteral feeding are present in the context of intentional food restriction. We present two cases of adult patients with hEDS admitted for severe malnutrition with suspected contribution from an eating, functional gastrointestinal, and/or somatic symptom disorder. Psychiatric consultation was sought for evaluation, assistance with management of psychiatric comorbidities, and guidance on refeeding strategies. Each patient ultimately required total parenteral nutrition (TPN), and their psychiatric comorbidities served as barriers to interdisciplinary agreement on this method of refeeding and delays in effective care. These cases demonstrate that TPN, typically avoided in eating disorder cases, may be necessary as a bridge to enteral feeding in hEDS, where gastrointestinal rehabilitation and weight restoration through enteral feeds may be especially challenging.

No. 39

Childhood Sexual Abuse Is a Significant Risk Factor for Food Addiction. Evidence From a Clinical Sample of People With Obesity

Poster Presenter: Maxime Legendre

Co-Author: Catherine Bégin

SUMMARY:

Background: Food addiction (FA), a pathological condition characterized by addictive tendencies toward palatable food and operationalized through the Diagnostic and Statistical Manual of Mental Disorders (DSM-5) criteria for substance-related and addictive disorders, has gained interest as a potential explicative mechanism linking childhood sexual abuse (CSA) to obesity. A higher risk of FA in people reporting CSA has been well demonstrated with community samples, but studies including clinical samples failed to replicate this relation. The aim of this study was to examine the risk of FA for people reporting CSA while considering the severity of CSA

and other types of interpersonal traumas. **Methods:** Participants were recruited from a multidisciplinary university clinic that offers eating disorder treatment. They (N=187) completed a DSM-5 eating disorders diagnosis assessment and questionnaires measuring FA, interpersonal traumas, depressive level, body esteem, dieting/weight preoccupations, and body mass index (BMI). Logistic regressions were used to calculate the odds ratio (OR) of FA using interpersonal traumas as risk factors, and *t* tests were used to compare people with FA and CSA and those with FA without CSA. **Results:** The sample had a mean age of 44.86 years old and a mean BMI of 38.22 kg/m². Seventy percent (70%) of them reached the criteria for a FA diagnosis, and 44% reported at least one CSA. Of all interpersonal traumas, CSA was associated with the highest risk of FA, with ORs of 1.73 and 2.07. In comparison, we found ORs between 1.29 and 1.74 for psychological abuse and neglect and between 0.88 and 1.08 for physical abuse and neglect, respectively. The three indicators of CSA severity (the relationship with the abuser, the type of sexual abuse and the number of abuses) were significant or marginally significant risk factors, with ORs ranging from 1.26 to 1.50. Finally, no significant difference was found between FA with CSA and FA without CSA. **Conclusion:** Using a clinical sample of people with obesity, this study showed that people who did report CSA have twice the chance to have FA compared to those who did not report CSA. Additionally, this study provided evidence that the relationship with the abuser, the type of sexual abuse, and the number of abuses are relevant severity indicators to take into consideration. Finally, in people with FA, the presence or absence of CSA did not influence depressive level, body esteem, dieting/weight preoccupations, or BMI. It seems essential to assess the presence of FA in patients reporting CSA, as FA is more frequent in this population and may lead to obesity and negative physical and psychological consequences. In patients presenting with FA, the evaluation of CSA may provide more suitable care and treatment. This study was supported by the Canadian Institutes of Health Research.

No. 40

Perceived Social Support Is a Mediator Between Resilience and Caregiver Burden: A Cross-Sectional Study of Caregivers to Older Psychiatric Patients

Poster Presenter: Richard Roshan Goveas

Lead Author: Janhavi Vaingankar

Co-Authors: Rajeswari Sambasivam, Mythily Subramaniam

SUMMARY:

Background: Informal caregivers with better resilience are known to handle burden of caring for someone with mental conditions well. Resilience can provide psychological resource to manage unexpected situations and emotional distress. However, whether physical resources such as social support can contribute to this beneficial effect is not well established. This study was conducted to investigate the role of perceived social support in mediating the relationship between resilience and care burden in a sample of caregivers of older adults aged 60 years and above having chronic conditions in Singapore. **Methods:** A cross-sectional study was conducted in 285 informal caregivers aged between 21 to 65 years who were providing care to older adults having chronic physical and/or mental health conditions. The Connor-Davidson Resilience Scale (CD-RISC) was used to measure resilience, Zarit Burden Interview (ZBI) assessed care burden and perceived social support was estimated with the Multidimensional Scale of Perceived Social Support (MSPSS). Path analysis and bootstrapped 95% confidence intervals (CI) were evaluated to test whether the relationship between resilience and care burden was mediated by levels of perceived social support, taking into account the effect of important sociodemographic and clinical confounders. **Results:** The mean age of the caregivers was 47 years with majority (74%) aged between 40-65 years and children of the older adults (79%). Common mental conditions of the older adults were schizophrenia, dementia and depression, and most frequent comorbid physical conditions were hypertension, hyperlipidemia and diabetes mellitus. Mean (SD) scores for resilience, care burden and perceived social support were CD-RISC: 70.8 (15.1), ZBI: 23.2 (16.0) and MSPSS: 62.2 (12.2), respectively. Resilience and perceived social support were negative associated with care burden ($p < 0.01$).

Perceived social support significantly mediated the association between resilience and caregiver burden ($\beta = -0.14$, 95% CI -0.224 to -0.072 , $p < 0.05$).

Conclusions: Results indicate higher perceived social support in caregivers strengthens the negative relationship between resilience and care burden. With the continued population ageing and increasing burden of chronic conditions, more and more informal caregivers will be tasked to care for older adults. There is, therefore, value in assessing and improving social support reserves of informal caregivers in order to reduce their care burden.

No. 41

Mindfulness-Based Cognitive Therapy for People With Parkinson's Disease

Poster Presenter: Andreea Seritan

Co-Authors: Sarah Wang, Prarthana Prakash, Ana-Maria Iosif

SUMMARY:

Introduction Anxiety and depression are among the most common nonmotor symptoms of Parkinson's disease (PD).¹ Mindfulness-based cognitive therapy (MBCT) is a manualized intervention conducted in 8-week group sessions, along with participant independent daily practice. MBCT has been shown to prevent the relapse of recurrent depression and improve anxiety and has been studied in patients with neurological diseases, including PD.^{2,3} Using a modified MBCT protocol, we investigated MBCT effectiveness in improving anxiety and depression for people with PD in 2 pilot clinical trials (NCT03904654, NCT04469049). **Methods** People with PD and mild-to-moderate anxiety and/or depressive symptoms participated in one of 2 studies. The first study started in-person in September 2019 and concluded in March 2020 (the last 2 sessions were virtual due to the COVID pandemic) and was limited to San Francisco Bay Area residents. The second study was entirely virtual, took place from November 2020 to June 2021, and was open to people with PD from across the U.S. and their caregivers. Participant demographic and clinical variables, pre- and post-intervention Generalized Anxiety Disorder-7 Item (GAD-7) and Patient Health Questionnaire-9 (PHQ-9) scores, and a participant satisfaction survey were collected. Descriptive

statistics were used to summarize the demographic and clinical variables. Linear mixed-effects regression models with fixed effects for time (Pre-, Post-) and study (Study 1, Study 2) and a random effect for person-specific intercept were used to assess pre- to post - changes in GAD-7 and PHQ-9 scores. This study represents a secondary analysis of combined data from the 2 clinical trials, restricting the analysis to people with PD and more than minimal anxiety and/or depressive symptoms (GAD-7 and/or PHQ-9 scores ≥ 5). **Results** In total, 5 MBCT groups (2 in-person, 3 virtual) were conducted. The subsample analyzed included 15 (8 women, mean age 64.2, SD 7.4) people with PD in Study 1 and 13 (7 women, mean age 61.6, SD 6.4) in Study 2. One participant withdrew. At baseline, 25 participants had anxiety symptoms (GAD-7 score mean 7.9, SD 2.9) and 22 had depressive symptoms (PHQ-9 score mean 9.8, SD 3.4). There were significant reductions in both anxiety and depression measures at the conclusion of the MBCT intervention. Post- to pre- estimated difference (95% confidence interval) was -2.1 (-3.9 to -0.4) for GAD-7 and -3.8 (-6.0 to -1.5) for PHQ-9 (both $p < 0.05$). Participant feedback indicated high satisfaction with the intervention. **Conclusion** MBCT appears to be effective in improving anxiety and depressive symptoms in people with PD. Randomized-controlled studies are needed to replicate these results. **Funding** This work was funded by the Parkinson's Foundation and the Mount Zion Health Fund.

No. 42

Could Obsessive Compulsive Disorder Be a Risk Factor for the Later Development of Dementia? A Systematic Review

Poster Presenter: Sonia Khan

Co-Authors: Meghana Mehendale, Sundas Saboor, Sadia Usmani, Nauman Ashraf

SUMMARY:

Background: Esketamine nasal spray (ENS) is one of the FDA approved practical solutions in treatment resistant depression (TRD). ENS should be used in conjunction with antidepressants (AD) at risk evaluation and mitigation (REM) certified centers to treat TRD (1). Close monitoring of blood pressure (BP) is needed in TRD patients who are both on an

AD and psychostimulant (PS) such as amphetamine, methylphenidate, modafinil, or armodafinil. Fua et al. reported that 15% of patients who received ENS+AD experienced an increase in BP (I-BP) as opposed to 4.9% of placebo+AD patients (2) and Adigun et al. published about impact of AD on efficacy and safety of ENS (3). Both ENS and PS may cause treatment emergent hypertension (HTN) and tachycardia, but there is a dearth of data on their concomitant use. This retrospective case series were conducted to understand impact of ENS on BP and its tolerability in TRD patients, who were on AD plus PS. Methods: We retrospectively reviewed records of patients treated with ENS between 12/2020-12/2021 at an outpatient clinic on the East Coast. Eight cases were treated with ENS for TRD while they were on AD plus PS. We created a de-identified dataset including the following: Age, gender, comorbid diagnoses, average (ave) systolic and diastolic BP and heart rate (HR) measurement changes (pre-ENS and at 40 and 120 min post-dose) for sessions 1, 2, 3, 4, and 8. Results: Average age of patients was 54.5 years (range: 23-66), 6 were females and 2 were males. Beside treatment-resistant MDD, 6 patients had GAD, 2 had PTSD, one had binge eating disorder (BED), but none had ADHD as comorbid diagnosis. Seven patients were on PS for augmentation and one was to treat BED. In session 1 and 2 ave systolic and diastolic BP changes at pre-ENS, post-dose 40 and 120 min were +3/-3, -2/-2, +5/-1 and +3/+4, -1/+2, 0/+2 mmHg, respectively. Ave heart rate (HR) changes ranged between +7 and -7 beat per minute (BPM) in all sessions. BP and HR resumed to baseline by end of 2 hour monitoring period. As expected some patients experienced sedation and/or dissociation, but all symptoms resolved within 2 hours after ENS administration. In total 109 sessions were completed, session numbers ranged between 6 and 24 per patient. All patients tolerated ENS without any significant adverse events (AE) in any sessions. Conclusions: Patients with TRD often need multiple medications such as augmenting AD, PS, lithium, and/or atypical antipsychotics in addition to an SSRI, SNRI or TCA. These eight patients tolerated ENS in conjunction with AD plus PS medications without any significant AE. Changes in BP measurements were transitory and did not require additional anti-HTN medications. With close BP monitoring, clinicians might consider ENS as an

option in TRD patients who are on concomitant AD plus PS. However, larger and randomized controlled studies are necessary to further understand safety of ENS in TRD patients who are on complex medication regimens.

No. 43


Impact of the Revision of the Mental Health and Welfare Law on Psychiatric Patients in Prisons in South Korea

Poster Presenter: Hyunkyu Kim

Co-Author: Suk-Yong Jang

SUMMARY:

Background: The Mental Health and Welfare Law in South Korea is a law enacted to allow mentally ill people to receive proper treatment and prevent infringement of basic rights that may occur in the process. The revision of the Mental Health Welfare Law in 2016 was intended to supplement the various limitations of the previous version which was pointed out by the Constitutional Court of Korea. The compulsory admission requires the agreement of diagnosis by two individual psychiatrists, one of whom must be the psychiatrist in a public hospital. The committee for the examination as to legitimacy of admission was also introduced to review the compulsory admission. These changes lead compulsory admission more difficult and might affect the number of crime by mentally ill patients. The aim of this study is to evaluate the impact of the mental health and welfare law revision on the psychiatric patients in prisons in South Korea. **Methods:** The data used in this study was Korea Correctional Service Statistics from 2012 to 2020. Interrupted time series analyses were used to investigate the impact of the mental Health and Welfare Law Revision on psychiatric patients in prison. **Results:** The baseline trends of psychiatric patients in prisons were positive ($\beta < 0$), thus psychiatric patients has been increased regardless of the revision. The trend change of psychiatric patients in prison has been increased statistically after the revision ($\beta > 0$) ($p = 0.01$),

src="file:///C:/Users/Hyunkyu/AppData/Local/Temp/msohtmlclip1/01/clip_image002.png" style="width:10px; height:20px" />=336.90, p=0.03). The trend change of proportion of psychiatric patients also increased its trend after the revision enacted(β  src="file:///C:/Users/Hyunkyu/AppData/Local/Temp/msohtmlclip1/01/clip_image002.png" style="width:10px; height:20px" />=0.93, p=0.01). Among the psychiatric disorders, schizophrenia, mood disorder, anxiety disorder showed statistically significant increase in trend change. **Conclusion:** This study showed that the revision of Mental Health and Welfare Law in South Korea had impact on the trend of psychiatric patients in prison. Schizophrenia and mood disorder patients were statistically significantly increased in prison who were common in psychiatric involuntary admission. Further research about the reason of increase should be followed to reduce total institutionalization number of psychiatric patients including hospitalization and imprisonment.

No. 44

Association Between Stress-Related Disorders and the Risk of Dementia Using the Korean National Sample Cohort: A Matched Cohort Study

Poster Presenter: Hyunkyu Kim

SUMMARY:

Background: Post-traumatic stress disorder (PTSD) is well known to be associated with the development of dementia, but studies on overall stress-related disorders are less known. This study investigated the association between stress-related disorders and the risk of dementia in a Korean national sample cohort.

Methods: The data analyzed in this study were acquired from the Korean National Health Insurance Service National Sample Cohort(NHIS-NSC) of the National Health Insurance Service between 2002 and 2013. Using a 1:3 propensity score matching, 8,906 patients with stress-related disorders and 26,718 control participants were included in the analysis. The risk of dementia was analyzed using the Cox proportional hazard model and Kaplan–Meier survival curves. Stress-related disorders and dementia were subdivided into their types to investigate the specific association of disease risk.

Results: Patients with stress-related disorders had a

higher risk of developing dementia after adjusting for covariates (Hazard ratio [HR] = 1.27; 95% confidence interval [CI] = 1.13–1.43) than the control participants. Patients with PTSD showed the highest risk of increase (HR = 1.95) compared to those with other types of stress-related disorders. Alzheimer’s dementia showed the highest and statistically significant risk of increase in patients with stress-related disorders (HR = 1.37, 95% CI = 1.16–1.61). **Conclusion:** This study identified an association between a history of stress-related disorders and the risk of dementia in the South Korean population. Further research investigating the causal mechanisms is needed.

No. 45

Association Between Suicide and Dialysis in South Korea: A Matched Cohort Study

Poster Presenter: Hyejin Joo

Co-Authors: Sung-In Jang, Il Yun, Yu Shin Park

SUMMARY:

Background: The high suicide rate is a serious social problem in South Korea, and physical illness is one of the major relating factors to suicide. In particular, renal disease undergoing dialysis is known as a disease with a high frequency of suicide. However, treatment regarding mental health problem such as suicidal ideation of dialysis patients is overlooked. Therefore, this study aims to provide evidence for the importance of mental health management in dialysis patients by investigating the association between suicide and renal dialysis in Korean population. **Methods:** The data for this study was obtained from the National Health Insurance Service National Sample Cohort between 2003 and 2013. Risk-set matching on propensity score was performed to select the study population, and the final study population was 5,026 (dialysis cohort: 2,546, matched cohort: 2,546). Suicide mortality was classified by ICD-10 code X64–80. A Cox proportional hazards model was conducted to analyze the association between suicide and renal dialysis.

Results: The results of this study demonstrate that dialysis in patients with ESRD is significantly associated with mortality by suicide. Of the total 5,026 cohorts, 0.6% committed suicide, and 1.0% of dialysis patients died by suicide. Dialysis patients had

six times more mortality by suicide than non-dialysis patients (hazard ratio (HR), 6.05 [95% confidence interval (CI)] 2.67–13.70). As a result of subgroup analysis stratified by age and gender, the risk of suicide in dialysis patients was higher than those who did not dialysis in under 40 years group and male group. **Conclusion:** Dialysis was significantly associated with high suicide mortality. The study suggests that interventions are needed to reduce suicide rates and improve the quality of life in patients suffering from severe chronic diseases such as dialysis.

No. 46

Familial Firearm Culture Among the Families of Youth Who Died by Firearm-Suicide: A Psychological Autopsy Study

Poster Presenter: Matthew Kelly, Ph.D., M.P.H.

Co-Authors: Holly Wilcox, Paul Nestadt, Aubrey DeVinney, Ling Li

SUMMARY:

Background: Suicide is the second leading cause of death among adolescents in the United States, with firearm-related suicides comprising half of these deaths. In many cases, youth who died by gun-related suicide were introduced to firearms through culturally rooted familial traditions. Efforts to understand these traditions are ongoing, as researchers have recognized the need to better characterize the avenues through which children and young adults are socialized into firearm use. This study seeks to understand culturally rooted perspectives on firearms among the families of youth who completed suicide by firearm. It also seeks to ascertain family members' perspectives on suicide prevention interventions, including the State of Maryland's Extreme Risk Protective Order Law (ERPO), passed in 2018. **Methods:** We performed 2.5-hour semi-structured psychological autopsy interviews with the parents of youth (n=8), aged 17-22, who died from firearm-related suicide. Next of Kin (NOK) were approached by the Maryland Office of the Chief Medical Examiner (OCME) to obtain consent for contact by the research team. Clinicians on the research team conducted all interviews, exploring decedents' and families' prior exposure to and engagement with firearm use, among other

topics. Using an inductive analytical approach, a team of two researchers identified and reached consensus on interview themes and subthemes, performing iterative analysis of interviews to inform this process. **Results:** Interviews with nine participants revealed that most families (75%) shared some degree of familial engagement with firearms. In many cases (62%), decedents used family-owned firearms when completing suicide, and in one case a decedent used a firearm he had constructed with his father. In several cases wherein decedents received psychiatric care in the weeks preceding their deaths, interviewees shared that they did not consider their family-owned firearms to be sources of danger. Some noted that had a clinician expressed concern about the risk of firearm-related harm, it may have prompted action to reduce this risk. Several shared that they would have considered filing an ERPO request had the option existed prior to their child's passing. **Conclusion:** This study documents diverse culturally rooted familial firearm narratives and suggests that these narratives influenced parents' conceptualization of firearm risk, including during periods when their children exhibited suicide warning signs. It also suggests that successful suicide prevention interventions must work to help families rescript firearms from tools seen as markers of familial cohesion and conveyors of intergenerational history to instruments that pose a threat to youth with suicide risk factors. Interviewees' reflections furthermore suggest that opportunities exist to undertake this rescripting to prevent firearm-related suicide.

No. 47

Precipitated Withdrawal: Lessons and Limitations of Treating Addiction in a Low Resource Setting

Poster Presenter: Eric Alcid, M.D., Ph.D.

Lead Author: Kristin Nguyen, M.D.

Co-Author: Bibhav Acharya, M.D.

SUMMARY:

Introduction: We explore a case of precipitated withdrawal in a patient in Nepal who inaccurately reported his last use of an opioid and the cultural and structural factors that led to this Case: We present a 24 year old patient with a complex history of addiction living in rural Nepal. He presented to

Dolakha hospital in October 2021 complaining of insomnia, sweating, and vomiting. He takes many different medications not prescribed and easily purchased at market “pharmacies” including valproic acid, pregabalin, quetiapine, and dextromethorphan; this cocktail of medications last taken three days ago. He was treated for presumed dextromethorphan withdrawal symptomatically with mirtazapine based on hospital formulary. He came back weekly to the hospital but continued to relapse back on various prescription medications. We then suggested off-label naltrexone to treat his cravings. He disclosed that he had been taking an opioid, Tapentadol, and was advised to be off this medication for at least seven days before starting. The hospital does not have access to urine drug screens, but the patient reported that he had abstained from opioids and, and his pupils were not constricted. About thirty minutes after the patient took the naltrexone from the pharmacy, he was in florid opioid withdrawal, reporting that he had taken Tapentadol the day before. He was treated symptomatically with clonidine, acetaminophen, and clonazepam. The patient recovered well and was discharged after an overnight ED stay. Discussion: The authors are a global health psychiatrist and an addiction psychiatrist from the US who would like to reflect on the blind spots that led to precipitated withdrawal in this patient. The first challenge was being unfamiliar with Tapentadol; research has shown it is being widely abused in India (Mukherjee et al., 2020). Another was the hope from every staff member that the patient was less ambivalent than he was: while he did come to the hospital weekly, and had his first baby on the way, in hindsight there were other signs suggestive of ambivalence such as a history of misrepresenting how long he had been off of other prescription medications. Perhaps the power dynamic and scarcity mindset in the room was also affecting his judgement: two American doctors who would only be here a limited time suggesting a treatment that could address his addiction, and him wanting to seize the opportunity while he could, especially given how there is limited training on addiction psychiatry in lower middle income countries (Balhara et al., 2021). Other challenges include the language barrier, limited access to medication-assisted therapies which India has shown to have success with (Ambekar et al., 2018), and

suggested behavioral interventions that were culturally inappropriate such as having his wife hold onto his money so that he could not purchase medications at pharmacies.

No. 48

Association of Self-Reported Drinking Behavior and Symptoms of PTSD in Veterans With Alcohol Use Disorders (AUD)

Poster Presenter: Katherine E. Anderson

Co-Authors: Paul Thuras, Kathryn Dockter, Peter Hauser, M.D., Eric Dieperink

SUMMARY:

Background: Alcohol use disorders (AUDs) are common co-morbidities in military Veterans with Post Traumatic Stress Disorder (PTSD). This study examined the relationship between symptoms of PTSD and self-reported drinking behavior in a sample of U.S. Veterans who met the diagnosis of AUD and participated in a 12-week double-blind randomized clinical trial of the efficacy of baclofen to reduce alcohol use. We hypothesized that change in drinking behavior during the 12-week study period would be correlated with change in symptoms of PTSD in Veterans who reported hazardous drinking at baseline. Methodology: 176 Veterans (3 women; 56.8% Caucasian, 35.2% African-American, 8% other/unknown; mean age 57 years) enrolled in the study completed the Timeline Followback and PTSD Checklist-Civilian (PCL-C) at baseline. 91 were randomized to placebo and 85 to baclofen. 140 veterans completed week 12 of the study- 74 placebo and 66 baclofen. Results: The total sample had a mean of 63.8 drinks, 8.8 drinking days and 6.8 heavy drinking days in the 2 weeks prior to baseline. The mean PCL-C score was 37.3 and 55 Veterans (31%) had a PCL-C score above 44 suggesting a current diagnosis of PTSD. Mean drinking behavior (as measured by drinking days and heavy drinking days) and mean PCL-C score decreased significantly by end of study for both placebo and baclofen groups and there were no significant differences between groups in behavioral measures or demographic data. Change in PCL-C score between baseline and end of study for the total sample (140 completers) showed that decreases in heavy drinking days (a mean reduction of 5.2 days) correlated

significantly with decreases in PCL- C score (a mean reduction of 8.45; Pearson Correlation [two tailed]; .178, $p < 0.05$) but decreases in drinking days (a mean reduction of 4.5 days) did not correlate significantly with decreases in PCL-C score (Pearson Correlation [two tailed]; .097, $p > 0.05$). When the placebo and baclofen groups were analyzed separately there were no significant correlations with either heavy drinking days (Pearson Correlation [two tailed]- placebo- .132; baclofen- .222) or drinking days (Pearson Correlation [two tailed]- placebo- .015; baclofen- .175). **Conclusion:** Our results suggest that decreases in heavy drinking are associated with decreases in symptoms of PTSD in a sample of Veteran with AUD and hazardous drinking. The results of our study suggest that targeting alcohol misuse in Veterans with significant symptoms of PTSD may have the additional benefit of reducing symptom severity in PTSD. The relationship between alcohol use/ misuse, and symptoms of PTSD is complex and future research may better elucidate the effects of alcohol misuse in the trajectory of PTSD symptomatology.

No. 49

Psilocybin Assisted Psychotherapy for Alcohol Use Disorder

Poster Presenter: Murk Kaka

Co-Authors: Kaushal Shah, M.D., M.B.A., M.P.H.,

Nauman Ashraf, Sahar Ashraf

SUMMARY:

Background/ Introduction: Psilocybin is produced by more than 100 species of mushrooms worldwide. It is a classic hallucinogen with a high affinity for several serotonin receptors located in different brain parts including the cerebral cortex and thalamus. More work is being done to further understand the uses of psilocybin since 1992 for different psychiatric disorders such as mood disorders, anxiety disorders, Obsessive-compulsive disorder, and alcohol use disorder[1] Psilocybin-assisted psychotherapy has been helpful in treating depression in cancer patients and treatment-resistant depression in a randomized clinical trial with only 1-2 sessions of psilocybin along with supportive therapy[2]. These results support the basis of further research done using psilocybin-assisted psychotherapy for alcohol use disorder and

other refractory psychiatric disorders with less effective treatments. Methods: Literature search in PubMed, Google Scholar, and clinical trials.gov using MESH terms, ((psilocybin) AND cognitive behavioral therapy)) revealed 25 studies, of which only four studies met the eligibility criteria to be included in the review. Results: Psilocybin-assisted therapy has been proven to be effective in treating alcohol use disorder in an open-label trial where 10 volunteers received psilocybin in one or two sessions in addition to Motivational Enhancement Therapy and therapy sessions on preparation for and debriefing from the psilocybin sessions. No clinically significant increase in abstinence was observed in the first 4 weeks of treatment with no psilocybin treatment but increased significantly following psilocybin administration ($p < 0.05$). This improvement is consistent at the follow-up to 36 weeks. The intensity of effects in the first psilocybin session (at week 4) was predictive of the change in alcohol intake during weeks 5–8 ($r = 0.76$ to $r = 0.89$) and also predicted decreases in craving and increases in abstinence during week 5[3]. In a double-blinded randomized clinical trial, psilocybin and motivational enhancement therapy, and cognitive behavioral therapy were used, psilocybin assisted psychotherapy was shown to produce decreases in the percentage of heavy drinking days over and above those produced by active placebo and psychotherapy[4]. Another randomized clinical trial, Quantum Trip Trial is being conducted and we hope for its results to assist further in understanding psilocybin-assisted psychotherapy use for alcohol use disorder. Conclusion/Discussion: Psilocybin-assisted psychotherapy has been proven to be effective in reducing alcohol intake and promoting abstinence in the follow-up period of clinical trials. There were robust and sustainable results with 1-2 sessions of psilocybin alongside psychotherapy. These results can help the providers with an alternative therapeutic plan for refractory cases of alcohol use disorder.

No. 50

Workplace Injury and Increased Risk of Opioid Related Overdose

Poster Presenter: Benjamin Buchholz, M.P.H.

SUMMARY:

Background: In the US, drug overdose deaths have increased 28.5% from April 2020 - April 2021 and have reached > 100,000 deaths annually. Prior to COVID related decreases, 156 per 10,000 estimated full-time equivalent workers would sustain a work-related injury in a given year. Objective: The objective of the systematic review was to understand how workplace injuries may result in an increased risk of opioid related overdose death (OROD) among workers in the United States. Methods: Following the Navigation Guide Framework, literature searches were conducted in SCOPUS, PubMed, and PsychINFO seeking original studies investigating workplace injuries and opioid related death, either by suicide or overdose. Of the 306 studies screened for title and abstract, 20 were selected for a full-text review and five studies met the inclusion criteria. The final studies were each evaluated for risk of bias, as well as the quality and strength of evidence. Results: The selected studies found workplace injury to be associated with an increased risk of OROD. Five studies met the initial inclusion criteria; however, one was excluded following the full-text evaluation. The final set of four studies received risk of bias ratings ranging from "Low" to "High." The body of evidence was rated "Moderate" quality. Each of the cohort study designs (retrospective and semi-ecological, open cohort) found an association of workplace injury with an increased risk for OROD. The ecological study design found a high rate of workplace injury among a deceased cohort who died of OROD. Conclusion: A final determination of "Limited Evidence of Toxicity" was given for the set of literature reviewed. However, the evidence of toxicity based on this body of literature can only be attributed to more severe workplace injuries, resulting in lost-time. Additional research is needed to make a stronger conclusion between workplace injury and OROD.

No. 51

Does Pharmacogenomic Testing Affect Clinical Decision Making for Poor Metabolizers of CYP2D6 and 2C19 in Minority Populations? -a Retrospective Review

Poster Presenter: Yuliang Hu, M.D.

Co-Author: Simon Kung

SUMMARY:

Background: Pharmacogenomic testing in the clinical practice of psychiatry is controversial but continues to be used. There is a relative lack of research done in minority populations.^{1,2} Our study collected real-world data on pharmacogenomic testing in minority patients, focusing on poor metabolizers of cytochrome P-450 CYP2D6 and CYP2C19, to see if testing was helpful for clinical decision making. **Methods:** A retrospective review of patients who received pharmacogenomic testing between 1/1/2003 and 11/2/2022 at Mayo Clinic Rochester. We selected poor metabolizers of CYP2D6 and CYP2C19 who self-identified as Hispanics, Asian and Pacific Islanders, African Americans, or Native Americans. Reason for testing, diagnosis, medication trials before and after testing were recorded. A positive outcome was defined as test results able to explain past reactions to medications or if results changed medication management. A negative outcome was where results did not explain or did not change clinical decision making. **Results:** 36,602 patients (31,699 or 86.6% Caucasian) received pharmacogenomic testing. 1525 (4.2%) and 502 (1.4%) patients were identified as poor metabolizers for CYP2D6 and CYP2C19, respectively. The prevalence for poor metabolizers of CYP2D6 in Hispanic, Black, and Asian patients were 2.7%, 2.7%, and 0.8%, and of CYP2C19 were 0.8%, 2.7%, and 6.8%, respectively. Among the 117 poor metabolizers of minority races, 28 (23.9%) received testing for research purposes, 38 (32.5%) for guidance on psychotropic medications, 40 (34.2%) for other medications, and 10 (8.5%) had no reasons documented. Among the 38 patients who tested for psychotropic medication guidance, 34 were referred by their clinician (10 by psychiatrists, 20 by general practitioners, 3 by other specialists, and 1 by a pharmacist), of which 50% had a positive outcome. When ordered by psychiatrists, 60% had a positive outcome. Reasons for negative outcomes include inaccurate diagnosis, patients' preference to not take or change medications, and no actionable pharmacogenomic recommendations for current medications. **Conclusion:** Among the minority patients pursuing testing for psychotropic medication guidance who were poor metabolizers of CYP2D6 or CYP2C19, half had resulting medication changes or a potential explanation for previous

response to medications. In these cases, pharmacogenomic testing was clinically useful. The prevalence of poor metabolizers in minority races in our study was lower compared to other studies.³ Limitations of this study include retrospective study, small sample size, and lack of data on symptom improvement. More studies are needed to understand the clinical utility of pharmacogenomic testing in diverse populations with psychiatric disorders, and whether any health disparities might exist.

No. 52

DSP-6745 Shows Rapid Antidepressant and Antipsychotic Effect Via Multimodal Action on Serotonergic Neurotransmission

Poster Presenter: Taro Kato

SUMMARY:

In both non-clinical and clinical studies, abnormality of serotonergic neurotransmission has been reported to play a central role in a wide range of psychiatric disorders, including depression, bipolar disorder, and schizophrenia. Functional serotonergic inhibitors such have played a central role in the treatment of these disorders. DSP-6745 is a novel serotonin antagonist that has been shown to exhibit potent antagonism of 5-HT_{2A} and 5HT₇ receptors. Here we report the effect of DSP-6745 on several animal models of depression and psychosis, as well as results from Ph1 clinical studies supporting its 5-HT_{2A} and 5-HT₇ mechanism of action. In vitro assays demonstrated DSP-6745 had significant antagonist actions for SERT, 5-HT_{2A}, 5-HT_{2C}, and 5-HT₇ receptors with nanomolar binding affinity. In vivo, DSP-6745 increased the release of monoamines including serotonin, norepinephrine, and dopamine, but also glutamate in the prefrontal cortex in a dose-dependent manner from 10 to 30 mg/kg po. In behavioral rodent studies, the antidepressant-like efficacy of DSP-6745 was confirmed in the forced swim test after 4 days of treatment from 1 to 10 mg/kg po. The antidepressant effect of 10 mg/kg po of DSP-6745 was maintained even at 24 h post dose. In addition to the antidepressant-like effect, anxiolytic activity was demonstrated in the social interaction test. On the other hand, DSP-6745 showed inhibition in the MK-801-induced

hyperlocomotion and improvement in the apomorphine-induced PPI test. These data suggest that DSP-6745 has not only antidepressant, but also antipsychotic-like effects. Furthermore, in the animal aggression test in APP Tg mice (which reflects the aggressive behavior observed in AD patients), DSP-6745 suppressed the excessive attacking to intruder animals. In the SAD study, plasma concentration of DSP-6745 was observed to be dose proportional from 10 to 120 mg. Regarding safety, moderate to severe adverse events including sinus pause and syncope was observed at 120 mg which was identified as the minimum intolerable dose, while 80 mg as deemed the maximum tolerated dose. In the 5-HT_{2A} PET study with 40 and 80 mg, respectively, DSP-6745 occupancy of 5-HT_{2A} receptors occurred in a concentration dependent manner with an RO₅₀ of ~10 ng/ml. In the SERT SPECT study, 80 mg DSP-6745 occupancy of SERT was <20% and an RO₅₀ could not be determined. It was concluded that DSP-6745 occupancy of SERT at 80 mg was not clinically meaningful. In the PSG study in normal healthy volunteers, 40 and 80 mg DSP-6745 was observed to increase slow wave sleep, which is consistent with 5-HT_{2A} antagonism. Furthermore, both doses of DSP-6745 was observed to increase REM sleep latency and decrease time (duration) in REM sleep. The inhibition of REM sleep is believed to be due to 5-HT₇ receptor antagonism. DSP-6745 is a dual 5-HT_{2A} and 5-HT₇ antagonist and is considered to be a novel compound with potentially antidepressant and antipsychotic properties.

No. 53

52-Week Open-Label Safety and Tolerability of Centanafadine Sustained-Release Tablets in Adults With Attention Deficit Hyperactivity Disorder (ADHD)

Poster Presenter: Eva Kohegyi

Co-Authors: Osman Turkoglu, Taisa Skubiak, Jessica McDonough

SUMMARY:

Introduction: Centanafadine (CTN) is a novel norepinephrine/dopamine/serotonin reuptake inhibitor in development for ADHD. In 2 pivotal adult ADHD trials, CTN sustained release (SR) 200 mg/d and 400 mg/d, administered twice daily (BID),

significantly reduced Adult ADHD Investigator Symptom Rating Scale (AISRS) total score vs placebo, with favorable safety and tolerability. Long-term (52 weeks) effects of CTN SR 400 mg/d in adult ADHD (NCT03605849) are reported here. **Methods:** Adults meeting *DSM-5* criteria for ADHD who completed a pivotal study or enrolled de novo were eligible for the 52-week, phase 3, open-label trial. Uncontrolled comorbid psychiatric disorder, undifferentiated diagnosis of ADHD, taking prohibited medicines, or positive alcohol or drug screen were exclusionary. All patients (pts) received CTN SR BID, titrated to 400 mg/d by day 8, and fixed thereafter. Safety was assessed by adverse events (AEs), laboratory results, physical examinations, vital signs, and electrocardiograms (ECGs). Withdrawal symptoms and suicidal ideation and behavior were assessed with the Study Medication Withdrawal Questionnaire (SMWQ) and the Columbia-Suicide Severity Rating Scale (C-SSRS), respectively. Efficacy was assessed by the AISRS, Clinical Global Impression-Severity of Illness Scale (CGI-S) and ADHD Impact Module-Adult (AIM-A). Analyses were based on observed results using descriptive statistics. Baseline was relative to the first CTN dose in the open-label study. **Results:** Of 662 pts enrolled, 653 received CTN SR; 345 pts completed the study. Mean (SD) age was 36.7 (10.1), 338 (51.1%) were female, and 549 (82.9%) were White. Common discontinuation reasons were subject withdrawal (119; 18%), AEs (81; 12.2%), and lost to follow-up (41; 6.2%). AEs occurred in 401 pts (61.4%); 16 AEs (2.5%) were severe. Common AEs were insomnia (8.0%), nausea (7.7%), diarrhea, and headache (7.0% each). 80 (12.3%) pts discontinued due to AEs. Serious AEs occurred in 12 pts (1.8%); none were CTN related. AEs of special interest (18 pts; 2.8%) included rash (n=5; 1 severe), papule, rash erythematous, rash maculopapular, rash papular, and urticaria (n=1 each); 3 discontinued. Abuse potential-related AEs occurred in 31 pts (4.7%). No deaths occurred. SMWQ scores improved. Suicidal ideation/behavior occurred in 13 pts (2.0%) per C-SSRS. There were no trends in laboratory, urinalysis, vital sign, or ECG changes. Baseline mean (SD) AISRS Total, Inattentive, and Hyperactive-Impulsive scores (34.4 [10.3], 19.2 [5.6], and 15.2 [6.0], respectively) improved by -20.4 (11.9), -11.2 (6.6), and -9.2 (6.2) points; baseline mean (SD) CGI-S score of 4.2 (0.9)

improved by -1.5 (1.1); and baseline mean (SD) AIM-A score of 6.5 (1.8) improved to 7.8 (1.5) at week 52. 22 (3.4%) pts discontinued for lack of efficacy.

Conclusions: Safety, tolerability, and exploratory efficacy results from this trial demonstrate that CTN SR 400 mg is a safe and effective long-term treatment for ADHD in adults.

No. 54

Therapeutic Use of Psychedelics: An Evolving Landscape

Poster Presenter: Vinay Lakra

SUMMARY:

Amongst resurging interest into psychedelic therapies for the treatment of mental illness in adults, the Royal Australian and New Zealand College of Psychiatrists (RANZCP) has published two clinical memoranda (2020; updated 2022) on the Therapeutic use of psychedelic substances. The clinical memorandum is intended to provide information for psychiatrists about the potential utility of psychedelic substances for mental illness. To develop the clinical memorandum, the RANZCP considered the published research including systematic literature reviews and meta-analyses on the effect of psilocybin and MDMA on mental, behavioural or developmental disorders. Information was discussed by members of the RANZCP Committee for Evidence Based Practice before successive consultation and review within the RANZCP. The clinical memorandum provides an overview of the evidence regarding the use of psychedelic therapies and notes that while there is emerging evidence for the use of psychedelic therapies in the treatment of mental illness in adults, the evidence is still in development. The document summarises psychedelic assisted psychotherapy; evidence and current research; risk and side effects; regulation; and considerations for use of psychedelic therapy in the treatment of mental disorder. Alongside the development of the clinical memoranda, the Therapeutic Goods Administration (responsible for regulating medicines in Australia) has received two successive requests to downschedule both psilocybin and MDMA from Schedule 9 (Prohibited Substance) to Schedule 8 (Controlled Drug). The RANZCP's clinical

memorandum has been considered and referenced in the decisions not to amend the Poisons Standard (final decision still pending at time of writing). This poster will discuss the development of the RANZCP clinical memorandum on the Therapeutic use of psychedelic substances alongside the regulatory landscape of psilocybin and MDMA in Australia and the challenges of providing advice to psychiatrists in an evolving landscape.

No. 55
Ethical Challenges in a Case of Psychotic Pregnancy Denial

Poster Presenter: Gabriella Musacchia Arth

Lead Author: Gabriel Tudose

Co-Authors: Roshen John, Sammi Wong

SUMMARY:

Background: There is a dearth of literature on ethical strategies to manage pregnancies of women with psychosis. Denial of pregnancy is a subjective lack of awareness of being pregnant; its prevalence is 1 of 475 women [1]. Objective: This poster's aim, based on the case of a 31-week pregnant woman with psychosis who did not acknowledge being pregnant, is to review the literature on the topic of psychotic pregnancy denial and to discuss the ethical challenges of treating this condition. Case Report: A 26-year-old single, unemployed, homeless, nulliparous woman with a history of schizophrenia presented to the emergency room with suicidal ideation; a transabdominal ultrasound confirmed a 31-week pregnancy. The patient did not believe that she was pregnant, and disputed the urine pregnancy test and ultrasound results. She claimed that her distended abdomen was due to gas, or rotten food, or that she did not have anything inside, even when looking at sonograms or listening to the fetal heart sounds. Early in the hospitalization, the patient had two episodes of aggression during which she assaulted staff members. With the use of antipsychotics, the patient's agitation improved and her suicidal thoughts subsided, however, she maintained that she was not pregnant. The Obstetrics team closely monitored the patient during her psychiatric hospitalization and provided psychoeducation on childbirth. The patient said that she would not push anything out, and that she

would not allow anyone to perform surgery on her; she was deemed to lack capacity regarding labor and delivery. The patient was estranged from her family, and the team could not assess what the patient would have decided, had she acknowledged that she was pregnant. The treatment team sought a court order for a Caesarian section against objection, if vaginal delivery was no longer possible. While the court hearing was in progress, the patient developed gestational hypertension; she was transferred to Labor and Delivery for induction of labor at almost 38 weeks. The induction failed due to non-reassuring fetal heart tracings; the patient required a Caesarian section and gave birth to a healthy infant. A family court hearing after the patient was discharged placed the infant in foster care. Conclusion: This case raises multiple ethical questions, including how and when physicians should intervene in cases of pregnant women who lack capacity due to mental illness. One significant challenge is determining who should make decisions regarding labor and delivery when a pregnant patient is incapable of doing so. Clinicians should strive to respect patient's autonomy while also preventing possible adverse consequences in pregnancy. The poster aims to recommend strategies for clinicians to effectively manage the ethical issues surrounding psychosis in pregnancy, in order to balance autonomy-based and beneficence-based obligations.

No. 56
Conmigo, Contigo, Con Todos - the 3Cs Program: A Model for the Promotion of Inclusion in a Framework of Peace in Vulnerable Communities From Colombia

Poster Presenter: Lina Gonzalez

Co-Author: Camila Andrea Castellanos Roncancio

SUMMARY:

The armed conflict that Colombia has endured over a period of 60+ years has permeated all the societal levels, exposing its population, especially vulnerable communities, to the manifestations of the war, be it by direct victimization in the form of injuries and death, or indirect, through economic pressures, displacement, abandonment, and restriction of access to social welfare. This frontal exposure to the conflict alters the wellbeing of the individuals and

their communities, leading to poverty, physical illness, and mental disease, affecting the way Colombian people lives, develops, and moves towards the building of a frame of peace and progress. The aim of this proposal is to present the framework of “Conmigo, contigo, con todo – 3Cs” (With me, with you, with all), a model developed to promote inclusion by strengthening the resilience and compassion traits of individuals and communities. The model is implemented as a program that trains participants in life skills and meaningful actions within their communities and is based in the cognitive behavioural model. Briefly, participants are trained in three modules composed of workshops that focus on one of the following life skills: self-awareness, empathy, assertive communication, problem solving, creativity, critical thinking, creative thinking, emotion regulation and arousal management techniques, compassion, resilience, coping of stress and identification of protective and risk factors. At completion of the modules, attendees are expected to recognize their own thoughts, cognitions, and emotions, successfully face problems, difficulties, and emotions in everyday life, improve their ability to manage emotions, and identify new mechanisms to develop self-compassion and compassion for the people around them. A key strength of the framework is that it also aims to ensure that the results of the program are maintained over time in the communities where it is implemented, key actors from within them, as leaders, educators, and local authorities are trained in conducting the actions of the model, mainly in developing the workshops that compose each module. A second strength of the model is that it is evaluated with a mixed methods approach to adapt it to the context of the communities where it is implemented and to generate actionable recommendations to decision takers and public policy development.

No. 57

Natural Disasters and Mental Health

Poster Presenter: Steven P. Gargano

Co-Author: Sy Atezaz Saeed, M.D., M.S.

SUMMARY:

Natural disasters are large-scale adverse events resulting from natural processes of the earth, often associated with death, trauma, and destruction of property. They threaten harm or death to a large group of people; cause disruption of services and social networks and a communal loss of resources; and involve identifiable mental and physical health outcomes, among those affected. While majority of individuals who experience a traumatic event due to natural disasters do not develop psychopathology, natural disasters can threaten our psychological well-being in many ways and they can result in both short and long-term psychological distress and thus create a significant burden of mental health conditions on individuals and the community affected by them. In this paper we provide a narrative review that focuses on the mental health effects of natural disasters. We discuss effective, evidence-based interventions that can help enhance the sense of safety, hope, and optimism, as well as serve to promote social connectedness for those who are impacted. We describe how these interventions, developed by keeping in mind the cultural context and the needs of the community, can be provided pre, peri and post-disaster period to improve the adverse mental health effects of the disaster.

No. 58

A Comparison of Mainstream and Social Media Reporting of Suicide Between Men and Women

Poster Presenter: Tina Guo

SUMMARY:

Purpose: The Werther Effect describes how suicides increase following publicized stories of suicide death, while the Papageno Effect refers to a decrease in suicides following publicized stories of crisis mastery and survival. A number of features of suicide-related media reporting are putatively harmful and putatively protective. This study aimed to identify differences in these features between media articles about suicide with different gender foci. **Methods:** Articles published between 2011 and 2014 from 12 major Canadian publications, as well as social media posts from Twitter published from July 1, 2015 to June 30, 2016 pertaining to suicide were identified. Each article and post was assigned to one of four

gender foci: “male”, “female”, “both”, or “neither”. Articles and posts were also coded according to whether they contained each of 54 and 62 variables of interest, respectively. Logistic regression analyses identified associations between gender focus and variables of interest. **Results:** A total of 6,367 suicide-related articles and 787 tweets were examined in this study. Features of mainstream media articles most strongly associated with a male gender focus were mass murder-suicide (OR 83.33), firearm (OR 8.77), and celebrity suicide (OR 4.98). Features most strongly associated with female gender were asphyxia other than by car exhaust (OR 4.75), youth (OR 3.71), and assisted suicide (OR 3.52). The feature most strongly associated with male gender focus tweets was firearm (OR 19.61). Features most strongly associated with female gender were celebrity relations (OR 22.84), victims of aggression (OR 12.27), and self-poisoning (OR 7.94).

Conclusions: More research in this area is needed to clarify the factors that influence how suicide is portrayed in traditional and social media depending on the article's or post's gender focus.

No. 59

Effective Dissemination of an E-Learning Neurology Curriculum for Psychiatry Residents

Poster Presenter: Christine DeCaire, M.D.

Co-Authors: Jinal Rajendrakumar Patel, M.B.B.S., Nuri Jacoby, Daniel Shalev, M.D.

SUMMARY:

Background: Psychiatry residents must complete neurology rotations per ACGME, however, this training is not standardized between residency programs. LearnNeuroPsych.com is a novel, interactive, publicly available, neurology e-learning curriculum that is specifically geared towards psychiatry residents. The curriculum can be used by residency programs and individuals with the goal of supplementing clinical neurology with psychiatry-specific neurology didactics. **Methods:** The curriculum design was informed by research on neurology education in psychiatry residency as well as surveys of an expert panel of psychiatrists and neuropsychiatrists involved in graduate medical education. It consists of ten case-based modules divided into sections, with modules that focus on the

neurocognitive exam as well as neurocognitive and movement disorders. Residents completed the modules on either a computer, an iPad, or a mobile device. **Results:** 78/80 residents completed the full curriculum, with one completing 7/10 and another completing 1/10 modules. 60/80 residents completed the pre-and post-attitude and confidence surveys, and 50/80 residents completed the pre-and post-knowledge surveys. Three of nine attitude items showed significant differences between pre and post-instruction ratings. Specifically, residents more strongly disagreed with the statements “managing dementia is more often frustrating than rewarding” (pre mean=2.32, post=2.68, $p=0.004$), “I feel frustrated because I don’t know how to effectively treat people with dementia” (pre mean= 2.05, post=2.95, $p=0.000$), and “I would enjoy pursuing further training on working with patients with neuropsychiatric disorders” (pre mean=1.95, post=2.18, $p=0.047$). There was no shift in overall attitude score or confidence ratings. There was a small but significant improvement in the total number of knowledge items answered correctly (pre mean = 8.73, post=10.44, $p=0.003$), with 14/22 individual items having significantly higher accuracies on post-test. **Discussion:** With the pilot of the curriculum complete, our goal is to disseminate the modules through contact with psychiatry residency education leads, psychiatry conferences, and professional liaison with organisations involved in psychiatry and medical education. **Conclusion:** Our goal is to standardise neurology education provided to psychiatry residents, in a simple, user-friendly method that is available nation-wide. Plans to disseminate the curriculum will be accomplished through both small and large-scale approaches; from circulation amongst psychiatry residencies, to national advertising at conferences. Surveys will continue to be used in order to evaluate the effectiveness of these e-learning modules and any need for potential curriculum adaptation. Our aim is to continue tracking the success of our curriculum as well as our dissemination strategies by utilizing longitudinal studies, employed to assess the spread and impact of LearnNeuroPsych.com over time.

No. 60**Clinical Outcomes of Psychiatric Medications in Encephalitis and Multiple Sclerosis**

Poster Presenter: Stephen Sai Folmsbee

Co-Author: Scheherazade Le

SUMMARY:

Introduction: Psychiatric medications, such as selective serotonin reuptake inhibitors (SSRIs) and antipsychotics, are frequently used in neuroinflammatory disorders, such as encephalitis and multiple sclerosis (MS). Although these medications are prescribed for psychiatric symptoms, little is known about how these medications affect clinical outcomes. Therefore, this retrospective study investigates how treatment with SSRIs and antipsychotic medications in these neuroinflammatory diseases are associated with differences in hospital length-of-stay (LOS) and mortality. Methods: In collaboration with the Atropos Health system (www.atroposhealth.com), we retrospectively evaluated all the adults in the Stanford Healthcare system from 2008-2022 diagnosed with either encephalitis (ICD 9/10 codes 323.81 and G04.81) or MS (ICD 9/10 codes 340 and G35), and subdivided them into those who did or did not receive SSRI or antipsychotic medications. From this, we analyzed whether outcomes, including LOS and mortality, differed in subjects exposed to these medications. Results: For individuals with encephalitis (n=193), about 47% (n=90) received antipsychotic medications while inpatient. The most common antipsychotics given were haloperidol, quetiapine, and olanzapine. Those exposed to antipsychotics had a significantly increased mean LOS (12.69 vs 21.33 days, $p < 0.0001$) even after correcting for co-morbidity using propensity score matching (14.33 vs 21.36, $p < 0.01$). There was no statistically significant difference in mortality. For only inpatients with MS (n=623), about 36% (n=226) of patients were treated with an antipsychotic medication, which was associated with a significant increase in mean LOS (8.1 vs. 5.2, $p < 0.00001$), even after correcting for co-morbidity (7.5 vs. 5.1, $p < 0.01$). For inpatient and outpatient individuals with MS (n=2776), 13% (n=373) were treated with SSRIs. After correcting for co-morbidity, there was a trend towards decreased mortality in those taking SSRIs ($p=0.0547$). Although there was significant increase

in mortality in inpatient individuals with MS exposed to antipsychotics ($p=0.011$), this difference was not significant after propensity-score matching, indicating that this difference may be due to the population receiving antipsychotics already having significantly higher co-morbidities. Conclusions: First, a substantial proportion of patients were treated with SSRIs and antipsychotics, illustrating the high frequency of psychiatric symptoms in these neuroinflammatory disorders. Furthermore, treatment with antipsychotics was associated with a statistically significant increase in LOS in both encephalitis and MS, but whether this result reflects differences in the patient population requiring antipsychotics or an effect of the medications themselves remain unclear. Finally, the possible protective effect of SSRI treatment in MS on mortality indicates that these medications merit further investigation into their role in treatment.

No. 61**Polyembolokoilamania: The Challenges of Psychiatric and Surgical Management for an Underrecognized Psychiatric Condition**

Poster Presenter: Talia Ginsberg

Co-Authors: Gregory Sprout, Danielle Wenger, Gwen Levitt

SUMMARY:

Background Polyembolokoilamania refers to repeated and deliberate insertion of foreign bodies into bodily orifices, most commonly the rectum, vagina, or urethra¹. Some of the common motives of polyembolokoilamania include sexual gratification, drug smuggling ("body-packing"), and suicide². However, when the motive is unexplained, not for benign reasons (e.g. putting cotton swabs in one's ear), and causing distress, a psychiatric condition should be considered. Lack of recognition as a psychiatric diagnosis means many patients do not receive a diagnosis and proper psychiatric care³. The purpose of this study is to review polyembolokoilamania and its relation to psychiatric and surgical management. **Methods** A targeted literature review was conducted to investigate the prevalence, demographics, psychiatric diagnoses, and recommended treatment for patients with polyembolokoilamania. The review was performed

using PubMed with the search terms: “polyembolokoilamania”, “foreign body insertion”, “psychiatric disorder” AND “foreign body”, “psychiatry” AND “foreign body”. A total of 47 studies were included in this review. A review of the DSM-V was completed to investigate the criteria and classification of related psychiatric disorders. **Results** The prevalence of polyembolokoilamania is unknown due to a small percentage requiring medical care. Of the patients identified, many are diagnosed with psychiatric conditions such as obsessive compulsive disorder, anxiety, depression, borderline personality disorder, psychosis, and factitious disorder. Most of the foreign bodies used are household objects, with bottles and glasses accounting for over 40% of cases. The majority of patients are male (~80% of cases) and in their 30s or 40s. Large institutions treat around one patient per month for foreign body removal. Rectal foreign body removal requires surgical involvement in 25 to 40% of cases, which may include an enterotomy with possible proctectomy or colectomy. Serious risks include bleeding, obstruction, perforation, sepsis, and even death. The in-hospital mortality rate for rectal polyembolokoilamania is estimated to be 1 to 2%. Psychiatric treatment strategies vary and can include cognitive behavioral approaches with or without antidepressants. One study showed successful treatment of urethral polyembolokoilamania with Electroshock Therapy. There are no current guidelines related to obtaining a psychiatric consult before discharge. **Conclusions** Polyembolokoilamania is a rare psychiatric condition that is largely under- or misdiagnosed. This review suggests that polyembolokoilamania should be formally recognized as a serious psychiatric condition. Establishment of a formal diagnosis and ICD-10-CM code has the potential to improve patient outcomes due to greater patient identification. Most importantly, increased collaboration between psychiatry and surgery departments is warranted to ensure patients receive proper psychiatric assessment and care before discharge.

No. 62

Trichtok: A Cross-Sectional Study of Trichotillomania Content Quality on Tiktok

Poster Presenter: Raquel Wescott

Co-Authors: Ramneek Dhami, Tatiana Nikooei, Melissa Piasecki

SUMMARY:

Background: Trichotillomania is a disorder characterized by an abnormal urge to pull out one's own hair, resulting in hair loss and potential functional impairment. In this disorder, hair is most commonly pulled from the scalp, eyelashes, and eyebrows, but can occur elsewhere on the body [1]. Studies have shown that TikTok is increasing in popularity as a way to disseminate medical information, and despite limitations regarding misinformation and credibility, there are significant benefits for using this platform to spread public health and medical information [2]. The goal of this project is to analyze the quality and type of information available in the top-100 liked videos regarding trichotillomania on TikTok. This study allows medical professionals insight into misinformation from content creators via social media and identifies opportunities to create accurate, beneficial, and current information. **Methods:** On November 21, 2022, we searched TikTok using the search term #trichotillomania, sorted by most liked videos, and identified the top 132. Three independent reviewers analyzed the videos, excluding those not in English, irrelevant to trichotillomania, and duplicates, resulting in 100 included videos. Videos were scored using the Global Quality Scale (GQS) and the DISCERN tool. GQS is a one question score of quality ranging from 1 (poor quality) to 5 (excellent quality). The DISCERN tool is a 16-question analysis ranging from a score of 1 to 5, rating if the video contains content that makes it a higher quality resource, and rating overall quality on the last question (Questions 1-15: 1 = no, 3 = partially, 5 = yes; Question 16: 1 = low, 3 = moderate, 5 = high) [3, 4]. **Results:** The top 100 videos had a combined total of 25,896,400 likes, with an average of 258,964 likes [SD 414,488] per video. The mean GQS score was 1.71 [SD 0.91] and mean DISCERN score was 1.48 [SD 0.39]. When the videos were categorized by content type, there were three groups: Educational Content, Personal Anecdote, and Other. The mean GQS and DISCERN scores were 2.71 [SD 0.63] and 1.75 [SD 0.25] for Educational Content, 1.60 [SD 0.56] and 1.45 [SD 0.21] for Personal Anecdote, and 1.52 [SD 0.44] and 1.50 [SD 0.19] for

Other, respectively. Only 1% (n=1) of the videos were created by a physician. Conclusion: Overall, there is a significant lack of physician created videos on TikTok on trichotillomania. Given the mean GQS and DISCERN scores, the average video scored generally poorly on content quality, creating potential for lack of knowledge and misinformation regarding trichotillomania. This demonstrates the need for physicians and other healthcare professionals to create and/or disseminate accurate and reliable information. With the growing use of TikTok for educational purposes, improving content quality of videos should be a priority to provide accurate information regarding medical and mental health conditions and their treatment. This research required no funding.

No. 63

Medical Improv Increases Perspective Taking and Decreases Burnout in Medical Students: A Randomized Controlled Trial

Poster Presenter: Maya Amjadi

Co-Authors: Amy Zelenski, Jacqueline Kociubuk

SUMMARY:

Background: Empathy decreases during medical training while burnout increases. Re-introducing empathy through medical improv may improve the wellness of medical students by teaching skills that promote effective teamwork and communication. **Methods:** Medical students (n=51) were recruited and randomized to either control (n=25) or intervention group (n=26). Both groups completed the Interpersonal Reactivity Index (IRI), a measure of empathy with four domains: personal distress, perspective taking, fantasy and empathic concern. The intervention group participated in at least three innovative medical improv zoom sessions which consisted of improv exercises and debriefs that connected the exercises to experiences in medical school. Topics covered included adaptability, listening, being a team player, expression and recognition of emotion, and status. Control and intervention groups completed the IRI post-intervention. A mixed-methods model was used. Quantitative analysis was done using STATA SE 15. Qualitative analysis was aided by NVivo. **Results:** From pre- to post-survey, the intervention group had

no change in personal distress (8.0, 8.0 p=1.0); and increases in perspective taking (20.7, 21.4 p=0.30) and empathic concern (21.8, 23.0, p=0.14). Their fantasy scores significantly improved (15.8, 18.5, p=0.05). The control group showed increased personal distress (9.1, 10.7, p=0.05) and decreased perspective taking (20.1, 18.6, p=0.03). Comparing the average change in scores between improv and control groups from pre- to post-survey, perspective taking was significantly different (0.7, -1.5, p=0.04) with a large effect size (Cohen's d = -0.81). Subgroup analysis comparing early (first and second years) and later (third through fifth year) students revealed that later stage students in the improv group had higher empathic concern than control group (2.0, -0.5, p=0.03, Cohen's d = -1.68). Furthermore, personal distress did not increase in those that received the improv intervention. Personal distress in the control group increased slightly for early stage students (0.71) and increased more in the later stage students (3.2) with a large effect size (-0.70). Qualitative analysis of intervention session transcripts revealed common themes: flexibility, team cohesion, listening, expressing emotion, power differentials, perceptions of challenge and uncertainty. **Conclusions:** This randomized controlled trial investigated the effects of medical improv on medical student empathy with specific attention to protective (perspective taking) and harmful (personal distress) factors that lead to burnout. We found that medical students benefited from and enjoyed zoom improv sessions. Those that received the improv intervention had an increase in fantasy and had improved perspective taking compared to the control group. Improv appeared to be protective as the intervention group did not have an increase in personal distress, unlike the control group.

No. 64

Identifying Individual Variations of Residents' Coping Skills in Response to Stress

Poster Presenter: Ozge Ceren Amuk

Co-Authors: Nauman Ashraf, Kailey Kowalski

SUMMARY:

Background: Enhancing resident wellness is significant for the development of a caring and resilient physician and correlated with decreased

emotional stress.(1) While the Accreditation Council for Graduate Medical Education (ACGME) emphasized promoting resident wellness within residency program training, there are areas of improvement for developing individualized wellness programs.(2) It is essential to understand the risk factors that lead to burnout and affect residents' well-being in order to tailor the wellness programs based on individual backgrounds and coping skills.(3)

Aim: To identify residents' individual coping mechanisms in stressful situations and define the expectations from an ideal wellness program in residency training that is tailored to trainees' individual needs. **Methods:** We conducted an online survey evaluating the concepts behind how residents in the graduate medical education program respond to stressful situations and identifying the specific behavioral patterns that are helpful for them to cope with stress. We distributed the survey to 58 residents of the GME programs at Ozark Center and Freeman Hospital from different specialties in November 2022. We included a total of 34 residents who participated via electronic study consent and completed the questionnaire. We performed a qualitative analysis of the respondent's views on the characteristics of an ideal wellness program comprising six themes, including acknowledgment and appreciation, leisure time, mentoring and training activities, resource allocation, social activities, workload, and working environment. We also assessed demographic correlates that might link to variations in perspective from an ideal wellness program to apply nuances and tailor an inclusive wellness program considering diversity. **Results:** Our results suggested that, for "Acknowledgement and Appreciation," respondents stated the need for monthly discussion sessions for ongoing struggles. For "leisure time," the need for a scheduled free time built into the curriculum for residents to use based on their individual needs is emphasized, as is the need to enhance sleep hygiene and provide time for exercise. For "mentoring and training activities," the need for formal mentoring programs with scheduled check-ins to train the residents and the need for the training activities to be tailored to individual needs are emphasized. For "resource allocation," the necessity of funding for physical wellness as well as to see a therapist of the resident's choice. For enhancing "social activities,"

team-based social events to improve teamwork are suggested. The "workload and working environment," domain includes cultivating a supportive environment with a better work-life balance. **Conclusion:** Identifying residents' responses to stress and defining expectations while taking into account variations could guide other residency training programs to launch individualized wellness innovations to address physician burnout.

No. 65

It's What Matters on the Inside: A Quality Improvement Project to Study Effects of an Inner Resilience and Compassion Training Curriculum in Residency

Poster Presenter: Anish Dhamija

Co-Author: Yash Joshi

SUMMARY:

Background: Burnout is a critical issue in postgraduate training. Many strategies to ameliorate burnout for residents prioritize modifying work-related stressors, but these are unlikely to be feasible or scalable across different clinical contexts. Recent studies have identified individual factors that also affect risk for burnout (i.e. perfectionism, compassion fatigue, moral injury, secondary trauma, etc.), which may be useful targets for interventions. This quality improvement study aimed to adapt a curriculum focusing on these individual factors and determine whether it could be integrated into the UCSD Family Medicine and Plastic Surgery Residencies didactics. Here, we present an initial evaluation of the newly developed Inner Compassion and Resilience Training (IRCT) by residents. **Methods:** IRCT is a curriculum with interactive didactic components adapted in two different formats – six one-hour sessions for the Family Medicine (FM) cohort (n=12), and two three-hour workshops for the Plastic Surgery (PS) residents (n=9). Residents in both cohorts were assessed on measures of compassion and resilience to identify the degree of burnout present in this population prior to beginning didactics. Curricula was assessed on 5-point Likert scales of satisfaction, ease, and applicability of this course for participants. **Results:** Residents were very satisfied with the overall quality and teaching methodology of the IRCT course with the PS cohort

reporting greater overall satisfaction (FM cohort average = 4.43/5, PS cohort average = 4.87/5, $p < 0.05$) and greater satisfaction with teaching methodology (FM cohort average = 4.37/5, PS cohort average = 4.87/5, $p < 0.005$). Both cohorts were likely to apply course concepts to their lives (FM cohort average = 4.24/5, PS cohort average = 4.40/5, $p = 0.55$). In addition, IRCT was associated with changes on post-course measures of burnout, compassion and self-compassion. Conclusions: IRCT is feasible to implement in didactics, relevant, and well-received by UCSD residents in Family Medicine and Plastic Surgery. Plastic Surgery residents' greater satisfaction with the material and the teaching may be related to the consolidated structure of the IRCT curriculum, timing of their didactics, differences in resident populations, and teacher experience. These findings were limited by small sample size, but will inform a future intervention trial to reduce and prevent burnout among residents of other disciplines beyond Family Medicine and Plastic Surgery.

No. 66

Identifying Reproductive Psychiatry Care Deserts in the United States

Poster Presenter: Amanda Koire, M.D., Ph.D.

Co-Authors: Mariella Suleiman, Polina Teslyar, M.D.

SUMMARY:

Background: Perinatal mental health concerns are common: 86% of women ultimately give birth and approximately 20% will experience a peripartum mood episode. Non-psychiatrist physicians have historically expressed a lack of training and confidence regarding mental health treatment in peripartum women and prefer involvement of psychiatry subspecialty care (LaRocco-Cockburn et al, 2013). However, reproductive psychiatry access in academic centers is limited, with prospective self-referral patients encountering low success rates and long wait times (Morain et al, 2022), and long waits significantly increase odds of worsening depression and new onset self-harm ideation (Koire et al, 2022). This study aims to identify and quantify state-level deserts in community-based reproductive psychiatry care. **Methods:** This study primarily analyzed publicly accessible data. The number of reproductive age women ages 15-49 living in each state was obtained

from the 2020 Census. Number of reproductive psychiatrists per state was defined as the number of psychiatrists searchable via Psychology Today who indicate 'pregnancy, prenatal, postpartum' as an 'Issue' they are willing to treat. Google Trends provided the relative predominance by state of the search term 'postpartum depression'. Degree of abortion restrictiveness was defined by the Guttmacher Institute which attaches to each state a designation ranging from 'most protective' to 'most restrictive' which was converted to a Likert scale for analysis. **Results:** 23 states had a ratio of less than one psychiatrist advertising as treating in the peripartum per 100,000 reproductive age women. South Dakota, Montana, and Mississippi demonstrated to lowest density of reproductive psychiatric care while New York, Connecticut, and New Jersey demonstrated the highest. Where the density of available reproductive psychiatric care was lower, Google searches for 'postpartum depression' were more prevalent ($R = -0.47$, $p = 0.0006$). More restrictive state policies on abortion were correlated both to lower density of available reproductive psychiatric care ($R = -0.46$, $p = 0.0007$) and higher prevalence of Google searches for 'postpartum depression' ($R = 0.55$, $p < 0.0001$). **Conclusions:** When attempting to self-refer in the community, individuals confront a scarcity of psychiatrists comfortable with care in the peripartum in most states. That reproductive psychiatric care deserts correlate strongly with higher prevalence of Google searches for 'postpartum depression' suggests an unmet need for services. States with restrictive abortion policies are likely to see higher levels of psychological distress the peripartum population (Sasaki et al, 2022) yet are highly underserved currently with regards to reproductive psychiatric care.

No. 67

Whats Cooking in the Kitchen? Drawing Parallels Between Two Newer Substances of Abuse, Kratom and Krokodil

Poster Presenter: Karuna Sandra Thomas, M.D., M.B.B.S.

Co-Author: Caridad Ponce Martinez, M.D.

SUMMARY:

Mr A., a 42 year old unresponsive male was brought in by EMS in ventricular tachycardia with pinpoint pupils. Naloxone was given and he was treated symptomatically. He reported using KRATOM for chronic pain and did not know that he could overdose on it. On observation, he did not demonstrate any symptoms of opioid withdrawal and was discharged within 3 days. Miss B., a 34 year old female was transferred with sepsis and symptoms of a pulmonary embolism. Chart review showed frequent hospitalizations over the last year for chronic lower extremity ulcerations, recurrent DVTs, endocarditis, and septic cerebral emboli. She provided a history of KROKODIL use. Patient reported intense cravings and had features of opioid withdrawal. She was started on methadone; the dosage had to be regularly increased due to craving. She remained seriously ill, yet threatened to discharge against medical advice if IV Morphine was not given. Kratom and Krokodil are newer substances of abuse in the US that act on mu-opioid receptors and cause euphoria similar to that of morphine. We compare these two substances in terms of epidemiology, pharmacokinetics, clinical presentation and trajectory of course. Kratom is a **natural** substance, obtained from the leaves of a tropical plant *Mitragyna speciosa*. The most potent alkaloid, 7-hydroxymitragynine, is **7x more potent than morphine**. There are over 2 million users in the US where it is a **legal substance**. It is available as a **green powder**, and consumed as a **liquid brew**. Krokodil is the street name for desomorphine, an illegal drug which is a **synthetic** derivative of codeine, manufactured easily from common ingredients like paint thinners and match sticks. It is **10x more potent than morphine**. It is a **yellow solution** and is **injected intravenously**. Both drugs are cheaper than heroin and are undetected in routine drug screens. Users of both drugs tend to have a history of opioid use. Kratom has a **long half-life**. Use is typical in an **older population**. It is beneficial to reduce opioid craving and treat chronic pain. Krokodil has a **shorter half-life**, leading to faster withdrawal and craving. Use is common in **younger individuals**. Typical complications of opioid use, like respiratory depression, are uncommon with both drugs. However, **cardiac arrhythmias, seizures and hepatotoxicity** are reported side effects from

Kratom. Krokodil causes **immediate thrombophlebitis, hyper pigmented scaling and later multi organ dysfunction**. To summarise, Kratom and Krokodil are common substances of abuse in the US. There is a misconception that Kratom is a harmless herbal supplement and that Krokodil is unavailable in the US. This poster aims to heighten awareness, which would help screen, diagnose and treat individuals using these substances earlier, as the eye does not see what the mind does not know. Knowledge of potential consequences of these substances can also help physicians educate their patients, particularly when a harm reduction approach is indicated.

No. 68

Quality and Safety Outcomes Pre- And Post-Implementation of a Centralized Multi-Hospital Telepsychiatry Consultation Service for Acute Care Settings

Poster Presenter: Sam Rashkovich

Lead Author: Wenna Xi

Co-Authors: Mohit Manoj Sharma, Jyotishman Pathak, Christina Shayevitz

SUMMARY:

Background: Telepsychiatry is vital to mental health care delivery in acute care settings, especially in the COVID-19 era. It has the potential to improve quality and safety outcomes through increased access to care and shorter time to consult. However, the literature on consultation-liaison telepsychiatry is limited in scale, particularly with respect to its impact on healthcare utilization and safety metrics.

Methods: This retrospective study focused on patients evaluated by psychiatry during an emergency department (ED) or inpatient (IP) visit at two NewYork-Presbyterian Hospital (NYP) sites between 12/2016 and 10/2021. Visits' length of stay (LOS), use of sedative psychotropic medications, use of 1:1 safety observation periods, 30-day all-cause ED return rate, and 30-day all-cause IP readmission were compared before and after the implementation of the NYP Telepsychiatry Consultation Service. The post-implementation phase was further divided into a pre-COVID phase (before 3/16/2020) and a post-COVID phase. Linear regression, logistic regression, and Quasi-Poisson regression models were used for

the appropriate type of outcome, controlling for hospital site, sex, race, age, primary language, diagnoses and medications history. **Results:** There were 3567 visits in the ED cohort (1399 pre-implementation) and 4642 visits in the IP cohort (2255 pre-implementation). When comparing pre- and post-implementation before COVID, patients in the ED cohort were less likely to be readmitted to the hospital within 30 days (OR=0.61), after implementation. Patients in the IP cohort were more likely to be placed under 1:1 observation (OR=1.21) post-implementation. When comparing the two post-implementation phases, pre- and post-COVID, patients in the ED cohort were less likely to be placed under observation (OR=0.72) after COVID, but those who were, remained under observation for longer (diff=0.13 on log scale); patients administered intramuscular diphenhydramine were also given lower total dosage (diff=-0.43 on log scale). Patients in the IP cohort had a 7% shorter LOS, were more likely to be placed under 1:1 observation (OR=1.29), and had a decreased 30-day ED return rate (OR=0.73) post-COVID. **Conclusion:** Implementation of the NYP Telepsychiatry Consultation Service before COVID demonstrated several improvements in quality and safety outcomes in both the ED and IP settings, consistent with the increased responsiveness that it made possible. The lack of increases in adverse safety effects, in the form of elevated likelihood or dosage of sedative medications, also supports telepsychiatry as a safe modality of care delivery in acute care settings. Post-COVID, there is continued evidence for the safety of hospital-based telepsychiatry services, even amidst an experiential increase in psychiatric-related patient acuity during the pandemic. But other quality-related findings may be confounded by pandemic-related structural shifts, such as patient hospital avoidance.

No. 69

Outcomes, Perceptions, and Cost-Effectiveness of Recreation for Adults With Chronic Moderate-to-Severe Acquired Brain Injury

Poster Presenter: Mayada Saadoun, M.D., M.P.H., M.Sc.

Co-Authors: Laura Lorenz, Hebatallah Naim Ali, Donald Shepard, Sakshi Prasad

SUMMARY:

Introduction and objectives: Acquired Brain Injury (ABI) from traumatic brain injury, stroke, infectious disease, metabolic disorders, and brain tumors is associated with significant physical, neurological, and psychosocial impairments, explaining its high economic burden for individuals, families, and funders of long-term care. In the chronic phase of ABI, government subsidies encourage participation in community-based recreation activities. This study examined functional and psychosocial impact and economic value of participation by people with chronic moderate-to-severe ABI in recreation, including adaptive exercise programming. **Methods:** This exploratory mixed-method study included data on physical, psychosocial, and cognitive status (outcomes) collected using the Mayo-Portland Adaptability Inventory-4 (MPAI-4) in 2013-2015 for 36 adults in ABI group homes in eastern Massachusetts. Ordinary least squares regression and economic analyses were performed to explore any association between participation in recreation and outcomes. Qualitative interviews (n=31) on exercise program perceptions, outcomes, barriers and facilitators, and motivations were collected through interviews with participants, nonparticipants, staff, family members, and trainers in 2015 (n=21) and 2016 (n=10) and analyzed for recurring themes. **Results:** Participation in the exercise program was significantly associated with better functional status. In 2014, 20 residents participated in exercise programming (average±SD 104±32 hours/person/year). Non-participants (n=16) showed a steeper deterioration in function. Exercise participants' MPAI-4 score (baseline SD 9.5) fell (improved) by 2.17 points (p=0.02) over one year, representing a "small" effect size (0.23 SDs). Program cost was \$1500/person/year; annual spending of \$690 on exercise programming resulted in one unit of improvement in MPAI-4. Interview respondents reported improved health (physical, psychological, and cognitive) among exercise participants and an improved residential environment. Psychological barriers to participation in exercise were depression, insomnia, fear, anxiety, and stigma. **Conclusions and Recommendations:** Participation in the exercise program was associated with better functional outcome among people with chronic ABI and is potentially cost-effective. By encouraging people

with chronic ABI to exercise and addressing psychological barriers to participation, clinical providers could contribute to reducing biopsychosocial and economic burdens associated with ABI. Organizations and policies serving people with chronic ABI could benefit from reduced costs of care associated with improved function. Future economic evaluation should track functional and psycho-social outcomes, conduct periodic interviews on exercise perceptions, and explore potential impacts of recreation participation, including exercise participation, on long-term care and societal costs. This study was funded by Supportive Living Inc.

No. 70

Enhancing Engagement in a Real-World Pilot of KP Accelerate, an Innovative Depression Care Treatment Pathway at Kaiser Permanente

Poster Presenter: Tiffany Y. Sui, M.D.

Lead Author: Honor Hsin, M.D., Ph.D.

Co-Author: Bharat Reddy Sampathi, M.D.

SUMMARY:

Background: In the U.S., 8.1% of adults experienced depression during 2013-2016, and the percentage of adults with depression has remained similar between 2007-2016 [1]. Real-world adherence to evidence-based therapies is often limited, with estimated dropout rates from cognitive behavioral therapy of 50% [2]. With increasing use of telehealth treatment modalities especially throughout the COVID-19 pandemic [3], novel models of care delivery such as the use of digital navigators have been proposed [4]. In 2022, an outpatient psychiatry clinic within Kaiser Permanente (KP) launched an 8-week virtual therapy ("KP Accelerate"), which engages a licensed psychiatric technician (LPT) to boost patient adherence to treatment. Here, we report results of a quality improvement project to improve KP Accelerate group therapy attendance rates through the establishment of LPT workflows. This project was conducted at a large community health center within KP Northern California, in the department of Adult Psychiatry. The study population was comprised of adult patients who had signed up for KP Accelerate. Methods: This project used QI methodology to target group attendance rate per cohort-week with a SMART goal of

maintaining 70% group attendance rate. Balancing measures were patient satisfaction and therapist/LPT time. This project spanned two cohorts ("C1" and "C2"), for a total of 16 weeks. Plan-do-study-act cycle 1 (PDSA) was implemented during week 1 of C2 to target the group attendance rate. Patients were called the day prior to group by the LPT to review how to digitally access the telehealth platform, and the LPT was available during the group to troubleshoot technology issues. PDSA 2 was implemented during week 2 of C2 where the LPT called patients directly if they were not logged in after 5mins of group initiation. Results: We found that LPT role definition and using a workflow for digital navigation boosted KP Accelerate group attendance rates to meet our target goal. Group attendance was maintained at 70% or higher for 6 of 8 weeks during C2. We also found that this workflow significantly alleviated estimates of therapist time spent on non-clinical engagement duties in the treatment program by ~90%. Initial feedback from patients about the program were positive, and specifically called out the benefits of an LPT role in the program. Conclusions: The interventions that were trialed in this project allowed for increased and continued engagement of patients in the depression treatment program with respect to our initial outcome of group therapy attendance. These interventions were designed to be sustainable as the program continues to move forward with additional cohort. Future PDSA cycles will focus on maintenance of the improved group attendance rate, as well as development of additional LPT workflows to enhance other outcomes of improved individual therapy attendance and homework adherence.

No. 71

Self Reported Depression Among Shia Muslims: A Cross Sectional Study

Poster Presenter: Sibtain Kazmi

Co-Author: Sadaf Sajjad

SUMMARY:

Shia Muslims are a minority group within the Muslim population. Not much research has been done in the prevalence of mood disorders within this population group. Muslims represent a growing patient population within the US. Understanding health

trends can potentially help clinicians diagnose and treat disorders better within this group. A questionnaire made up of Beck's Depression Scale, the Centrality of Religiosity Scale and demographic questions was distributed online to a population of Shia Muslims to determine if religiosity had any effect on the prevalence of depression and anxiety within this Muslim minority population. The purpose was to determine factors that may increase or decrease prevalence of these disorders that can help clinicians better direct patient treatment and management in these groups. A descriptive cross-sectional study was done using an online survey during the month of July 2022. Data analysis was done using Microsoft Excel. Amongst 152 participants, 73.6% scored as highly religious and 84.8% of the 73.6% did not show signs of depression. Pearson's correlation of religiosity level and depression level was found to be at -0.44 with a $p < 0.05$. Our data has shown that religiosity possibly has a protective effect on mental health. More research with a bigger sample size with a wider range of religiosity level would be needed to further strengthen this correlation. Presenting this data to Shia organizations can give them insight into the mental state of their mosque attendees and focus on different aspects of their religion that can improve depression levels.

No. 72

Combating Human Trafficking Through Education and Training: The Creation of an Outpatient Psychiatry Elective Experience

Poster Presenter: Lujain Alhajji, M.D.

Co-Authors: Mitchell Rovner, JoNell Potter

SUMMARY:

Background: Human trafficking involves the use of force, fraud, or coercion to obtain labor or commercial sex. Human trafficking leads to acute and chronic psychiatric sequelae. Psychiatrists, including trainees, seldom receive education or training on human trafficking. **Methods:** Trafficking Healthcare Resources and Interdisciplinary Victim Services and Education (THRIVE) clinic is an outpatient multidisciplinary clinic designed in 2016 to provide trafficked persons with comprehensive medical and mental health services by staff who

have experience caring for trafficked persons. The THRIVE psychiatry elective module was created at our institution in 2020, and a description of the model is discussed below. **Results:** The total number of patient referrals to THRIVE since 2016 is 262 (including 111 to psychiatry), and 648 encounters were completed by psychiatry. Post-traumatic stress disorder, mood, anxiety, and substance use disorders are THRIVE patients' most common psychiatric diagnoses. The one-year-long THRIVE elective module is offered to up to three psychiatry trainees at PGY-4 level or higher, including consultation-liaison and child and adolescent psychiatry fellows. All THRIVE trainees receive education and training on trauma-informed care. Their clinical duties include direct in-person and telehealth patient care, assessment of new referrals, collaboration with multidisciplinary team members including internal medicine and obstetrics-gynecology, active communication with patient navigators and survivor advocates, and engagement in the THRIVE steering committee. Our elective module helps integrate human trafficking education and training early in senior residency and fellowship. It allows for psychiatry trainees to become future healthcare trainers in combating human trafficking. It also lends an opportunity to be immersed in integrated care and provide trauma-informed psychiatric care for trafficked patients. **Conclusion:** This elective module is a unique opportunity for psychiatry trainees to provide comprehensive psychiatric care to patients with lived human trafficking experience.

No. 73

Supporting the Future of Medicine: Student Mental Health Services in Medical School

Poster Presenter: Elijah W. Hale, M.S.

Co-Author: Rachel A. Davis, M.D.

SUMMARY:

Background: Mental health issues are common among US medical students, and the AAMC has established recommendations for mental health services for medical students. There is very little research that directly compares mental health services at medical schools across the United States and, to our knowledge, none that analyzes how well schools adhere to the established AAMC

recommendations. **Objective:** To determine whether mental health services at US medical schools adhere to established guidelines. **Methods:** From October 2021 to March 2022, we obtained student handbooks and policy manuals from 77% of the accredited LCME US medical schools. The AAMC guidelines were operationalized and placed into a rubric format. Each set of handbooks was independently scored against this rubric. A total of 120 handbooks were scored and the results were compiled. **Results:** Rates of overall adherence were very low, with only 13.3% of schools displaying adherence to the full set of AAMC guidelines. Partial adherence was higher, with 46.7% of schools meeting at least one of three guidelines. Criteria whose requirements reflected a standard for LCME accreditation displayed a higher rate of adherence. **Conclusion:** The low rates of adherence across medical schools, as measured by handbooks and Policies & Procedures manuals, represents an opportunity to improve the mental health services within US allopathic schools. An increase in adherence could be a step towards improving the mental health of US medical students.

No. 74

A Multi-Faceted Approach to Mentoring Towards a Diverse Workforce Development

Poster Presenter: Kiran Khalid, M.D.

Co-Author: Manal Khan, M.D.

SUMMARY:

International Medical Graduates (IMGs) comprise a significant part of psychiatric workforce in the United States (US). In 2012, an analysis revealed that one-third of the US psychiatry workforce was comprised of IMGs [1]. In contrast to this, a more recent overview of GME (2019-2020) revealed only 21% of the current psychiatry residents are IMGs [2], indicating a decline in the IMG recruitment into the postgraduate year (PGY)-1 classes. Despite the downward trend, IMG psychiatrists continue to play a unique and important role in mental health service delivery in the United States. Also keeping in mind the current immigrant trends are to continue, immigrants and their descendants will be responsible for 88% of the US population growth by 2065. [3] Therefore, a diverse physician workforce is

required to provide care for an increasingly diversifying patient population. The aspiring IMGs face several challenges as they pursue training in the United States [4]. One proposed solution to help them overcome these barriers has been that of peer and senior mentorship. The authors have designed multifaceted programming for IMG applicants, through their work with the non-profit organization, Pakistani American Psychiatrists in North America (PAPANA). This encompassed free webinars, free writing workshops, individual mentorship and engagement on social media and messaging platforms. Applicants commented on the helpfulness and utility of the comprehensive nature of the programming. This was a volunteer activity and there was no funding support for the mentorship.

No. 75

Suicidal Ideation and Attempts Among Children and Adolescents Admitted to a New York City Psychiatric Unit Before and During Covid-19

Poster Presenter: Parul Shanker, M.D.

SUMMARY:

Objectives: Child and adolescent mental health has been drastically impacted by the COVID-19 pandemic. We hypothesized that suicidal ideation (SI) and suicide attempts (SAs) would increase in the COVID era due to several stressors, including social isolation, the transition to virtual schooling, and disruptions in access to mental health services. We also hypothesized that established findings in the literature, such as prior SA as predictive of future SA, would be replicated and potentially impacted by COVID-specific factors. *Methods:* This study was determined to be exempt by institutional IRB review. Sociodemographic characteristics and key clinical data were extracted through a retrospective chart review of a diverse population of minors admitted to a 17-bed metropolitan psychiatric unit from June 2018 to November 2021 (n = 1101). Statistical calculations such as descriptive statistics, chi square tests, and logistic regression were used to compare associations in pre-COVID era to quarantine era to COVID era (time periods defined by NYC public school closures). *Results:* Sixty-eight percent of patients admitted from June 2018 to November 2021 presented with either SI or SA. The proportion of

patients presenting with SI decreased after the start of quarantine (49.6% in pre-COVID, 39.8% in quarantine, 38.4% in COVID era; $\chi^2 = 12.3$, $df = 2$, $p = .002$); however, the proportion of patients presenting with a SA increased after the start of quarantine (16.2% in pre-COVID, 26.6% in quarantine, 31.5% in COVID era; $\chi^2 = 36.0$, $df = 2$, $p < .001$). There were significant gender and racial differences with female, non-binary, and non-Black patients more likely to present for either SI or SA over the full study period (44.2% of males admitted for SI/SA compared to 78.2% of females and 90% of non-binary patients, $p < .001$; 58.3% of Black patients compared to 72.9% White, 72.5% Hispanic, and 70.8% Asian, $p < .001$). In terms of independent predictive factors, history of prior SA was found to increase the odds of admission for another attempt by 2.6x, however, this was only seen in the pre-COVID and COVID eras. Female gender was a predictive factor for SA in all time periods, and history of self-injurious behavior was a predictor of SI in all time periods. Higher number of psychiatric medications at time of admit lowered odds of admission for SI in the pre-COVID era as well as for admission for SA in the quarantine era. Child Protective Services (CPS) involvement lowered odds of admission for SA in all eras. *Conclusions:* Hospital admissions for youth SAs have increased in the COVID era, potentially due to decreased access to resources and subsequent lack of referrals for SI until the event of a SA. Patients with a history of SA require intensive care and likely medication management given risk of a repeat SA. Additionally, further involvement of governmental agencies (CPS) may help lower rates of admission for SA given protective safety features.

No. 76

Disposition Impossible: Decentralizing High Acuity and Complexity Inpatient Psychiatric Placements in Vermont

Poster Presenter: Kelley-Anne Cyzeski Klein, M.D.

Co-Authors: Allie Nerenberg, Emily Hawes

SUMMARY:

Just over ten years ago the solitary state hospital in the state of Vermont flooded during Tropical Storm Irene, leaving the system without state level inpatient psychiatric beds. In response, Vermont

rapidly shifted to a decentralized system of care. The “level 1” system was created, shifting funding and resources to general inpatient psychiatric units for a set number of beds to serve the states most complex and acute patients. Although the state hospital was rebuilt, it was completed with a lower capacity and the decentralized level 1 beds have expanded in both number and locale. This has impacted and benefitted the patient population by offering a variety of placement options for all patients meeting “level 1” criteria, including the forensic population. This novel structure of care is well illustrated in the case of Mr. K, who being held in corrections on assault charges. Mr. K had a known history of schizoaffective disorder, bipolar type, and was historically served by a community mental health agency. During the seven months he was held in corrections he decompensated psychiatrically. He became increasingly disorganized, threatening, and unable to care for himself. This progressed to him spending a vast majority of the time nude and yelling out, with his cell covered in feces. He was assessed and deemed to meet criteria for involuntary psychiatric hospitalization and level 1. At the time of his assessment there were no beds available at the state hospital, which was capped at 12. He was admitted to a level 1 bed in a separate psychiatric facility. This case illustrated the enhanced flexibility and ability to serve traditional exclusively state hospital served populations. Our decentralized system now consists of two hospitals outside of the state hospital and an additional 32 state level beds.

No. 77

To All the Overlooked Asian Women: A Study on Asian American Women Portrayals in Media and Impact on Self-Esteem and Mental Health

Poster Presenter: Miles Perez Reyes

Co-Authors: Crystal Nguyen, Zahab Qazi, Toshia Yamaguchi

SUMMARY:

Objectives: The objective of this review is to better understand how depictions of Asian American Pacific Islander (AAPI) female characters have evolved in recent years and how this may impact the self perception and self esteem of AAPI youth who identify as female. AAPI women in the media have

long been portrayed as one-dimensional characters who are docile, studious and feminine. This has led to the fetishization and stereotyping of AAPI women in Western/European media and culture. However, there has been a recent shift in both film and television, with portrayals of more complex Asian female characters breaking previously established molds. Existing literature has shown that media representation for minorities can reinforce or break existing stereotypes, impacting their respective groups' self-esteem and identity formation, yet little is reviewed for AAPI women. Methods: A comprehensive literature review was conducted in the first two weeks of September 2022 using PubMed, Google Scholar, and Cochrane databases to examine existing literature on the analysis of Asian women in media. A total of 10 articles were included, searched using keywords: "Asian-Americans media representation", "AAPI women in film/media", "Evolution of Asian women in media," "psychological effects of media in Asian American," "self esteem and identity formation based on media representation." Results: Media portrayal of minority groups has long been a prominent source of social stereotypes and attitude formation, especially for AAPI women. Adolescents and young adults-- especially AAPI youth, often also use media consumption as a means of identity formation. For some it is also a primary source of education on topics that may otherwise be taboo. While most pre-2010 roles for AAPI women were typically hypersexualized, timid and one-dimensional, the last decade of representation of AAPI women has witnessed the proliferation of more nuanced and balanced characterizations. Since more authentic media representations of Asian females are becoming more widespread, it has made a positive impact in the way this group is perceived in society, reducing microaggressions and perpetuation of negative stereotypes, and diversifying perspectives in roles AAPI women can take. These changes in media empower AAPI youth who identify as women to take pride in their intersectionality and help promote self-esteem and a sense of identity. Conclusion/Discussion: The upsurge of AAPI females taking on multifaceted character roles is a promising sign that may encourage AAPI female youth to help dispel themselves of the harmful pressures of the "model minority" stereotype and support positive

mental health behaviors which is especially important at a time where AAPI youth suicide rates are on the rise. There are limitations to these findings, as there is a lack of existing literature analyzing Asian-American women in media as well as AAPI sub-group analysis.

Poster Session 8

No. 1

Euthanasia and Physician Assisted Suicide of Patients With Psychiatric Disorders: Trends From Belgium and the Netherlands From 2018 to 2021

Poster Presenter: Christian S. Monsalve, M.D.

Co-Author: Nhan Le, M.D.

SUMMARY:

Introduction: Euthanasia and Physician Assisted Suicide (PAS) are debated subjects within medical, legal, and philosophical ethics. Euthanasia is the active intentional killing of a patient by a third party, typically by lethal injection. PAS is the intentional taking of one's own life through the self-administration of a lethal drug prescribed by a physician. This practice is particularly controversial in Psychiatry given the historical attribution of expertise in the prevention of suicide. The Netherlands, Belgium, Luxembourg, and Switzerland allow euthanasia and PAS for psychiatric patients who are not in the terminal phase of their life. While euthanasia is illegal in the United States of America, PAS is legal in 11 jurisdictions but not for psychiatric disorders. Methods: The annual reports from the Regional Euthanasia Review Committees from the Netherlands and the official press communications from the Federal Commission for the Control and Evaluation of Euthanasia from Belgium were evaluated for the years 2018-2021 Results: In Belgium, euthanasia was reported 2,359, 2,656, 2,444, and 2,699 times from 2018-2021 respectively. Psychiatric disorders were reported as the primary reason for euthanasia 34 (1.4%), 23 (0.8%), 21 (0.8%), and 24 (0.9%) times across the consecutive years studied. Psychological suffering was reported in 3.5%, 4.3%, 1.9%, and 2.1% of cases across the consecutive years studied. For context, some cancer patients whose pain is well controlled may only report psychological suffering. Simultaneous physical

and psychological suffering was reported in 78.8%, 82.8%, 84.6%, and 80.2% of cases across the years studied. In the Netherlands, euthanasia and PAS was reported to account for 6,126 (4%), 6,361 (4.2%), 6,938 (4.1%), 7,666 (4.5%) of all deaths from 2018-2021 respectively. Psychiatric disorders were reported as the primary reason for euthanasia 67 (1.1%), 68 (1.1%), 88 (1.3%), and 115 (1.5%) times across the consecutive years studied. Among these, a Psychiatrist was the notifying physician in 34 (50.7%), 42 (61.8%), 35 (39.8%), 51 (44.3%) of situations. Among cases reported for those between the ages of 18-40, euthanasia for primary psychiatric indications increased and was proportionally overrepresented, demonstrating a 4-year trend from 14.7% to 16.7% to 22.2% to 40.3%. Conclusion: Euthanasia for primary psychiatric indications remains a relatively small proportion of the total performed in Belgium and the Netherlands. In the Netherlands, it represents a gradually growing proportion of euthanasia deaths from 2018 to 2021 with notable increasing overrepresentation among reported cases of those aged 18-40. Consideration should be given to effects of the public trust toward psychiatry and medicine in general especially among racial minorities and those with disabilities. While this practice is currently illegal in the USA, an informed understanding of the data from other jurisdictions can inform current and future debates.

No. 2

Ethical Challenges of Managing Acute Psychosis in Pregnancy

Poster Presenter: Yarden Segal

SUMMARY:

For most, pregnancy is a time of well-being and happiness, for some, time of increased vulnerability for psychiatric illness. Women with psychiatric history are more vulnerable to mood symptoms and psychosis during the peri- and post-partum period. These have detrimental effects both for mother and offspring. Maternal suicide risk, self-harming behaviors, and psychosis is increased compared to general population. This presents both a psychiatric and obstetric emergency, with implicit clinical and ethical challenges. We present a female, 35 weeks pregnant with past psychiatric history of bipolar I

disorder that was brought in by police after assaulting bystanders on the street. She gave a false name and over 19 hospitalizations in the past year. She initially presented with catatonia, later observed to be aggressive and disorganized. She attempted to self-abort by hitting herself, throwing herself on the floor, and putting lotion in her vagina to help the baby “slide out”. The patient was treated with Haloperidol and Fluoxetine. This case presents the ethical implications of treating pregnant women with acute psychosis and the balance between beneficence, nonmaleficence, autonomy, and justice in an inpatient setting. Ethical dilemmas arise when the physician obligations to the mother and the fetus diverge.

No. 3

Reproductive Rights Landscape After the Overturn of Roe v. Wade and a Practice Framework

Poster Presenter: Alexandra Hyejoo Yoon, M.D.

Lead Author: Eindra Khin Khin

SUMMARY:

Recent overturn of Roe v. Wade in June, 2022 has not only impacted women’s reproductive rights but also the overall health of women going through the perinatal period. As of August, 2022, at the least 12 states have the full restriction on abortion, and 5 states have gestational limitations on abortion. In 11 states, abortion remains legal currently, but many states are expected to enact a ban and restrictions in the coming months. In addition, in certain jurisdictions, healthcare professionals are being threatened with legal repercussions for providing much needed services in a timely manner to this population. These measures taken by certain states are happening at alarming rates, impacting both patients and healthcare professionals. Uncertainties for both patients and healthcare professionals created by the recent abortion legislation changes will inevitably have a tangible impact on comprehensive healthcare including mental health. Many recent studies demonstrate that the unwanted pregnancy and denied abortion are associated with higher risks of mental health issues in both women and children. Furthermore, pregnancy-related mental health issues can cause adverse obstetric outcomes, severe mortality and financial issues. A

study by Susanna et al. in 2021 reviews the maternal mortality for the past decade in 14 states, and it shows that, among identifiable pregnancy-related death, 11% can be attributed to pregnancy-related mental health issues, including suicide and substance overdose. Luca et al. in 2020 estimated the economic burden of pregnancy-related mood and anxiety disorders in the United States to be \$14 billion each year based on the data in 2017. A study in 2020 by Roberts et al. demonstrates that restrictive abortion policies impacted the marginalized population more significantly. The individuals who reported greater economic insecurity, mental health or substance use issues, identified the restrictive policies as a major barrier to reproductive healthcare access. As such, it is imperative to screen, identify and support women in order to prevent adverse health outcomes. In this study, we review research studies published in the past decade to explore common themes related to the abortion legislation landscape and access to comprehensive reproductive healthcare services. We then provide a practice framework for psychiatrists so that they can collaborate effectively and efficiently with other healthcare professionals and the legal profession to support patients' reproductive and privacy rights.

No. 4

Opioid Epidemic in Jails: Incarcerated Females Disproportionately Affected by Opioid Use Disorder and Opioid Withdrawal

Poster Presenter: Ambriale Davis

Co-Authors: Brianne Lacy, Zara Khan, Hien Piotrowski, Waseem Ahmed

SUMMARY:

The link between opioid use disorder (OUD) and incarceration is well-documented. 1 in 4 persons with OUD have contact with the criminal justice system per year. The rate of OUD is higher among those incarcerated compared to the general population (8.5% vs 0.8%, respectively). In response to high rates of OUD, prison facilities have established opioid withdrawal programs. Medication assisted treatment of opioid withdrawal in jails is associated with decreased opioid use and increased entries into drug rehabilitation programs after release. SUD is prevalent amongst incarcerated

people regardless of gender; over two-thirds of men and women incarcerated report SUD. Incarceration trends differ by gender; since 2008 the population of men incarcerated has declined while the population of women incarcerated has increased. The goal of this study was to understand the prevalence of OUD and opioid withdrawal treatment among people incarcerated in a local county jail with special attention to differences in gender. This study was approved by the UT Southwestern IRB. 507 charts were randomly selected from a group of 1841 patients who were seen by the psychiatry team at a county jail in December 2020. Demographic and opioid use data were extracted from review of intake health screening forms and psychiatry clinical notes. Descriptive analyses were performed in R. Chi-square and Fisher's exact tests were used to test independence of associations between categorical variables. Our sample was 67.3% male. The total prevalence of OUD in our sample was 12.4%. Among incarcerated people ever diagnosed with OUD, 50.8% reported using opioids outside of jail and 36.5% were treated for opioid withdrawal upon intake. Of the total sample, 5.9% were treated for opioid withdrawal upon jail intake; a majority (76.7%) having had a diagnosis of OUD. Although females represented 47.6% of people incarcerated with OUD, the prevalence of OUD among incarcerated females was significantly higher than males (18.1% vs 9.7%, $p < 0.01$), and females were significantly more likely to report opioid use upon intake (18.1% vs 7.3%, $p < 0.01$). Females also received withdrawal treatment at a significantly higher rate (12.0% vs 2.9%, $p < 0.001$). We found females were more likely than males to report opioid use and have an OUD diagnosis. This is consistent with previous reports of disparate opioid use in both the general and incarcerated population by sex. Females in our cohort were also significantly more likely than males to be treated for opioid withdrawal upon intake, suggesting females presented with more severe symptoms and may have reduced access to outpatient OUD treatment. The opioid epidemic in America is often presented in a gendered fashion: there is lack of recognition of and stigma against OUD in women. With the incarceration rate of women increasing, addressing the substance use behaviors of this population is paramount to

promote mental health in the criminal justice system.

No. 5
Medicolegal Challenges in Diagnosing Factitious Disorder Imposed on Another (FDIA) in an Adult Patient With Schizoaffective Disorder and Hypoglycemia

Poster Presenter: Olumuyiwa Fatade, M.D., M.P.H.
Co-Authors: Omotola Ajibade, Ramon Solhkhah, M.D.

SUMMARY:

Introduction Factitious disorder (FD) is a condition in which patients fabricate evidence and produce false stories that often subject them to needless medical interventions with no clear benefit. In some instances, it can be imposed on a secondary victim often as a form of abuse. Most often, victims of factitious disorder imposed on another (FDIA) are children or the elderly. FDIA is often underdiagnosed with a mortality rate among FDIA victims ranging between 6 and 10%. Here we present a rare case of FDIA in an adult patient with a history of diabetes, substance use disorder, and schizoaffective disorder. This report focuses on the health care management initiatives and diagnostic, legal, and ethical challenges involved in managing FDIA. **Case Description** G, a 42-year-old man with a history of diabetes, hypercholesterolemia, hypertension, stroke, and schizoaffective disorder was brought to the emergency department (ED) by his mother following multiple episodes of uncontrolled elevated blood glucose. Psychiatry was consulted due to G's previous history of attempted suicide. During the initial assessment, G appeared to defer all questions to his mother who was present at the bedside. Following the initial assessment, he had multiple hypoglycemic episodes but only when his mother was at his bedside. Despite these episodes, his mother repeatedly refused diagnostics and labs. Furthermore, the treatment team identified numerous inconsistencies between the mother's account of patients' hospitalizations and previous clinical documentation that aided in the diagnosis of FDIA. Emergency guardianship was sought to protect the patient once the diagnosis was made. **Discussion** This case highlights the importance of appropriate communication and detailed documentation when

signs of FDIA are suspected. One of the challenges faced in this case was the mother's ability to take advantage of various hospital procedures to continue to perpetuate harm to the patient. Challenges like these, are why multidisciplinary approaches must be implemented to minimize harm and improve outcomes. Ethical dilemmas faced with this case involved the consideration for the removal of the mother, given that she was the primary caregiver. These issues can be compounded by hospital policies as well as statewide laws. It is helpful in these situations to determine whether the caregiver has durable power of attorney. If delayed, these medicolegal challenges can interfere with necessary clinical decision-making. Physicians should also be aware of the victim's right to privacy and should apply the same level of care and protection that they would apply to any other patient. When implemented appropriately, multidisciplinary health care initiatives are instrumental in improving outcomes.

No. 6
Is There a Role for L: Methylfolate in ADHD Management? A Case Report

Poster Presenter: Olumuyiwa Fatade, M.D., M.P.H.
Co-Authors: Stacy J. Dumas, M.D., Amrita Solanky, M.D.

SUMMARY:

Introduction Recently discovered genetic polymorphisms and mutations in the methylenetetrahydrofolate reductase (MTHFR) gene have led to new therapeutic approaches that could help personalize mental health care. MTHFR is a key enzyme of folate metabolism and changes in its gene can result in reduced enzyme activity which has been associated with psychiatric illnesses. L-methylfolate is approved as Deplin in depressed and schizophrenic patients, but its use in ADHD remains controversial. Its role in modulating the synthesis of monoamines such as dopamine and norepinephrine could be important to the management of MTHFR deficient ADHD patients. Here we present a rare case of treatment-resistant ADHD in a pediatric patient with MTHFR polymorphisms who responded dramatically to the use of L-methylfolate. This report focuses on the MTHFR gene and enzyme activity and highlights the current literature on the use of L-methylfolate

for ADHD. **Case Presentation** 14 years old male presented with impulsivity, hyperactivity, and inattentiveness since the 7th grade. The mother reports angry outbursts, and defiance since elementary school but oppositional defiance disorder and intermittent explosive disorders were ruled out. The patient was diagnosed with ADHD and started on stimulant medications. His symptoms were unresponsive to multiple stimulant trials along with 2nd line ADHD medications. The patient tested positive for MTHFR polymorphism and was started on L-methylfolate. Mood, focus, angry outbursts, and defiance improved significantly while inattention was mildly improved following treatment. **Discussion** This case highlights the role L-methylfolate could play in the management of ADHD. The MTHFR gene codes for the enzyme that plays a critical role in one-carbon metabolism by producing methyl groups that allow for purine synthesis, regulation of the homocysteine - methionine pathway, and epigenetic modifications. Polymorphisms in the *MTHFR* gene are associated with psychiatric diseases. This patient was positive for both the C677T and A1298C variants and responded positively following L-methylfolate treatment. While more robust evidence-based pharmacogenetic research is needed to inform treatment decisions, assessing patients for MTHFR polymorphisms could help personalize treatment.

No. 7

Meeting a Need in the Medical Student Community Via Self-Directed Care

Poster Presenter: Sanam Bhatia

Lead Author: Benjamin Harrison

Co-Authors: Sarah Szwed, Jessica Spellun, M.D.

SUMMARY:

Medical students experience higher rates of depression, stress, burnout, and suicidal ideation than the general population¹. However, they face a variety of barriers in accessing mental health care, including concerns about the stigma of mental illness, worries about future employability, time constraints due to academic obligations, lack of available resources, and financial challenges¹. To address these barriers, the Weill Cornell Medicine (WCM) Wellness Qlinic, a free, student-run mental health clinic that serves the LGBTQ community of

New York City, designed cognitive behavioral therapy (CBT) based modules with the goal of teaching medical students the skills necessary to engage in self-directed behavioral change. We also sought to introduce CBT, a therapeutic technique commonly used among mental health providers. While research on self-help CBT among medical students in particular is limited, a systematic review found no significant difference between self-help and face-to-face psychotherapy². Further, mental health prevention programs have been found to be effective in addressing psychiatric symptoms for at-risk higher education students³, and CBT in particular has been found to benefit students with depression and anxiety disorders⁴. Our program involved three modules based on *Self-directed behavior: Self modification for personal adjustment* by Watson et. al. Medical students taught the modules with the guidance of psychology interns and attending psychiatrists. The modules centered on students developing their own “self-change” projects, in which they identified a behavior or emotion they sought to address. The first module involved an introduction to CBT and a discussion on setting attainable goals. The second module focused on cognitive interventions in behavior change, particularly cognitive restructuring and reappraisal. The last module centered on behavioral interventions, such as assessing high-risk situations for problematic behaviors and developing reinforcers for target behaviors. The sessions involved active participation, as students discussed their self-change projects and shared how they implemented CBT techniques into their day-to-day lives. An informal survey of participants revealed that students found the sessions helpful in learning about CBT as a therapeutic technique. They also felt it allowed them to consider distressing behaviors and emotions and how to address them. One student even felt motivated to pursue formal psychotherapy. Next steps include seeking formal feedback from participants to inform future iterations of the program, assessing impact on psychiatric symptoms, and considering integration into the medical school curriculum and existing mental health resources.

No. 8

Comparison of Various State Dependent Buprenorphine Regulation

Poster Presenter: *Ajitpaul Singh Basra, M.B.B.S.*
Co-Authors: *Masroor Sohail Ahmed, Danae Nicole DiRocco*

SUMMARY:

Background Federal regulation exists only for buprenorphine and methadone but not other opioids known to be misused and lead to OUD, overdose and death. Further state regulation limiting the use of buprenorphine for OUD treatment creates additional barriers to care. Overdose deaths topped 100,000 in 2020. Only 18% of patients with OUD received any of the 3 FDA approved medication treatments in 2019 (methadone, buprenorphine or XR-naltrexone). Various state dependent regulations may be contributing to this lack of access.

Additionally, race and ethnicity barriers to care exist and overdose deaths have risen among minoritized populations. Methods/Results We have reviewed laws regarding the regulation of prescribing buprenorphine for all 50 states. Several types of regulation themes emerged. Examples of buprenorphine regulations which vary by state include: requirements for prescribers to register and utilize a prescription drug monitoring program before prescribing, limiting of buprenorphine dose including maximum number of days on a higher dose and recommendation to reduce, limits on number of film/tablets (by state insurance typically), and limits on refills or not allowing early refills or replacement of lost or stolen prescriptions. Some states do not allow the co-prescription of buprenorphine if a patient is on benzodiazepines or other controlled substances or may have specific drug screening requirements with respect to frequency.

Furthermore some states require specifications for elements of evaluation such as H&P items to be covered, labs to be ordered or requiring an addiction specialist consultation before prescribing and making in person meetings mandatory before dose changes. Conclusions Many states have regulations in addition to federal regulation that further limit access to life-saving treatment for OUD with buprenorphine therapy. Given the rise in overdose deaths, access to treatment cannot be hindered in any way. States should review existing policies and revise them to

allow for easier entry and maintenance of treatment to reduce the overall morbidity and mortality as a result of OUD. References Strickland DM, Sorboro J. Adverse effects of regulation on buprenorphine prescribing and its impact on the treatment of opioid use disorder. *J Opioid Manag.* 2021;17(7):133-139. doi: 10.5055/jom.2021.0650. PMID: 34520034. Abraham AJ, Andrews CM, Harris SJ, Friedmann PD. Availability of Medications for the Treatment of Alcohol and Opioid Use Disorder in the USA. *Neurotherapeutics.* 2020 Jan;17(1):55-69. doi: 10.1007/s13311-019-00814-4. PMID: 31907876; PMCID: PMC7007488. Joseph Friedman and Helena Hansen, 2022: Far From a "White Problem": Responding to the Overdose Crisis as a Racial Justice Issue *American Journal of Public Health* 112, S30_S32, <https://doi.org/10.2105/AJPH.2021.306698>

No. 9

Enhancing Collaborative Care to Mitigate Children's New Homework Assignment: Psychiatric Clearance

Poster Presenter: *Lauren Russo, D.O.*
Co-Authors: *Brett Kramer, D.O., Cassandra Ramirez, D.O., Mariel Salkeld, D.O., Ramkrishna Makani, M.D.*

SUMMARY:

Background: Although the high-acuity environment of an emergency room (ER) should not deter psychiatric screening in children, unnecessary exposure can be traumatizing. The majority of these visits occur at nonchildren's ERs, which have been underprepared for the influx of child and adolescent mental health visits. This study investigated the extent of suboptimal triage to the psychiatric ER by assessing odds of admission when children are referred from home, school, therapist, or physician; along with reasons for referral and diagnosis. Then, a solution can be suggested using the collaborative care framework. Methods: A retrospective chart review was completed to identify 585 children and adolescents between the ages of 5-17 who were referred to AtlantiCare Regional Medical Center's psychiatric ER from their home, school, therapist, or physician between 1/1/21 to 5/1/22. Odds ratios and 95% confidence intervals elucidated odds of admission to a psychiatric inpatient unit from each site. Occurrence of referral reason and diagnosis was conveyed using percentages. Results: The study

included 336 females and 249 males with a mean age of 13.7 years. The odds of being admitted were over 3 times higher when referred from home (3.54, 95% CI 2.39 to 5.25), with much lower odds when referred from a therapist (1.01, 95% CI 0.35 to 2.01), physician (0.70, 95% CI 0.30 to 1.64) and school (0.25, 95% CI 0.16 to 0.39). The most common reason for referral for all sites was suicidal ideation (59%), mostly referred from home (46.4%) and school (37.7%). The next most common complaint was aggression and/or threats to others/property (21.5%) from home (49.2%) and school (43.7%). The preceding referral reasons include depressive thoughts without SI (10.4%), self-harm behavior without suicidal ideation (4.8%), and "other" (4.3%). The top five diagnoses of those admitted were MDD (43%), DMDD (13%), ADHD (11%), ODD (9%), and substance use (8%). The top 5 diagnoses of those discharged were adjustment disorder (47%), MDD (27%), ODD (9.7%), ADHD (6%), and substance use (3%). Conclusion: Increased odds of admission when referred from home may be explained by utilization of child mobile outreach, which dispatches a therapist to the home. Specific mention of this service for the home referrals was not always mentioned in the chart, when it may have been used. A similar service may enhance triage in schools, where odds of admission were the lowest. The low odds ratios in the therapist and physician groups were likely impacted by small sample sizes. Suicidal ideation was the most common reason for referral, and likely reflects uncertainty in comprehensive suicide screening. The diagnoses were expected, as depressed and deregulated mood are major contributors to inpatient admissions. Overall, these data reveal opportunities for improved collaborative care, especially in schools, for better mental health triage and treatment.

No. 10

Restructure Automatic Thoughts About Using CBT on a Short-Term Inpatient Unit

Poster Presenter: Lauren Russo, D.O.

Co-Authors: Katie Soler, D.O., Sarah Nasra, M.D.,

Cassandra Ramirez, D.O., Brian Isaacson, M.D.

SUMMARY:

Background: Major depressive disorder (MDD) is a leading cause of disability worldwide and is a major contributor to the global burden of disease. With psychotropic medications taking weeks to attenuate symptoms, and few studies exploring use of cognitive behavioral therapy (CBT) on the inpatient unit, this study investigated if individual, brief CBT reduced depressive symptoms more than treatment as usual. Methods: This prospective randomized control trial of 20 adults with major depressive disorder on the AtlantiCare Regional Medical Center psychiatric inpatient unit took place from January 1, 2021 to August 15, 2022. Exclusion criteria were bipolar depression, psychotic features, catatonia, or major neurocognitive disorder. Residents made a standardized manual to conduct daily 30 minute CBT sessions using thought records, behavioral activation, problem solving, and relaxation techniques. The control group received pharmacotherapy, group, and supportive therapy as usual, while the treatment group received treatment as usual plus individual CBT. PHQ-9 scales were given to all participants upon admission and discharge to assess for significant difference between mean changes in scores. Results: There were 10 patients in the control group (mean [SD] age, 35 [13.1] years; 50% male, 50% female) and 10 patients receiving CBT (44 [20.6] years; 50% male, 50% female). The average length of stay was 7.4 days in the control group (80% admitted consensual voluntary (CV) and 20% involuntarily). The average stay was 6 days in the CBT group (100% CV). The mean PHQ-9 score was 16.3 on admission and 5.8 at discharge in the control group and 17.3 on admission and 7.2 at discharge in the intervention group, with a between-group mean difference of 0.4 points [(95% CI, -5.95 to 6.75); p=0.945] and no outliers for changes in PHQ-9 scores for the control [IQR, 7-13.25] or CBT [IQR, 4.75-15.5] group. Compared to controls, the CBT group had more patients with recurrent depression (70% vs. 60%), anxiety diagnoses (30% vs. 0%), and medical comorbidities (60% vs. 40%). The control group had more substance use diagnoses (70% vs. 20%) and multiple psychotropic medications (average 2.1 medications per person). Conclusion: The parallel, but non-statistically significant decrease in scores may be first explained by sample size limitations due to exclusion criteria. Second,

although patients were told PHQ-9 scores did not impact discharge, minimizing symptoms to show improvement, especially in committed patients (in the control group), may have been a factor. Third, patients in the CBT group had more comorbid anxiety disorders, medical comorbidities, and recurrent episodes, which may have made depressive symptoms more treatment resistant. Lastly, future modifications of this study could condense the session manual to avoid overwhelming the patient with too many objectives. Overall, this study provided a much needed framework to use CBT on a short-term inpatient unit.

No. 11

Raising Awareness of the Effect of Chronic Marijuana Use on the Dopaminergic System and How It May Lead to Susceptibility to EPS

Poster Presenter: Mirza Wasi Khan, D.O.

SUMMARY:

This is the case of a 22-year-old female, who at the time was 23 weeks pregnant with a history of chronic marijuana use and cyclical vomiting syndrome who presented with nausea, vomiting, and anorexia for the last 5 days. The psychiatry consult team was asked to assess the patient after she experienced acute dystonia following administration of medications that were being used for symptomatic control of nausea and vomiting. On review of history, the patient had at least three distinct and temporally separate instances of dystonic reactions with the use of antidopaminergic medications. The first was after administration of haloperidol, second was with the use of droperidol, and during our evaluation was with the use of metoclopramide and prochlorperazine. Further discussion revealed patient had received similar medications including prochlorperazine during a sustained period of abstinence from cannabis use and did not develop dystonia or similar extrapyramidal side effects at that time. With the changing patterns of increased cannabis use owing to the legalization and increased availability, along with its purported therapeutic effects, continuing studies and awareness of its true effects is of great concern for mental health providers. In this poster, we intend to review the current literature regarding physiologic changes

associated with acute versus chronic cannabis and its impact on the dopamine system. We will use the case example mentioned above to illustrate our hypothesis that the blunting of the system from chronic cannabis use can lead patients to be sensitized to have extrapyramidal side effects. With this, we hope to promote an appreciation regarding the need for research in this area.

No. 12

Let's 'Whippit' Away: Nitrous Oxide Abuse and Its Complications, a Case Report

Poster Presenter: Sean D. Sedore, D.O.

Co-Author: Susan P. Nelsen, M.D.

SUMMARY:

Background While there has been a push to tackle drug abuse, most notably the opioid epidemic, less attention has been paid to other abused substances, namely nitrous oxide. Although nitrous oxide is used safely in the healthcare field, as our case will demonstrate, abuse has multiple risks including long-term neurological sequelae. **Case** Mr. A is a 45-year-old man with history of schizoaffective disorder, inhalant use disorder, and alcohol use disorder who was referred to our clinic for further evaluation of weakness. This is in the context of significant nitrous oxide abuse of 100 'whippits' daily for one year. His nitrous oxide abuse persisted until he awoke in bed and was barely able to move his legs. Initial primary care evaluation found vitamin B12 deficiency, so he received vitamin B12 supplementation which improved his strength. Despite vitamin B12 normalizing he still was experiencing symptoms, so he was referred to our clinic. Our assessment found lower extremity weakness, decreased sensation, hyporeflexia, steppage gait, and positive Romberg test. He was scheduled for an EMG and referred to physical therapy. Repeat vitamin B12 testing was ordered. The patient rescheduled the EMG, did not present to his follow-up appointment, and was ultimately lost to follow-up. **Discussion** Nitrous oxide has been used in the healthcare field for nearly two centuries but is now also a substance recreationally abused (Gillman, 2019). Among users, a significant majority are unaware of any adverse effects associated with its use (Ehirim, 2018). Despite a lack of awareness, nitrous oxide abuse can have

significant adverse outcomes including vitamin B12 deficiency which causes long-term or potentially permanent neurological sequelae (Al-Sadawi, 2018; Thompson, 2015). **Conclusion** Psychiatrists frequently work with patients battling addiction. Out of various substances abused, nitrous oxide is less discussed, especially in middle-aged adults. Consequentially, an important cause of vitamin B12 deficiency is not being identified. By increasing awareness, we can identify at-risk patients and provide better treatment to prevent long-term and possibly life-long neurological sequelae.

No. 13

Expanding Naloxone Distribution in the Hospital Setting: A Quality Improvement Initiative in a NYC Hospital's Psychiatry Department

Poster Presenter: Erva Khan

Co-Authors: Lisa Cohen, Patrick DiGenova

SUMMARY:

Background: Opioid-related overdoses continue to present a public health crisis. The CDC estimates there were 80,816 opioid-related deaths in the USA in 2021, an increase from 70,029 the previous year. Data suggest that the rise in opioid-related deaths is in part due to illicit drugs, such as stimulants and non-prescription/counterfeit pills, being increasingly laced with synthetic opioids, such as fentanyl. Naloxone, a mu-opioid receptor antagonist, rapidly and temporarily reverses the symptoms of opioid toxicity. In March 2022, a Naloxone Consultation Service was created by Mount Sinai Beth Israel Hospital's Psychiatry Department to offer Naloxone kits to psychiatric patients at higher-risk of opioid overdose (based on past or current opioid use, stimulant use, or non-prescribed pill use). **Methods:** Psychiatric patients in the inpatient units and emergency department are identified as higher-risk of opioid overdose by their primary team. The Naloxone Consultation Service offers these patients Naloxone kits to take home after discharge, and also provides education on opioid overdose recognition and Naloxone use. Patients offered Naloxone kits take a survey with questions related to their experiences with Naloxone and drug use. Data collection is ongoing, and the presented results are based on fulfilled Naloxone consultations, in which

patients were offered kits and subsequently completed a survey, as of late August 2022 (n=93).

Results: Most participants accepted Naloxone (82.8%, n=77). Based on self-report, 20.4% (n=19) of participants used heroin or fentanyl, 16.1% (n=15) used other opioids (e.g. methadone, oxycodone, etc.), 39.8% (n=37) used stimulants, and 9.6% (n=9) used non-prescribed pills. The majority of participants had witnessed an opioid overdose (51.6%, n=48), and many had previously overdosed (32.3%, n=30). Several participants had Narcan used on them in the past (18.3%, n=17), and several had previously used Narcan on others (16.1%, n=15). There was a nonsignificant trend that participants who had witnessed an overdose were more likely to accept a kit (89.6% of those who witnessed an overdose accepted a kit, versus 75.6% of those who had not witnessed an overdose, p=0.06). Participants reported high confidence using the Narcan kits following completion of training (Mean=4.53, SD 0.86 on a five-point Likert scale from 1 = "not at all confident" and 5 = "extremely confident").

Conclusion: Distributing Naloxone through a consultation service to psychiatric patients in the hospital setting is an effective strategy to increase the availability of Naloxone for individuals at higher-risk of opioid overdose. Expanding the target population of Naloxone distribution efforts to include not only known opioid users but also those who use drugs at risk of contamination from synthetic opioids, such as stimulants and non-prescription pills, presents an opportunity to educate patients about relevant risks and reduce harm from opioid overdose.

No. 14

Kratom Induced Manic Episode

Poster Presenter: Lana Abdole, M.D.

Co-Author: Ibrahim Sablaban, D.O.

SUMMARY:

Recreational use of kratom (*Mitradyna speciosa*) has gained popularity in recent years despite its harmful risks and lack of any FDA approved indication for medicinal use. It is thought to act on opioid receptors - at low doses it appears to act as a stimulant while at higher doses produces more opioid like effects. There is limited data on kratom

use, its safety, potential sequela, or chronic effects of the substance, which is concerning given the increase in use and access to consumers. In the United States, kratom is easily accessible and there are little to no regulations or prohibitions for its possession or use, regardless of potential for misuse and risk of adverse events. In this poster, we present a unique case of excessive kratom use and subsequent induction of a manic episode in a 41 year-old male patient with no prior manic episodes. Here, we will discuss details of the case and its management, pharmacologic properties of kratom, reported safety concerns, and future considerations in light of its increased use.

No. 15

Creating a Community Mental Health Fair by Psychiatry Residents and Medical Students

Poster Presenter: Neel Matiwala

Co-Authors: Jensen Vayalil, Elias Smith, Janvi Patel, Rajat Duggirala

SUMMARY:

Background: The greater St. Louis area faces its own unique challenges regarding lack of providers¹, as well as racial (45-97% African American) and economic disparity (19-54% of residents living in poverty)². Oftentimes, lack of access, stigma, and unavailability of information are some barriers to care³. To address this, Saint Louis University (SLU) psychiatry residents in the Diversity, Equity, Inclusion (DEI) committee and medical students coordinated a pilot project in the St. Louis area. The initiative was to collaborate in coordinating a mental health fair in the greater St. Louis community. Better Family Life, a not-for-profit community development organization that works to stabilize inner city neighborhoods, was a key partner in this endeavor. Given evidence to support proactive outreach in improving outcomes of mental health^{4,6}, this intervention served to initiate partnerships between community members and community providers including medical students and residents. **Methods:** The mental health fair was on April 26th. Five local mental health organizations were present. This included 2 SLU psychiatry residents and 3 medical students to welcome and distribute flourishing scales⁵ (participants self-assessment and start conversation) and exit surveys

to all participants. The exit survey served as a means of qualitative measurement. It consisted of 5 questions which were both open response and likert-scale format. To assess the quality of the fair, survey questions evaluated abundance of resources, quality of activities, and future directions such as which season of the year to hold the next fair, other types of resources and activities. **Results:** The event lasted 4 hours and there were a total of 33 surveys from 33 attendees. From exit surveys, 15 attendees preferred more community resources, 14 requested more activities, and 11 wanted a community gathering at the next event. Based on attendees' response, 21 valued learning about the resources most and 15 liked organizations in attendance. Most requested improvement was increased advertisement at the next event. **Conclusion:** Literature continues to support the extension of health services within the community⁶. This initial mental health fair serves to understand the potential value of information sharing and community gathering. It offered a physical space in a low-resourced community to discuss mental health, a relative barrier due to the COVID-19 pandemic. Per exit surveys, there was emphasis on the resources and information provided. Multiple event organizers articulated the benefit of being able to collaborate with each other to expand services. Finally, this wellness fair allowed residents and medical students to initiate a partnership as well as a trusting relationship within the community. Future goals as a part of SLU's DEI committee would be to continue annual mental health fair to extend this partnership between providers and community.

No. 16

Documentation of Social Determinants of Health in Patients With Mental Health and Substance Use Disorders Using Z Codes

Poster Presenter: Philip Wang

Co-Authors: Akhil Anand, James Bena, Shannon Morrison, Jeremy Weleff

SUMMARY:

Background: The social determinants of health (SDOH) are important factors that influence healthcare utilization, healthcare delivery, quality of life, and mortality. Z codes were introduced in the

ICD-10 to capture SDOH data, although they are underutilized. The purpose of this study was to examine the documentation of Z codes amongst those with mental health (MH) and substance use disorders (SUD) prior to and at the start of the COVID-19 pandemic to characterize the current usage of Z codes in this population in a large healthcare system. **Methods:** Patients who visited any Cleveland Clinic Health System emergency department in Ohio from 5/2/2019-12/31/2019 and 5/2/2020-12/31/2020 were identified. The electronic medical record was extracted for demographics, Z codes, and mental health and substance abuse disorder data. Z codes were documented in the patient's charts at any time, not only during ED encounters. Comparisons between categorical factors use Pearson's Chi-square tests, and comparisons between continuous factors use t-tests. **Results:** 871,020 total ED encounters from 487,028 unique patients were captured. Compared to patients without documented SDOH, patients with a coded SDOH were more likely to be Black (38.8% vs 27.3%, $p < 0.001$), younger (28.7 ± 26.0 vs 46.1 ± 23.9 , $p < 0.001$), male (53.6% vs 46.4%, $p < 0.001$), and on government or self-pay insurance (42.3% vs 31.1%, $p < 0.001$). 2,572 (0.53%) patients had a documented Z code for SDOH. The most often coded SDOH in ED encounters was problems related to housing and economic circumstances, followed by other problems related to the primary support group and by other psychosocial circumstances. 71,031 (8.1%) encounters had a coded MH or SUD diagnosis. 862 (0.01%) visits had both a coded MH or SUD diagnosis and a documented SDOH. The most common overlap in MH/SUD and SDOH occurred between problems related to housing and economic circumstances and substance use ($n=471$ patients). This was followed by patients with problems related to housing and economic circumstances and mood and affective disorders ($n=266$ patients). **Conclusions:** We found that only 0.53% of patients had a Z code for an SDOH, which undoubtedly underestimates the number of patients that seek care at EDs who have social needs. In addition, the most documented social determinant of health was problems with housing and economic circumstances, which commonly overlapped with substance use. Because the standardization and unification of documentation of SDOH for those at risk for multiple

socioeconomic disadvantages plays an integral role in targeting social advocacy and health policy, Z codes should be more frequently utilized in the EMR.

No. 17

Wellness, Discrimination, and Burnout in Medical Education: A National Cross-Sectional Study of the Experiences of Black Canadian Medical Students

Poster Presenter: Johanne Audrey Mathieu

Co-Authors: Oyedeji Ayonrinde, Kien A. Crosse

SUMMARY:

Background: Black medical students have been consistently underrepresented in Canadian medical schools. Data on the impact of discrimination on their medical education and wellbeing remains limited. This cross-sectional study aims to investigate the experiences of Black medical students through the Black Medical Student Association of Canada (BMSAC). **Methods:** The authors developed a 63-item instrument around the domains of Wellness, Discrimination, Inclusion and diversity, Career advancement, and Diversity in medical education. Items assessing wellness were adapted from the Oldenburg Burnout Inventory. The anonymous web-based questionnaire was sent to 128 medical students and first year residents from all 17 Canadian medical schools via the BMSAC listserv. Frequencies were obtained for demographic data and self-reported experiences. **Results:** 52 responses were obtained. 65.3% of respondents indicated that their well-being was poor in medical school, agreeing with statements that elicited symptoms of burn-out. Around 58.8% of respondents had at least one personal encounter with discrimination in medical school. Discrimination was experienced in both clinical and academic contexts, notably from patients, peers, and hospital staff. There was a positive correlation between years in undergraduate medical education and exposure to discrimination [$\chi^2 (4, N=49) = 17.939, p=0.001$]. Most respondents had negative experiences relating to reporting discrimination, career advancement, sentiments of "minority tax" and low diversity in medical education. Interestingly, a majority of respondents reported positive experiences with academic and clinical inclusion, as well as resiliency in face of discrimination. **Conclusions:** These findings show

that discrimination has significant implications on the learning experience of Black medical students surveyed from the BMSAC. This directly challenges the notion that Canadian medical schools are impervious to racism and highlights the need for advocacy and systemic changes to eliminate institutional racism and address burnout amongst ethnic minority learners.

No. 18
Religiosity, Multimorbidity, and Mental Health Utilization Two Decades Later: The Role of Spiritual/Religious Leaders

Poster Presenter: Ruby Lekwauwa, M.D.

Lead Author: Augustine Cassis Obeng Boateng, M.P.H.

Co-Authors: Joshua Sebu, Ph.D., Katherine Britt, Ph.D., M.S.N., R.N., Hayoung Oh, M.P.H.

SUMMARY:

Background: The association between religiosity and professional mental health utilization is unclear. However, evidence suggests that religious and spiritual leaders may be more trusted than traditional psychotherapists during times of distress and are often the first point of contact for individuals with mental health struggles who identify as religious. We sought to determine factors that might contribute to a preference to seek out religious leaders over psychotherapists using data from the Midlife in the United States Series (MIDUS) between 1995 and 2014. **Methods:** A generalized equation estimate (GEE) analysis was performed on a total of 11,950 participants. **Results:** Results suggest in the presence of multi-morbidity, high religiosity increases the odds of seeking mental health services from religious leaders by a factor of 1.6 two decades later compared to low religiosity. Likewise, high religiosity is associated with decreased odds of seeking help from mental health professionals compared to low religiosity by a factor of 0.2. **Conclusion:** In older adults with multiple medical morbidities, high religiosity increased the likelihood of seeking out mental health supports from religious leaders and decreased the likelihood of seeking out supports from mental health providers. As health declines, older individuals are more likely to turn to religion for comfort and strength, elevating the

important role of religious and spiritual leaders within and outside the health care system. With proper mental health training, religious and spiritual leaders could play an integral role in reducing the burden of mental illness in the United States especially among older adults and socially marginalized groups who find religion important.

No. 19

The Placebo Response in Classic Psychedelics: A Systematic Review of Clinical Trials

Poster Presenter: Nikhita Singhal, M.D.

Co-Authors: Brett Jones, M.D., Richard Zeifman, Ph.D., Cory Ross Weissman, M.D., Alexander Wen

SUMMARY:

Background: The use of classic psychedelics (e.g., psilocybin, ayahuasca, lysergic acid diethylamide [LSD]) as potent mental health treatments is gaining traction, yet significant challenges remain in conducting trials with these substances. Both the role of placebo controls and the importance of placebo mechanisms in explaining the efficacy of psychedelic therapy remain understudied. Several factors pose significant challenges to blinding in psychedelic therapy trials, yet this topic has not been well studied. The role of expectancy in placebo response also remains understudied and is a vital component of response. **Methods:** We conducted a systematic review of placebo response in clinical trials involving the administration of classic psychedelics to enhance our understanding of this complex area. The characteristics and findings of included studies were presented as a systematic narrative synthesis including qualitative outcomes and summarized in tabular format. **Results:** A total of 55 out of the 1053 studies retrieved through our search were eligible for inclusion, with publication dates ranging from 1963-2020. Studies were either randomized controlled trials (RCTs) or used a within subject cross-over design. There was also one single-blind non-randomized placebo-controlled within subject trial. Among RCTs, there were 10 on LSD, 17 on psilocybin, 5 on ayahuasca, and 1 on N,N-Dimethyltryptamine (DMT); 29 were on healthy subjects, 3 on life-threatening cancer, 2 on schizophrenia, and 2 on major depressive disorder. For cross-over design studies, 7 were on LSD, 2 on

psilocybin, 1 on ayahuasca, and 1 on DMT/6-hydroxy-N-dimethyltryptamine; 8 were on healthy subjects, 2 on schizophrenia, and 1 in alcohol use disorder. The most common forms of placebo used were empty capsules, niacin, and IV saline. Expectancy was not measured in the vast majority of studies. Clinical outcomes in our review included subjective mental states, physiological measures, creative imagination and mental imagery tests, BDNF and cortisol levels, eyeblink responses, and formal measures of clinical depression and anxiety. **Conclusion:** Our review suggests that the vast majority of placebo-controlled psychedelic therapy studies involve healthy participants with the use of LSD or psilocybin. There is a very limited number of placebo-controlled studies among psychiatric populations, and the quality of placebo controls have been questionable. The use of an adequate placebo control, as well as assessment and balancing of expectancy, is severely lacking in existing clinical trials. Future psychedelic clinical trials should include adequate assessment of blinding, more appropriate controls, and randomization of both treatment arms and treatment expectancy. Active psychopharmacological controls (such as other rapid acting agents), in addition to head-to-head comparison with active treatments, should be considered as alternatives.

No. 20

Collaborating to Enhance Child and Adolescent Psychiatry Training in Equity, Diversity, and Inclusion: Results of an Initial Needs Assessment

Poster Presenter: Nikhita Singhal, M.D.

Co-Authors: Catherine Deschenes, Yezarni Wynn, Rajeevan Rasasingham, Chetana Kulkarni

SUMMARY:

Background: The current social climate has brought attention to historic and systemic inequities impacting child and youth mental health. Despite this, equity, diversity, and inclusion (EDI) principles have not been a major component of Canadian child and adolescent psychiatry (CAP) training. This study reports the results of a needs assessment conducted to examine the state of national CAP EDI curricula as part of a larger project grounded in Kern's framework for curriculum development, with the ultimate goal of co-designing an evidence-informed

educational intervention in the form of online modules focused on EDI themes relevant to CAP.

Methods: Canadian CAP program directors, postgraduate trainees, and recent graduates from the sixteen CAP programs across the country were surveyed from March-August 2022 using an online questionnaire eliciting information on EDI learning needs as well as facilitators, barriers, and motivation for change within the various programs. Respondents could opt to participate in a semi-structured follow-up interview to further discuss their experiences and thoughts. **Results:** The survey has been completed by 28 respondents in total thus far (6 program directors, 8 current postgraduate trainees, and 14 recent graduates). The vast majority (96.4%) of respondents perceived a gap in EDI training within their programs. Only 8 recent graduates (57.1%) believed their programs had addressed health equity and marginalization in any form. Specific barriers identified by program directors included soliciting local expertise and finding adequate space/time within curricula, with all program directors expressing a desire for access to externally-developed resources to support trainees. Themes regarding topics of interest which emerged across all three groups of respondents included culturally-informed care, trans/LGBTQ-sensitive practice, Indigenous mental health, mental health in racialized populations, and refugee/newcomer mental health. **Conclusion:** There is a clear lack of dedicated EDI teaching in Canadian CAP postgraduate training; innovative solutions are needed to address identified gaps. After conducting follow-up interviews with those who indicated interest, information collected will be reviewed and thematically analyzed for identification of module topics and potential design elements. We then plan to co-develop the modules alongside individuals with lived experience; these will then be pilot-tested, evaluated, and iteratively fine-tuned before being disseminated on a local, national, and international scale to promote EDI learning among postgraduate CAP trainees, with the potential to adapt these for broader applicability to continuing education for a variety of interdisciplinary healthcare professionals.

No. 21

Impact of Interpersonal Relationships and Acquired Capability for Suicide on Suicide Attempts: An Observational Study

Poster Presenter: Sehoon Shim

Co-Authors: Ji Sun Kim, Wooseung Lee

SUMMARY:

Aim This study aims to examine two interpersonal constructs for suicidal desire; thwarted belongingness and perceived burdensomeness, acquired capability for suicide, the emotional dysregulation as a predictor of both desire and capability of suicide, and depression symptoms through a questionnaire survey following a suicide attempt in people admitted to the hospital for medical treatment after attempted suicide. **Methods** A total of 344 participants (200 depressed patients with attempted suicide, 144 depressed patients with suicidal ideation) were enrolled for this study. Depression, anxiety, emotional regulation, interpersonal needs, and acquired capability for suicide were evaluated. A model with pathways from emotional regulation difficulties and interpersonal needs to suicide attempts was proposed. Participants were divided into two groups according to the presence of suicide attempts or suicidal ideation. **Results** Acquired capability for suicide mediated the path from depression to suicide attempts. In the path model, difficulties in emotional regulation and interpersonal needs predicted depression significantly ($\beta = 0.523, p < 0.001$; $\beta = 0.460, p < 0.001$, respectively). Moreover, the score for interpersonal needs significantly predicted depression and acquired capability for suicide ($\beta = 0.268, p < 0.001$; $\beta = 0.256, p < 0.001$, respectively). Although depression itself was not significantly related to acquired capability for suicide, depression was significantly related to acquired capability for suicide in suicide attempter group ($\beta = 0.189, p < 0.05$). **Conclusions** The current study examined a comprehensive model explaining relationships among interpersonal constructs for suicidal desire, acquired capability for suicide, the emotional dysregulation and depressive symptoms related to suicide attempt based on previous studies by conducting path analyses. Interventions with difficulties in emotional regulation and interpersonal needs affecting suicide attempts will clarify the

suicide risk and contribute to finding risk factors. It will also help reduce suicide rates through interventions in the processes leading to suicide attempts by identifying variables to predict the attempts through the path to suicide attempts.

No. 22

The Electrophysiological Change Between Patients With Suicidal Ideation and Suicide Attempts: An Event-Related Potential Study

Poster Presenter: Sehoon Shim

Co-Authors: Ji Sun Kim, Wooseung Lee

SUMMARY:

Aim This study aimed to determine the association between the no-go event-related potential component and suicidal behaviors among suicide attempters and ideators who never attempted suicide. **Methods** Overall, 150 patients who visited the emergency room by suicide attempts or patients who visited the psychiatric department with suicidal ideation were recruited and instructed to perform a go/no-go task during electroencephalography recording. All the participants were aged between 19 and 60 years, with their right hand as the dominant hand, had the normal hearing ability, and drug-naive status. The Beck Depression Inventory, Beck Anxiety Inventory, Barratt Impulsivity Scale, Difficulties in Emotional Regulation Scale, and Acquired Capability for Suicide Scale (ACSS) were used. Individuals were divided into two groups: those with suicidal attempts (SA group) and with suicidal ideation (SI group) without SA. The psychological characteristics and event-related potentials of the two groups were compared. Correlation analyses were conducted to test the association between the clinical characteristics and event-related potentials. **Results** In clinical measurement, the SA group had higher ACSS scores than the SI group. The SA group had significantly decreased no-go P3 amplitude at all electrodes than those of the SI group (Fz, $p = 0.009$; FCz, $p = 0.023$; Cz, $p = 0.015$; Pz, $p = 0.001$). In correlation analysis between the clinical measurements and ERPs in all participants, no-go P3 amplitudes in whole electrode sites were negatively correlated with the scores of Acquired Capability for Suicide scale (Fz: $r = -0.228, p = 0.005$; FCz: $r = -0.203, p = 0.013$; Cz: $r = -0.181, p = 0.027$; Pz: $r =$

-0.248, $p = 0.002$). **Conclusions** This study was able to compare no-go ERPs between patients with MDD who had SA and SI. Moreover, we also evaluated ERPs immediately after near fatal SA in a relatively large, drug naïve sample. Hence, the attenuated no-go P300 amplitude might reflect SA in patients with MDD. Future studies should explore the various aspects of impulsivity in suicide which may be related to no-go ERP.

No. 23

Inpatient Suicide: Based on Korea Patient Safety Reporting and Learning System (KOPS)

Poster Presenter: Ah Rah Lee

Co-Authors: Jong-Woo Paik, Sangmin Lee, Jihyun Lee

SUMMARY:

Ah Rah Lee, Jihyun Lee, Haelim Lee, Jong-Woo Paik, Sang Min Lee* *Corresponding author: Sang Min Lee, MD, PhD Department of Psychiatry, Kyung Hee University School of Medicine, Seoul, Republic of Korea **Background:** Korea has recorded the highest suicide rate among OECD countries since 2003. According to the Statistics of by the Korea Institute for Healthcare Accreditation of the inpatient suicide and self-injury, 4 cases (0.7%) in 2016, 39 cases (1.0%) in 2017, 90 cases (1.0%) in 2018, 92 cases (0.8%) in 2019, 123 cases (0.9%) in 2020, the rate is continuously increasing. We aim to analyze a nationwide Investigation on inpatient suicide and self-harm and suggest the prevention of suicide accidents and recurrence. **Methods:** The Korean patient safety reporting and learning system (KOPS) aims to share and learn patient safety information throughout the medical institution and analyze self-reported patient safety accidents. We analyze data from KOPS for healthcare workers, specifically on subjects with suicide and self-mutilation, provided by Korea Institute for Healthcare Accreditation. We interpret general characteristics, information regarding suicide and self-mutilation, accident prevention, and relapse prevention information on 355 subjects from January 2016 to December 2020. Frequency analysis, descriptive statistics, and chi-test were conducted by using the SPSS 21.0. **Results:** Suicide and self-harm in medical institutions occurred relatively more in the elderly than in the younger age. The average age of the patient was

64.5 years old (s.d=18.1), 70s (16.3%), 50s (7.9%), 80s (7.6%), 60s (6.2%), 30s and 40s (6.2%), and 3.4% in their 20s or younger. Type of medical institution, 35.8% general hospitals, 25.3% tertiary general hospitals, and 21.1% nursing hospitals in order were found. The detailed location of the accident occurred in the order of the hospital room (57.2%), the bathroom (11.8%), the hospital lobby (7.6%), and the hospital outdoor garden (4.2%). The methods of suicide and self-harm were the order of hanging (27.3%), falling and stabbing(23.7%), and poisoning(12.1%). The time of incidents of suicide and self-harm accidents was the most frequent between 18:00-23:59(27.9%), followed by between 12:00-18:00(22.0%), and between 06:00-11:59. The time of occurrence of accidents is relatively evenly distributed throughout the day, suggesting the need to pay attention to risks outside of work hours.

Conclusions: To prevent hanging and falling, which are the most frequent suicide attempts used in the hospital, It is important to manage the facilities and environmental factors of suicide risk in the hospital. For facility management, not only the ward but also the external space is important. There were many suicides and self-harm reported in nursing hospitals. It is necessary to discuss the direction in which practical consulting and cooperation can be provided to nursing hospitals and hospitals that do not have a department of psychiatry.

No. 24

The Role of Severity of Depression on the Relationship Between Suicidal Ideation and Self-Injury in Adolescents With Major Depressive Disorder

Poster Presenter: Hyeonseo Jin

Co-Authors: Sang Woo Hahn, Jiyeon Kim

SUMMARY:

Background: Suicide has been a leading cause of death among adolescents in South Korea since 2011. Depression and personality profiles were identified as important risk factors for suicidal behavior in previous studies, but little is understood about how they affect the process of suicide. This study examines the role of severity of depression and temperament/character on the self-injury of adolescents. **Methods:** This retrospective study

included 116 adolescents (12-18 years) with a primary diagnosis of Major depressive disorder (MDD), and their parents. Depressive mood, suicidal ideation, and Temperament and Character Inventory scores were entered in linear regression analyses to reveal factors that significantly affect self-injury. Mediation analysis was used in the investigation of the relationship between adolescents' suicidal ideation and self-injury. Results: In adolescents with MDD, 75.9% answered that they had suicidal ideation, and 55.2% answered that they had self-injurious behavior in the last six months. In multivariate linear regression analysis after adjusting for age and gender, adolescent's suicidal ideation ($p < 0.001$) and severity of depressive mood ($p < 0.001$) had a significant influence on self-injury. The mediation model indicated that depressive mood mediates the relationship between an adolescent's depressive mood and self-injury. Conclusion: This study highlights the importance of evaluating and managing the severity of depression in adolescents with MDD, since it partially mediates the transition from suicidal ideation to self-injury.

No. 25

Ketamine Versus Midazolam for the Rapid Treatment of Acute Severe Suicidal Ideation: A Pilot of a Randomized Controlled Trial (RCT)

Poster Presenter: Masoomeh Faghankhani

Lead Author: Maryam Barzkar

Co-Author: Amir Hossein Jalali Nadoushan

SUMMARY:

Background: Around 700 000 people worldwide die from suicide annually, and 10 to 20 times this number attempt suicide. A few evidence-based choices are in practice to treat suicidal crises. Recently, ketamine has been reported as a rapidly effective medication; however, there is controversy. More evidence is needed to conclude about the efficacy of ketamine in treating suicidal ideation. This study examined remission of suicidal ideas after a single infusion of ketamine versus Midazolam in inpatient participants with suicidal thoughts. Method: After ethical approval, a triple blinded RCT was performed in two academic hospitals in Tehran Iran from January to July of 2022 (IRCT20220118053756N1). 36 inpatient participants

with severe suicidal thought that appeared within the past 72 hours, with no antidepressant use during the past month, and aged between 18 and 65 consented to take part in the study. They were randomly assigned to two groups either intravenously receiving a single dose of Ketamine 0.5 mg/kg or Midazolam 0.02 mg/kg in 100 cc sodium chloride 0.9% for 40 minutes. The participants' suicidality was assessed before administering the medication, 12 hours, and 24 hours after administration. Beck Scale for Suicide Ideation (BSSI) was used to measure the intensity of the patients' specific attitudes, behaviors, and plans to commit suicide during the past week. Besides, a Suicide-Visual Analog Scale (S-VAS) was used to measure the suicidality. Result: Using intention-to-treat analysis, we included 36 participants (male=63.8%) with mean (SD) age of 35 (10.18). Of them, 13 patients had the major depression disorder; 13 had the personality disorder; 7 had the bipolar disorder; and 3 had the anxiety disorder. The baseline characteristics were comparable between the two groups except for that the borderline personality disorder was significantly more prevalent in Midazolam group (13 vs 6). The participants in Midazolam group showed a higher average BSSI score before administration of medication compared to the participants in Ketamine group (26.2 ± 9.3 vs. 18.7 ± 8.1 , $p: 0.015$). After 12 hours, the average BSSI score decreased to 23.2 ± 10.4 and 14.9 ± 10.1 ; and after 24 hours, it decreased to 22.7 ± 9.6 and 13.4 ± 8.9 in Midazolam and Ketamine group, respectively. Moreover, at baseline, the average of S-VAS score was 7.5 ± 1.8 and 7.1 ± 1.7 ; after 12 hours, it was 6.7 ± 1.9 and 5.6 ± 2.9 ; and after 24 hours, it was 6.0 ± 2.0 and 5.4 ± 2.8 in Midazolam and Ketamine group, respectively. We did not find a statistically significant difference in BSSI score and S-VAS score between the two groups. Conclusion: In this study, the suicidal thoughts were reduced more using Ketamine versus Midazolam only at a trend level of significance, due to the small pilot sample or the moderator role of comorbid mental disorder. This is the first study that included participants with personality disorder comorbidity in the cohort. This study is funded by Iran University of Medical Sciences.

No. 26

WITHDRAWN

No. 27

Pica With Complicated Surgical Intervention and Outcomes in Patient With Iron Deficiency Anemia and Active Psychosis

Poster Presenter: Kristen Santarone

Co-Author: Rachel Carpenter

SUMMARY:

While most cases of pica are linked to iron-deficiency anemia and/or malnutrition, there are also well known links to psychiatric diagnoses such as autism, obsessive compulsive disorder (OCD) and, less frequently, psychosis. This case explores the relationship between nutritional complications and chronic mental illness. Patient is a 37 year-old African American male with a history of schizophrenia and substance use disorder presenting to the ED for lower back pain after a reported assault 2 days prior. Abdominal XR revealed numerous radiopaque foreign objects throughout the GI tract eventually requiring exploratory laparotomy for bowel obstruction and removal of foreign bodies. Patient remained on the surgical service for 2 months after surgery as his recovery was complicated by wound infection with intestinal fistula and abscess development, feeding intolerance, dysphagia, candida esophagitis, and continued ingestion of non-food items. Patient was eventually transferred to the psychiatry unit. Mental status exam was significant for tangential and disorganized thought process, paranoia surrounding staff, and auditory hallucinations. Patient additionally continued eating foreign objects on the unit requiring 1:1 observation. After significant chart review, we suspected a component of his presentation may be related to nutrient deficient pica (despite previous erroneous documentation noting a history of sickle cell anemia), and treated him with IV Iron Sucrose as well as oral iron supplementation. Due to persistence of psychotic symptoms, patient was started on clozapine and eventually augmented with haloperidol and fluoxetine. Patient's psychosis gradually began to improve and he became less guarded and paranoid with staff. Ingestion of objects also ceased. Patient was discharged to his mother

after about two months on the psychiatric unit. Abnormal feeding behaviors are common in patients with schizophrenia, this poster explores the importance of delineating between psychotic origins of pica while also ensuring adequate attention to potential medical causes.

No. 28

Comorbid Obsessive Symptoms in Patients With Chronic Schizophrenia as a Compensation for Subjective Experiences Induced by Clozapine

Poster Presenter: Seong Hoon Jeong, M.D., Ph.D.

SUMMARY:

Introduction: Comorbid obsessive-compulsive symptoms (OCS) in patients with schizophrenia have traditionally been considered as either a part of psychotic symptom spectrum or a side effect of antipsychotic medication. However, neither argument can explain why heterogeneous mechanisms converge to a single phenomenon of OCSs. Another possibility is that the OCSs may develop as compensation for the diversified subjective changes after taking medications. To clarify this matter, the relationship between the components of OCSs and those of medication induced subjective changes was examined. Other clinical variables were also included in the analysis to adjust for the confounding effects. To explore the complex relationship among multiple variables, a Gaussian graphical model (GGM) was built based on partial correlation network. Method: Patients with schizophrenia taking clozapine for more than several months were recruited. Study participants completed Positive and Negative Syndrome Scale (PANSS), the Korean version of the Obsessive-Compulsive Inventory-Revised (OCI-R), and the Korean version of the Liverpool University Neuroleptic Side Effect Rating Scale (LUNBERS). Plasma concentrations of clozapine/norclozapine were measured. The obtained GGM was visually and numerically analyzed. Result: The total of 140 subjects were included. The prevalence of OCSs was much higher than that in general population. None of the subscores of OCI-R showed meaningful association either with PANSS or clozapine dose/concentration except very weak association with checking subscore. In contrast, multiple strong

associations were found between LUNSERS and OCI-R subscores. In the bridge centrality analysis, the EPS, psychic, and obsession subscores were found to act as mediating variables in the relationship between OCI-R and LUNSERS. Discussion: The absence of associations between 1) OCI-R - PANSS and 2) OCI-R - dose/concentration suggests that the OCS neither belonged to the same spectrum as psychotic symptoms nor were the direct effect of medication. The close relationships between OCI-R and LUNSERS without being mediated through other clinical variables supported the hypothesis that the OCSs appeared in the process of compensating for the subjective experiences after taking clozapine. Patients, with poor resonance with the self and the surroundings and the impaired common sense, may attempt to adapt to the medication induced subjective change by repeating constant internal questions about trivial issues that have no practical value.

No. 29

Hypomania Following Low-Dose Deutetrabenazine in a Geriatric Patient With Bipolar Disorder: A Case Report

Poster Presenter: Calvin Sung, M.D.

Co-Author: Seema Quraishi, M.D.

SUMMARY:

Ms. S is a 74 year old woman with a past psychiatric history of bipolar disorder, who presents to the outpatient clinic with concerns of worsening involuntary movements over the past year. The patient was previously taking a combination of valproic acid and risperidone for bipolar disorder, but risperidone was later discontinued due to adverse effects. Six weeks following discontinuation of risperidone, the patient began developing prominent oral and truncal movements that worsened over the course of a year. She was initially treated with benztropine 1mg twice daily for these movements but experienced minimal benefit and had an adverse effect of dry mouth. Her movements were thought to be due to tardive dyskinesia (TD) and benztropine was discontinued. She scored a 7 on the Abnormal Involuntary Movement Scale (AIMS) and she was started on deutetrabenazine following the usual titration. At week 3, when the patient was taking

deutetrabenazine 24mg/day, she began to experience symptoms of hypomania characterized by rapid speech, flight of ideas, and insomnia. Valproic acid was increased and quetiapine was added to target hypomania. Deutetrabenazine was discontinued at this time. The patient's hypomania resolved, and notably, her involuntary movements were significantly improved. On a two-week follow up examination, she scored 0 on the AIMS, and continued to score 0 on subsequent examinations for 1 year after discontinuation of deutetrabenazine. In this poster, we discuss a potential serious adverse effect of deutetrabenazine that is currently not included in the prescribing information. To our knowledge, there is only one report of substance-induced mania in phase 3 placebo-controlled trials of this medication [1, 2]. Furthermore, a long-term safety extension study found that deutetrabenazine may have been linked to an exacerbation of hypomania or mania in 2 patients [3]. More research is needed to determine if there is an association between manic and hypomanic episodes with the use of deutetrabenazine. Special consideration should be given to the geriatric population who may experience adverse effects even at low doses of this medication. Close collaboration with patients, families, and other providers is key in identifying the lowest effective dose of this medication and monitoring for adverse effects. Deutetrabenazine is an important novel treatment for TD, but providers should be aware of its possible risks. TD remains a challenging clinical concern and future research is needed to both prevent and treat this debilitating condition.

No. 30

Psychedelics Used in the Treatment and Relief of Symptoms in Anxiety Disorders: A Literature Review

Poster Presenter: Leah Feulner

Co-Authors: Nathan Rodland, David Galarneau, M.D., Thanpicha Sermchaiwong

SUMMARY:

Background: Anxiety disorders are commonly diagnosed and are a cause of substantial functional impairment. A mixture of traditional pharmacological and psychosocial treatments currently exist, however, they are not always

tolerable and effective. For the past 50 years, psychedelic chemicals like ayahuasca, ketamine, psilocybin and LSD have been studied for their potential antidepressant and anxiolytic effects. For patients whose anxiety is resistant to standard therapy, psychedelics may prove to be a promising alternative. The goal of this review is to assess the safety and efficacy of psychedelics in treating anxiety disorders. **Methods:** Clinical trials investigating psychedelics in patients with clinician diagnosed generalized anxiety disorder, social anxiety disorder, specific phobia, separation anxiety disorder selective mutism, panic disorder, agoraphobia, and anxiety due to another medical condition were searched via PubMed, Embase, PsychINFO, and CINAHL. Efficacy was assessed by measuring change of symptoms and change of quality of life from baseline. **Results:** Data from 8 studies were analyzed in this review, representing 8 independent psychedelic-assisted therapy trials (Ayahuasca=1, Ketamine=4, LSD=2, MDMA=1). Across these studies, 119 patients suffering either from generalized anxiety disorder (GAD), social anxiety disorder (SAD), or anxiety due to another medical condition (AMDC) were included. The reviewed studies demonstrated encouraging data of efficacy in the reduction of anxiety symptoms, increased self perception, and increased social function in patients with GAD, SAD, or AMDC, while also establishing feasibility and evidence of safety. However, the 1 study on MDMA assisted psychotherapy reported decreased anxiety symptoms, but the results were not found to be statistically significant due to outliers in the control group. For many of the patients, therapeutic effects of the psychedelic treatment lasted weeks. No severe adverse events were reported, and all studies were conducted within psychedelic therapy guidelines. **Limitations:** The number of studies investigating psychedelics in patients with anxiety disorders is extremely limited. The studies that currently exist often yield low quality results due to poor study design and conflicts of interest in funding. Additionally, the findings from some of these studies are unlikely to be generalizable as some included unique populations such as patients suffering from life-threatening disease. **Conclusion:** Current literature shows that psychedelics could be considered in the treatment of patients with clinician diagnosed anxiety disorders due evidence of

symptom reduction and established safety. The use of psychedelics may provide an alternative therapeutic option to patients who are resistant to current standard treatments.

No. 31

Psychogenic or Polypharmacy? A Case Highlighting the Importance of Pharmacokinetics

Poster Presenter: Alexandra Moore

Co-Author: Erica C. Garcia-Pittman, M.D.

SUMMARY:

Introduction: Psychotropic drugs are among the most common medications prescribed to elderly patients. The number of psychotropic drugs has increased significantly over the past few decades with a proportional increase in adverse medication outcomes including drug-drug interactions. Advancing age is accompanied by changes in pharmacokinetics and pharmacodynamics that put older patients at greater risk for adverse medication outcomes. Many drug-drug interactions of psychotropics involving the cytochrome P450 enzyme system. The activity of these enzymes can be inhibited or induced by several drugs resulting in clinically significant drug-drug interactions. This case highlights the importance of maintaining a comprehensive understanding of pharmacokinetics and considering the possibility of an adverse drug reaction when evaluating an older patient presenting with new and unexplained symptoms. **Methods:** This case report focuses on a geriatric patient with depression and multiple medical comorbidities presenting with unexplained neurological symptoms thought to be psychosomatic. Patient's clinical documents were reviewed. A literature survey was performed on the topic of psychotropic polypharmacy, pharmacokinetics, and the increased risk of adverse medical outcomes in geriatric patients. **Results:** A 69-year-old female was referred by neurology to geriatric psychiatry clinic for evaluation of psychogenic non-epileptic seizures. She had been experiencing symptoms of dizziness, dysarthria, and gait instability with multiple falls requiring hospitalization. She underwent an extensive and uneventful medical and neurological workup. Immediately prior to onset of symptoms the patient was taking the maximum dose of

amitriptyline at 150mg when bupropion was added and increased to 300mg. Symptoms were suspected to be secondary to amitriptyline toxicity with bupropion (a potent CYP2D6 inhibitor) leading to supratherapeutic amitriptyline levels (CYP2D6 substrate). Amitriptyline level was obtained and returned supratherapeutic at 362. Both amitriptyline and bupropion were discontinued with immediate resolution of the patient's symptoms. Conclusion: Polypharmacy is a disease simulator; patients may exhibit conditions caused by medications rather than organic illness. It is crucial for clinicians to be aware of drug interactions and consider whether the development of a new medical condition could be the presentation of an adverse drug event. Many drug interactions are the result of altered CYP450 metabolism, and therapeutic drug doses may cause adverse effects related to increased drug serum levels if a CYP450 enzyme inhibitor is added or if the patient is a poor metabolizer. Knowledge of the most important drugs metabolized by cytochrome P450 enzymes, as well as the most potent inducers and inhibitors, can help to reduce the occurrence of adverse drug events and interactions.

No. 32

Toxicities With Polypharmacy: A Case of Amitriptyline Toxicity

Poster Presenter: Tara Eden Lemens, M.D.

Co-Author: Kristy Griffith, M.D.

SUMMARY:

Ms. L, a 65-year-old woman, presented for routine follow-up from a previous psychiatrist for her generalized anxiety disorder and major depressive disorder with concerns of brain fog and dry mouth. Her depressive symptoms were resolved, and anxiety symptoms significantly reduced at the time of this appointment. However, she had been experiencing "brain fog" for the past 3 months, which became severe enough to cause a traffic accident. She also was experiencing symptoms of insomnia, dry mouth, decreased coordination, memory loss, hair loss, and vertigo. She denied any other symptoms, including nausea, vomiting, diarrhea, constipation, weakness, or urinary retention. Her medication regimen at the time was bupropion XL 300 mg PO qAM, amitriptyline 75 mg PO qhs, and quetiapine 100 mg

PO qhs. Her combined amitriptyline and nortriptyline level on bloodwork drawn the day of the appointment was 300 mcg/mL, 50 mcg over the high end of the therapeutic range. We discontinued her amitriptyline at that appointment, and her physical symptoms had completely resolved by her follow-up visit. Side effects heralding a more dangerous toxicity can emerge at supratherapeutic but still sub-toxic levels. In patients presenting with anticholinergic side effects or confusion on a tricyclic antidepressant, their full medication regimen needs to be evaluated for any potential interactions that would lead the blood level to be elevated. In this patient, we found an interaction between amitriptyline and bupropion at the CYP 2D6 enzyme, which caused the amitriptyline level to be elevated. Her older age also made her more sensitive to anticholinergic side effects, which were the most prevalent in this patient.

No. 33

Urinary Retention in Catatonia: An Atypical Presentation

Poster Presenter: Tara Eden Lemens, M.D.

Co-Author: Tessa Manning, M.D.

SUMMARY:

Introduction: Catatonia is a common psychiatric syndrome that may have multiple atypical presentations. The classic hallmark symptoms of catatonia are waxy flexibility, mutism, grimacing, posturing, stupor, cataplexy, negativism, echopraxia, and echolalia. Other less common symptoms can include agitation, excitement, bizarre behaviors, and, in this case, urinary retention. Urinary retention is an understudied symptom of catatonia, which, if severe, can lead to confusion in detecting some of the more traditional signs of catatonia due to the resulting pain response. Common symptoms such as mutism, posturing, agitation, and grimacing can be diminished or eliminated due to the patient responding to pain from urinary retention, or mistakenly attributed to the patient's pain response. **Case Description:** A 59-year-old male with no past psychiatric history presented with new onset depression and psychosis defined by nihilistic delusions. The patient was refusing to eat or drink and was reported to have a restricted affect at home.

On initial exam, he was found grimacing and writhing due to abdominal pain with diffuse tenderness on exam. After his bladder was drained of 1.2 L of urine, the abdominal pain resolved. However the patient continued to exhibit repeated episodes of urinary retention requiring intermittent catheterization. The patient continued to have restricted affect, increased sleep, and decreased appetite, along with continued nihilistic delusions, despite a trial of sertraline and quetiapine for presumed major depressive disorder with psychosis. The diagnosis of catatonia was only suspected after he was given dose of lorazepam for anxiety.. Soon after this was given, the patient became more active, was able to eat and urinate without difficulty, and no longer reported nihilistic delusions His urinary retention resolved after initiation of lorazepam, and he was discharged without residual symptoms on lorazepam 1.5 mg orally three times daily, sertraline, and quetiapine..

Discussion: Catatonia can present with a wide array of symptoms. However, in this case, some of these symptoms, in particular his stereotypy, his posturing, and his grimacing, were masked by his response to pain from severe urinary retention. In patients presenting with significant pain and inability to communicate the origin of that pain, it is important to keep catatonia on the differential. Furthermore, certain causes of pain can be symptoms of the patient's catatonia, such as urinary retention. Therefore, all patients with catatonia should be screened for urinary retention, and all patients with altered mental status and urinary retention should be screened for catatonia.

No. 34

Sedative Drug-Use in Denmark, 2000 to 2019: A Nationwide Drug Utilization Study

Poster Presenter: Ida Kim Wium-Andersen

Lead Author: Thomas Wolff Rosenqvist

Co-Authors: Merete Osler, Marie Kim Wium-Andersen

SUMMARY:

Background In Denmark several central regulations have sought to regulate prescriptions practice toward more restrictive use of Z-drugs and benzodiazepines¹. Thus, the aim was to describe trends in and characteristics of sedative drug use

from 2000 through 2019 in relation to the introduction of central regulations and new drugs. *Methods* We used individual prescription data on the entire Danish population from the Danish National Prescription Registry to calculate yearly incidence and prevalence of use of benzodiazepines, benzodiazepine-related drugs (Z-drugs), melatonin, promethazine, low-dose quetiapine, and pregabalin from 2000 through 2019. From the Danish National Patient Registry, we obtained data on drug users psychiatric and somatic comorbidity. *Results* The use of benzodiazepines and Z-drugs declined gradually from 2000 through 2019, whereas the newer alternatives, melatonin, promethazine, low-dose quetiapine and pregabalin, increased in use. This development was seen in both men and women and across all age groups except for hypnotic benzodiazepines which showed a steep increase in the oldest age group from 2010. For all sedative drugs depression, anxiety, alcohol and misuse disorder, pain and cancer were the most prevalent comorbidities. During our study period, the number without any of the selected diagnoses increased. However, over time hypnotic benzodiazepine users had more comorbidity. *Conclusion* Our results indicate that the different regulations have influenced prescriptions practice toward more restrictive use of Z-drugs and benzodiazepines, however for hypnotic benzodiazepines prescriptions have increased after the introduction of palliative care. Notably, we observed a shift towards a higher proportion of sedative drug users without somatic or psychiatric comorbidity. Also, the increase in use of newer sedative drugs, however, indicates that the regulations do not remove the need for sedative drugs in the population, however, shifts the use of medication to off-label use of drugs with sedative properties.

No. 35

Short-Term Tolerability and Adherence to Vortioxetine: A Brief Report From India

Poster Presenter: Parmod Kumar, M.D.

Co-Authors: Nitin Gupta, Shubham Kamal, M.B.B.S., Sabhya Kamal

SUMMARY:

Short-Term Tolerability And Adherence To

Vortioxetine: A Brief Report From India Parmod

Kumar, Nitin Gupta, Shubham Kamal, Sabhya Kamal

Background: Vortioxetine is a recently introduced multimodal anti-depressant with a presumed mechanism of action being enhancement of serotonin in the central nervous system through reup- take inhibition. The efficacy of vortioxetine in the treatment of Major Depressive Disorder (MDD) is well demonstrated; especially compared to numerous other antidepressants in head-to-head trials. However, studies from India are lacking.

Method: The data was retrospectively collected from case files of 37 patients with ICD-10 diagnosis of Depression who were initiated on vortioxetine for a period of 6 months (July 2021-December 2021). They were assessed at baseline, 3 months and 6 months follow-up. Any patient who did not complete these 3 assessments were not included in the study.

Descriptive analysis was conducted. **Results:**

Majority of them were above 40 years of age (43%), males (62%), graduates (54%), from nuclear family (76%), of Hindu religion (89%), of urban background (70%), and outside local catchment area (68%). ICD-10 diagnosis made were-51% severe single/recurrent depression, 14% severe psychotic depression-single or recurrent, 19% mild and 16% moderate depression. Mean Baseline PHQ score was 14.94; majority (65%) belonged to moderately severe to severe depression sub-group. Mean PHQ score at 3 months and 6 months follow up was 4.95 and 3.43. Regarding side-effects, majority (86%) didn't report, and only 5 patients reported immediate side effects (2 experienced nausea, and 1 each reported insomnia, itching and heaviness in head). None reported any sexual side effects. Side effects were reported by 8% (GI-nausea and vomiting, hypomanic switch) and 2.5% (headache) at 3 and 6 months respectively. No sexual side effects were reported.

Drop-out rate was 38% and 57% at 3 and 6 months respectively. An average of 6.18 number of follow up visits were made over 6-month period. **Conclusions:**

Vortioxetine is efficacious over short-term duration of 6-month usage with minimal side effects and no effect on sexual functioning. More studies are needed from India using comparative, prospective, cross-over design to demonstrate its efficacy and safety in the real-world setting.

No. 36

When Psychiatric Medications Are Not the Culprit: Capecitabine Causing Oro- Buccal Dyskinesia

Poster Presenter: Ivana Espinosa

Co-Authors: Maria Rueda-Lara, Terri Pollack, D.N.P., A.P.R.N.

SUMMARY:

ABSTRACT Purpose Pancreatic cancer is the fourth leading cause of cancer- related death in the world. It has a high mortality rate and it is difficult to treat because most patients are initially diagnosed with advanced disease. Early detection is key.

Capecitabine is an oral fluoropyrimidine carbamate that is associated with a lower incidence of toxicities that can be used in advanced pancreatic cancer.

Pancreatic cancer is the tumor entity with the highest incidence rate of depression among all other tumors of the digestive system. Selective Serotonin Reuptake Inhibitors (SSRI) are commonly prescribed for the treatment of depression in patient that are diagnosed with cancer because they generally have fewer side effects than most other types of antidepressants. Monitoring for side effects of chemotherapy medications and anti- depressants may be challenging given the risk of toxicities of chemotherapy drugs. We discuss a case illustrating how oro- buccal dyskinesia presented with on a patient diagnosed with pancreatic adenocarcinoma being treated for depression. **Methods** We summarize the clinical encounters and chart review of a 75-year-old male patient with pancreatic adenocarcinoma on capecitabine who was treated for depression. **Results** The patient had a history of recurrent depression. For his pancreatic adenocarcinoma, the patient was receiving Capecitabine. Following his cancer diagnosis, he presented with a major depressive episode. He was prescribed Sertraline and was steadily increased to the dose of 200mg. Mirtazapine was started four months after the initiation of Sertraline to target appetite and sleep. Six months after starting Sertraline, the patient complained of sexual side effect and requested for the dose of the Sertraline to be decreased. Due to increase tumor markers, the capecitabine dose was increased. At that time, he began to exhibit involuntary pouting and smacking

lip movements. Both psychotropic medications were discontinued. It was thought to be a side effect related to the anti-depressant but symptoms did not resolve with the discontinuation of SSRI. The oro-buccal dystonia continued while on capecitabine. Conclusions This case highlights the need for awareness that capecitabine may lead to oro- buccal dystonia. In this patient it was difficult to differentiate if the etiology of the dystonia was the SSRI or capecitabine. We concluded that this was due to capecitabine use, because after discontinuing Sertraline, symptoms continued and did not improve. There have been other reported cases of abnormal involuntary movements (oromandibular dystonia) due to capecitabine. Due to the serious nature of this adverse event, although rare, we are convinced that physicians should be aware of the potential adverse event. More research is needed to clarify the pathogenesis of abnormal involuntary movement due to capecitabine.

No. 37

Is There a Sex Difference in Response to SSRI Treatment?

*Poster Presenter: Bojana Pejuskovic, M.D., Ph.D.
Co-Authors: Marija Lero, M.D., Gorana Nikolasevic, M.D., Vesna Pesic, Ph.D.*

SUMMARY:

Background and aims: Depression is a complex mood disorder with high incidence and leading cause of years lost to disability, putting a great burden on health care systems worldwide. Furthermore, depression is sex specific, as women suffer this mood disorder twice the rate of males, as well as a number of studies have observed the sex differences in response to antidepressant treatment. The aim of the study was to explore therapeutic response in male and female patients after hospital admission and four-week-long treatment with selective serotonin reuptake inhibitors (SSRIs). **Methods:** The sample consisted of 43 hospitalized patients with major depressive disorder (MDD) at Clinical Department of Crisis and Affective Disorders. The assessment has been carried out by following instruments: socio-demographic questionnaire, Mini International Neuropsychiatric Interview (M.I.N.I.-5), Hamilton Depression Rating Scale (HDRS) on

admission and after four-week-long SSRI treatment.

Results: Among 43 patients with diagnose of MDD, reduction of the Hamilton scores (day 28 vs. day 1) in male patients (N=14) was significantly ($p=0.025$) higher than in female patients (N=29). Furthermore, Hamilton scores after four-week-long SSRI treatment (day 28), was highest in women in luteal phase compared to all other groups of patients. **Conclusion:** Present study adds to the data on difference in sensitivity to antidepressants treatment in male and female patients suffering from MDD. Also, it points to the difference in response to SSRIs treatment in females depending on their menstrual cycle phase.

No. 38

Stopping Over Prescription of Psychotropics in People With Intellectual Disabilities, Examples of Collaborative Practice in the UK

Poster Presenter: Aruna Sahni

Co-Authors: Rupal Ekeberg, M.B.B.S., B.Sc., Paul Shanahan

SUMMARY:

Background: There is established evidence of inappropriate use of psychotropic medication in people with Intellectual Disability (ID). In primary care, it was noted that “the proportion of people with ID treated with psychotropic drugs exceeded the proportion with recorded mental illness” and “antipsychotics are prescribed for people with no recorded severe mental illness but behaviours that challenge”. Public Health England reported that up to 35000 people with ID a day take psychotropic medications they may not need. Stopping the Over-medication of people with ID (STOMP) is a national project supporting the judicious use of medications for people with ID. The Royal College of Psychiatrists (RCPsych) produced a Faculty Report FR/ID/09 to provide “a framework for clinicians on how to rationalise their prescribing practice and, where appropriate, taper and stop psychotropic drugs. **Methods:** We have audited our prescribing practice for behaviours that challenge and looked at collaborative ways to reduce medication reliance. We present examples of working jointly with behaviour analysts, specialist pharmacists, general medical practitioners and other services in order to

rationalise use of psychotropics in this vulnerable group. We also discuss how psychiatric diagnoses have been revoked following the resolution of other factors such as medical conditions, environmental factors or relationships with carers. Results: Our audit supports previous literature on factors that increase prescribing rates for managing behaviours that challenge (e.g. diagnosis of autism, severity of ID, male gender). We describe case examples: 1. Where treatment of underlying physical illness led to reduction in behaviours that challenge and withdrawal of psychotropic medications. 2. Illustrating the importance of collaborative working with behaviour analysts to understand the function of behaviours. 3. Where changing the environment led to resolution of behaviours that challenge. Conclusion: Working collaboratively with health and social care professionals has improved the quality of life of people with ID, such that psychotropic medications were reduced/withdrawn, and in some cases psychiatric diagnoses were revoked. Our practice is in keeping with national UK guidance and recommendations around behaviours that challenge.

No. 39
Psychotropic Prescribing Practices in Adults With Intellectual Disability and Autism Spectrum Disorder

Poster Presenter: Richard John Hillier, Ph.D., M.B.

Co-Author: Rupal Ekeberg, M.B.B.S., B.Sc.

SUMMARY:

<div style="margin: 0cm 0cm 10pt; text-align: justify;">**Background**

STOMP stands for stopping over-medication of people with intellectual disability (ID), autism or both with psychotropics. STOMP was launched in 2016 by NHS England and is a national project with an aim of stopping the overuse of psychotropic medications in people with ID. It aims to improve the quality of life, by reducing the potential harm of inappropriate use of psychotropic medications as means of 'chemical restraint' in this patient group.

NICE guidance on challenging behaviour in people with ID (NG11) advises that specialists should only consider using psychotropics to help manage behaviours that challenge</div>

<div style="margin: 0cm 0cm 0.0001pt 36pt; text-align: justify;">· psychological/behavioural interventions do not produce change in an agreed time</div>

<div style="margin: 0cm 0cm 0.0001pt 36pt; text-align: justify;">· treatment for any coexisting mental and physical health conditions has not led to a reduction in the behaviours</div>

<div style="margin: 0cm 0cm 10pt 36pt; text-align: justify;">· the risk to the person or others is very severe, such as aggression directed towards self or others.</div>

<div style="margin: 0cm 0cm 10pt; text-align: justify;">NICE also recommends that antipsychotic medications are only offered alongside psychological/behavioural interventions when used in relation to behaviours that challenge.</div>

<div style="margin: 0cm 0cm 10pt; text-align: justify;">**Method**

In this study we looked at prescribing patterns for adults with ID and autism within the community team for the London Borough of Richmond. We collected demographic information including age,

sex, level of ID, mental health diagnoses and prescribed medication. We also looked at evidence of involvement of positive behaviour support (PBS) and any associated PBS plan.

Results

32 patients were identified as eligible for inclusion in the study. 84% (n=26) had an indication for psychotropic medication clearly documented. Every patient on psychotropic medication had evidence of a medication review in the last year. 66% (n=21) were prescribed psychotropic medications for behaviours that challenge. 53% (n=17) had an established PBS plan in place from behaviour analysis. The average number of prescribed medications was 2 (median 2, mean 2.41) but when additional diagnoses outside of ASD, ID and epilepsy were excluded, the average number was reduced to 1 (median 1, mean 1.76). The most commonly prescribed psychotropic medications were risperidone (n=9), diazepam (n=5) and sertaline (n=4).

Conclusions

Prescribing of psychotropic medication is common in this group of people and there was clear evidence that prescriptions were regularly reviewed, in keeping with STOMP guidance. However, we found that input from behaviour analysis and PBS plans were not always in place for some cases where their input would have been helpful.

No. 40

Delay in Care of a Catatonic ECT Patient – Critical Evaluation of Legislative Constraint

Poster Presenter: David J. Cox, D.O.

Co-Authors: Emily Beydler, Brent R. Carr, M.D.

SUMMARY:

Despite the broad and complex array of circumstances in which individuals with schizophrenia present, systematic reviews and meta-analysis support ECT's favorable safety and efficacy. (Grover et al., 2018). Catatonia response rates are >80%, including those refractory to benzodiazepine treatment (Lloyd et al., 2020). However, its efficacy has been shown to drop considerably with treatment delay and prolongation could worsen symptoms of depression, catatonia, or treatment-resistant affective disorders (Nazarian et al., 2013 & Kim, 2018). Despite the need for urgency, various well-intentioned legislative barriers exist throughout the United States, which are designed to protect vulnerable patients, but ultimately delay patient care. Here we present DB, who is a 63-year-old Caucasian female with intellectual disability and schizophrenia, on Clozaril, who presented to the ED from an assisted living facility for decompensating mental status. She has a 10-year history of multiple psychiatric hospitalizations with similar presentations of poor self-care. She responded to several previous ECT courses, most recently 9 months earlier. Consult-Liaison restarted her Clozaril 25mg PO QD as she had been off her usual dosing of 600mg PO QHS. 3 days later, she was transferred to inpatient psychiatry. However, she continued to decline over the next 4 days with uncooperative behavior and poor PO intake that led to ketoacidosis. She was emergently transferred back to the hospital, where catatonia was diagnosed. Court documents were filed for approval for a healthcare proxy to consent her for ECT. However, it was not until 8 days later that DB received her first ECT treatment and had to be sustained with tube feeds and IV hydration during the interim. One day post-ECT, she resumed regular diet with adequate PO intake. Court hearings are held only once a week, on Thursdays. Timing was favorable for DB's case that resulted in only a 48-hour delay to present to court. The magistrate authorized a proxy to consent for 12 treatments only. However, a judge did not sign the magistrate's approval, thus delaying treatment that spanned a treatment day and full weekend resulting in a 5-day delay. Furthermore, by the morning of the first ECT treatment, the patient's healthcare proxy (her father) had still not yet been available to give consent for ECT which delayed treatment for another

several hours, almost resulting in another 48-hour delay from possible need to cancel the case. Mental health laws are often set in place to prevent patient mistreatment, and many were established from an era of psychosurgeries, and are residual laws that should be updated. Here, a 1-2-day file time might translate into a week-long delay prior to initial court approval. Given the urgency and severity of such cases, delay has potential for harm, nullifying the benefits of a well-intentioned law.

No. 41

Facebook and YouTube as Sources of Medical Information for Postpartum Depression

Poster Presenter: Jasmine Liu-Zarzuela

Lead Author: Jasmine Liu-Zarzuela

Co-Authors: Isreal Bladimir Munoz, Kimberly Grayson, Meghan M. Mallya, B.S.

SUMMARY:

Background: Postpartum depression (PPD) is a common condition that affects one in seven women in the United States, but up to 50% of PPD cases may go undiagnosed due to privacy concerns and an unwillingness to disclose symptoms to family members. As a result, new mothers may turn to other sources of information, such as social media platforms, for education and support. This study aims to evaluate YouTube as a source of medical information on postpartum depression in regard to quality, reliability, and usefulness. Methods: For video extraction, YouTube was queried using the terms “postpartum depression,” “postnatal depression,” and “depression after pregnancy.” The top 60 videos for each term were selected using the “most views” function, totaling to 180 videos. Videos were excluded if they were 1) unrelated to PPD, 2) under one minute, 3) longer than 20 minutes, 4) not in English, 5) duplicates, 6) without audio, and 7) less than 1,000 views. Three independent reviewers evaluated the quality and reliability of medical information in the videos using a modified DISCERN (mDISCERN) Scale and Global Quality Scale (GQS). The videos were then classified as useful, misleading, or neither useful nor misleading. Results: After exclusion, this analysis included 64 videos, which were uploaded between November 30, 2007 and October 11, 2022. The mean video length was $6.9 \pm$

4.6 minutes with a mean number of views of $692,520 \pm 2608044.7$. The mean number of likes was 8325 ± 26975.2 , and the mean number of comments was 600 ± 1690 . With a sample size over 50, the Kolmogorov-Smirnov normality test was utilized to evaluate normality assumptions of numerical variables, which were not normally distributed. Thus, the nonparametric statistical method of the Kruskal-Wallis test was used to determine any differences (in mDISCERN score, GQS score, video length, number of likes, and number of comments) between video source and video classification. There was a significant difference between mDISCERN scores and GQS scores with respect to video source and video classification ($\alpha < .05$). Specifically, videos from psychiatrists and other healthcare providers had the two highest mDISCERN and GQS scores, while videos from independent users and news channels had the two lowest mDISCERN and GQS scores. In addition, independent users and news channels had the two highest mean rank for number of views. Conclusion: Social media platforms like YouTube allow individuals to share information about medical disorders with a large audience. However, the quality and reliability of this information can vary greatly. The current findings emphasize the need for healthcare providers to disseminate high quality and reliable healthcare content on social media platforms to educate women enduring postpartum complications, such as postpartum depression, and ensure access to accurate information.

No. 42

YouTube and Tiktok as a Source of Medical Information on Dissociative Identity Disorder

Poster Presenter: Isreal Bladimir Munoz

Co-Authors: Jasmine Liu-Zarzuela, Navin Oorjitham, M.D., Devon Jacob

SUMMARY:

Background: Dissociative Identity Disorder (DID) is a rare condition that causes alternation of at least two separate personality states and has a prevalence of less than 1% in the general population. As DID continues to grow in popularity in media and social network platforms, users may use these platforms to share information and for self-expression. While social media provides an accessible platform for

education, it may spread miseducation, particularly with medical information. This study aims to appraise the social media platforms, YouTube and TikTok, as sources of medical information on DID.

Methods: YouTube and TikTok were queried using the following search phrases: “Dissociative Identity Disorder,” “Multiple Personality Disorder,” and “Split Personality Disorder.” Videos were sorted by “most viewed” for YouTube and “most liked” for TikTok. The top 60 videos were selected from each search term on each platform. Videos were excluded if they were unrelated to DID, under one minute (YouTube only), not in English, duplicate, or had no audio. Videos were reviewed by four independent reviewers using a modified DISCERN (mDISCERN) Scale, Global Quality Scale (GQS), and they were further classified as useful, misleading, or neither useful or misleading. **Results:** Sixty YouTube videos met criteria, and 97 TikTok videos met criteria. For classification, 51.7% of YouTube videos were useful, 6.7% misleading, and 41.7% neither, while 5.2% of TikTok videos were useful, 10.3% misleading, and 84.5% neither. A Kruskal-Wallis test was used to analyze the difference between (mDISCERN score, GQS score, video length, views (YouTube only), number of likes, number of comments) and video source, content type, and classification. A significant difference was found between (mDISCERN and GQS) score and the video source, type of content, and classification ($\alpha < .05$). For YouTube video source, educational organization and health professionals had the two highest mDISCERN and GQS score, while independent users and film/TV had the two lowest. For YouTube video content, educational videos had the highest mDISCERN and GQS score, while comedy skits and compilation videos had the lowest two. For TikTok video source, organizations had the highest mDISCERN and GQS score, while podcasts and Film/TV had the two lowest. For TikTok video content, educational videos and interviews had the highest mDISCERN and GQS score, while comedy skits and art the two lowest. **Conclusion:** Medical information on DID was found to vary greatly by the type of source and content for each platform. More than half of the YouTube videos were useful, and many were educational content and interviews. On the other hand, TikTok had very few useful videos and was a platform dedicated more towards self expression. Therefore, healthcare professionals and

organizations should create content of high quality and engagement on social media platforms, particularly TikTok, in order to educate users on DID.

No. 43

Factors Associated With Response in Patients With Schizophrenia Undergoing Bilateral Electroconvulsive Therapy: Retrospective Study

Poster Presenter: Chanaichon Ruangsetakit

Co-Author: Pichai Ittasakul

SUMMARY:

Abstract Objective: To examine the response rate and factors associated with response in patients with schizophrenia undergoing bilateral electroconvulsive therapy (ECT). **Method:** Demographic data, clinical characteristics, ECT data and treatment response (defined as a 40% reduction in the Brief Psychiatric Rating Scale (BPRS) psychotic symptom subscale after last ECT session) of patients with schizophrenia, undergoing bilateral ECT from January 2013 to June 2022 were reviewed. We analyzed the clinical characteristics of the patients and clinical outcome so as to evaluate factors associated with response and speed of response. Forty-six patients were included. The reasons for ECT were to non-response to antipsychotics (27/58.7%), agitation (11/23.9%), psychomotor retardation (5/10.9%), and intolerance to side effects of psychotropic medication (3/6.5%). The response rate was 60.9%. Nine (19.6%) patients responded after the first three sessions, 17 (37%) after six sessions, 20 (43.5%) after nine sessions, 25 (54.3%) after 12 sessions and 28 (60.9%) after last ECT sessions. Baseline BPRS psychotic symptom subscale score of responders (17.0 ± 5.8) were significantly higher than of non-responders (10.9 ± 6.4) ($p < 0.05$). Duration of EEG seizure of responders (53.9 ± 22.6) was significantly longer than of non-responders (42.7 ± 11.0). No association between demographic and ECT data with treatment response. Among responders ($n=28$), 20 (71.4%) responded to ECT after nine sessions (faster responders), 8 (29.6%) responded later (slower responders). Number of failed antipsychotics prior ECT were 2.8 ± 1.6 for faster responders, and 4.4 ± 1.9 for slower responders ($p = 0.02$). A nominal logistic regression showed the number of failed antipsychotics prior ECT was associated with speed of response to ECT. (p

= 0.037, odd ratio = 1.77) **Conclusions:** ECT was an effective treatment for schizophrenia. The number of failed antipsychotics prior ECT was associated with speed of response to ECT. **Keywords:** Electroconvulsive therapy, Schizophrenia, Acute ECT, Response rate, Inpatient

No. 44

Analysis of Gender Affirming Surgeries to Improve Gender Dysphoria and Quality of Life in Usa: A Literature Review

Poster Presenter: Jatminderpal Bhela, M.D.

Co-Authors: Sundas Saboor, Manpreet Kaur, Akhilesh Agarwal

SUMMARY:

Introduction: Gender dysphoria refers to strong discomfort or distress that results when a person's assigned birth gender is not the same as the one with which they identify. It can strongly impact a person's quality of life which results from poor peer and family relations, symptoms of depression and anxiety, substance use disorders, poor self-esteem. Transgender people with gender dysphoria are more likely to experience poor quality of life and mental health problems than the general population. Gender affirming surgeries (GAS) are being increasingly performing over the past few years and the results so far have been quite promising. It has shown to greatly improve the quality of life, level of satisfaction and long-term mental health among the transgender population experiencing gender dysphoria. In order to understand the impact of GAS on the gender dysphoria of individuals, we aim to evaluate the effects of GAS on the quality of life and gender dysphoria among individuals in United States. **Methods:** Literature search was conducted using PubMed, Web of Science, APAPsycInfo, APA, CINAHL Combined and LGBTQ+ Source through May 2017 to May 2022 (last 5 years). Randomized controlled trials, case reports/case series that described gender dysphoria, quality of life, and gender surgery in the context of USA were included. Five independent reviewers analyzed the studies and 22 studies were included in the final analysis. **Results:** Data from variety of questionnaires used in the studies measuring quality of life and gender dysphoria before and after receiving the procedures were

analyzed, with $P < .05$ considered significant. Results showed that after receiving either or combined procedures on the face, chest or genitalia, significant improvement in self-worth, social and psychological well-being, sexual and physical appearance satisfaction, and which improved the overall quality of life and gender dysphoria. Other significant finding was that despite the side effects from variety of gender affirming surgeries, participants were satisfied and were willing to have the procedures all over again if they had to. **Conclusion:** Gender identity is a complex subject where although the research is gaining momentum but there is still so much remaining to be unfolded. Despite the recent increase in access to gender assignment surgeries (GAS), there is a paucity of research to assess the quality of life and gender dysphoria among these individuals after surgical interventions as well as individuals who have accepted themselves.

No. 45

Residents' Perceptions and Evaluations Regarding E-Learning

Poster Presenter: Andres Ricardo Schneeberger, M.D.

Co-Author: Rahul Gupta, M.D.

SUMMARY:

The implementation of online digital media for education, called e-learning or online education, has seen a great expansion in recent years and medical specialty training has not been excluded from this paradigm shift. Several factors have led to the need to redirect more resources to such a teaching modality. On one hand, the increasing demand for national and international standardization of training curricula, and on the other, the lockdown imposed in many nations during 2020 and '21 due to the SARS-CoV-2 pandemic. Although many efforts have been made in analyzing the effectiveness of classical teaching methods, there are currently only partial and fragmentary analyses of the effectiveness of e-learning for post-graduate programs and even less for psychiatry training. To try to fill this gap, we created a survey involving all psychiatry and psychotherapy residents enrolled in the North and Northeastern Swiss regional postgraduate training center "WBV Zürich", where e-learning has been implemented for the past two years due to pandemic

restrictions. The objectives of this study are to analyze residents' perceptions and evaluations regarding e-learning, assess previous experience with e-learning tools and familiarity with digital media, and highlight any correlations between the two. Data were collected between June 9 and July 17, 2022, with a total response rate of 74.02% (n= 245 out of 331). Spearman's Correlation and Wilcoxon-Test were used to analyze the relationships between the variables and overall perception. Thereafter, we used logistic regression models to determine the odds ratios of the significant relationships thus highlighted. As many as 144 residents reported having used e-learning prior to the SARS-CoV-2 pandemic, either out of personal interest or during university training. The overall satisfaction with prior use of e-learning has an average of 4.81 (sd 1.13) with females having a more positive rating (n=152, mean 5.04, sd 0.97) than male colleges (n=91, mean 4.51, sd 1.25) [p=0.001] [Revelle's Omega 0.92]. The same statistically significant difference by gender can be found also in the overall satisfaction with the implementation of e-learning during specialty training, with female reporting better ratings.

No. 46

Creating an Academic Home for Quality, Innovation and Safety Activity in the Department of Psychiatry at the University of Toronto

Poster Presenter: Andrea E. Waddell, M.D., M.Ed.

Co-Author: Tara Burra, M.D., M.A.

SUMMARY:

Background: In addition to education and research, academic departments of psychiatry also focus on providing high quality, innovative, and safe clinical care. This priority requires scholarship in quality improvement, patient safety, and innovation. To achieve excellence in these domains, scholarly productivity needs to be structurally supported and rewarded. Recognizing a deficit in our academic structures, the Department of Psychiatry at the University of Toronto embarked on a multistage plan to create an academic home for faculty and trainees working in these areas. **Methods:** The first intervention was to create an academic job description with clear milestones and deliverables to

ensure a promotion pathway was available to our faculty. We gathered existing job descriptions from other departments in the Faculty of Medicine and created a working group of clinicians in quality, safety, and innovation to develop the job description. We then completed an environmental scan of our Department, which has over 800 faculty and spans more than 15 clinical sites, to develop a three year strategic plan for quality, innovation and safety (QIS). The strategic plan was vetted by the senior leadership of the Department. Third, we aimed to create an academic home, a "hub," for faculty and learners to: 1) disseminate QIS scholarship, 2) publicize professional development opportunities, and 3) support collaborations between sites. Clinicians in QIS were identified at each clinical site and invited to join the hub. Through snowball recruitment, the initial members were asked to identify additional members. **Outcomes:** 1. Academic Job Description & Promotion Pathway This has been active for six years. We recently had faculty members promote to Associate and Full Professor using this pathway. 2. Strategic Plan Using a matrix-maturity model, we have a stratified plan with deliverables for each year. This plan will support the development of QIS work at all the affiliated clinical sites and increase the number of faculty promoting via this pathway in the coming years through creation of academic opportunities. The matrix will be illustrated on the poster. 3. Hub/Community There are more than 20 members of the Hub to date, including faculty, trainees and clinical affiliates. We have drafted terms of reference for the hub and members are meeting 5 times a year. There is a website promoting faculty work in QIS and a monthly newsletter highlighting new opportunities for hub members. The chairs of the hub are co-editing a special edition of a journal focused on QIS, increasing opportunities for peer reviewed dissemination of work. **Discussion:** Quality, safety and innovation are core areas of inquiry in university-based departments of psychiatry, however, scholarship in these areas is not well served by tradition promotion pathways for education and research. Using a multi-step approach, we have created an academic home for faculty working in these areas.

No. 47**Roadmap to Bridging: Developing a Unified Discharge Process in an Ambulatory Mental Health Drop in Clinic**

Poster Presenter: Andrea E. Waddell, M.D., M.Ed.

Co-Authors: Mona Irannejad, Dorottya Harangi, Andres Kohan

SUMMARY:

Purpose: During COVID-19 pandemic, the Bridging Clinic at the Center for Addiction and Mental Health (CAMH) saw the number of clients served grow due to reduced discharge rates. This impacted their capacity to accept new clients and fulfill their mandate to provide low barrier and rapid access for acute care. Our team evaluated the problem space to identify needs related to effective client flow and to develop an intervention to address the most actionable uncovered need. **Methods:** We used mixed methods approach, ranging from environmental scans, semi-structured interviews, and direct observation/interaction to quantitative analysis of monthly reports and a user database of client flow. We also analyzed staff training manuals, and client views through the 2021 Ontario Perception of Care survey. All information was processed through an Affinity Diagram, and 5 Why approach to identify the needs behind improving the discharge process. Once needs were identified and impact and feasibility were assessed, one actionable need was selected based on staff feedback and group reflection. Using that need as a base, an opportunity canvas was completed with leadership to identify desirable outcomes. An ideation session with staff generated the basis of an intervention prototype. This study was approved by CAMH's Quality Projects Ethics Review (QPER) committee. **Results:** No evident "superuser" accounted for the backlog. Several needs were identified, being the most prominent and actionable: 1) coming together as a coordinated team, 2) having a unified discharge process, and 3) accessing and utilizing all available community mental health resources. A unified discharge tool was selected as the most actionable need. The opportunity canvas highlighted qualities that the tool should support communication, accountability, collaboration, and transparency. Using these characteristics, a client-facing form was developed where the goals of the client for the

duration of the episode are documented and tracked by both the client and the staff, and the 3-month mandate of the clinic is shared. The form was designed to allow coordination and communication between clients and staff and between providers. Finally, tasks pertaining to the goals are assigned for accountability and a copy of the document is handed to the patient for transparency. **Conclusions:** Despite the simplicity of the intervention, there is a hidden complexity of the tool that comes from its design, which considers many uncovered insights such as the proper use of language and continues to undergo iterations based on feedback by staff. By engaging the environment, analyzing the ecosystem and its players, and performing early prototyping and iterations, the form "Roadmap to Bridging" looks to bring coherence, consistency, and transparency to the transition of clients. **Keywords:** Quality Improvement, Mental Health Outpatient Clinic, Discharge Process, Efficient Client Flow

No. 48**An Overview of Anxiety Disorders in Pediatric Populations: From Presentation to Treatment**

Poster Presenter: Lauren Celentano, M.D.

Co-Author: Stephanie Friedman

SUMMARY:

Childhood anxiety rears its head in all manners, providing a challenge for both parents and clinicians alike. In its purest form anxiety is defined as excessive, uncontrollable worries regarding numerous everyday situations or activities. Teasing out which of the worries are pathological and which can be attributed to the growing pains of maturity and emotional development, takes an astute clinician. Typical symptoms include physical tension, apprehensive expectations, negative self-image, need for reassurance, irritability and physical complaints or somatization. Impressively 75% of children with anxiety report all the aforementioned symptoms and presentation does not statistically differ between age or gender. Physical comorbidities can be either secondary to anxiety or anxiety secondary to a physical condition, a good history along with collateral information and timeline can determine which of the two is more likely. Medical conditions associated with anxiety include,

hyperthyroidism, caffeinism, migraine, asthma, diabetes, chronic pain, pheochromocytoma, lead intoxication, hypoglycemia, hypoxia, central nervous system disorders, cardiac arrhythmia, cardiac valvular disease, SLE, and dysmenorrhea (Walter et al., 2020). Furthermore, one can never neglect to consider iatrogenic causes, with medication induced anxiety, common culprits include: bronchodilators, nasal decongestants, sympathomimetics, antihistamines, steroids, dietary supplements, antidepressants, antipsychotics withdrawal from benzodiazepine (Walter et al., 2020). Somatization commonly occurs in anxiety, even more so in non-western cultures. Thus, it is paramount when presented with non-specific complaints such as abdominal pain, to consider the timing of the complaints and, once medical conditions are excluded, to consider the diagnosis of anxiety with further screening and evaluation. As such, a child presenting with seemingly vague symptoms, to the well-practiced clinician a diagnosis of anxiety can be made swiftly, sparing both the child and caregiver a lengthy road to treatment and relief. In this poster we discuss the myriad of unusual presentations and differential diagnosis of childhood anxiety, its assessment, and treatment options.

No. 49
Prevalence and Associations of Anxiety Disorders, Depression and Charles Bonnet Syndrome in Patients With Abca4Retinopathies

Poster Presenter: Ernesto Calderon Martinez
Co-Authors: Jesús Lima Barrientos, Fatima Itzel Mendoza Iñiguez, Oscar Francisco Chacon Camacho

SUMMARY:

Background: The ABCA4retinopathies (ABCA4r) are a group of rare inherited diseases caused by mutations in the ABCA4 gene. Clinically they have onset during pediatric age and are characterized by decreased visual acuity, dyschromatopsia and photophobia. Few studies of psychiatric disorders in this retinal dystrophy have been performed to date and with a limited group of patients. Knowledge in this regard would allow an adequate psychiatric management of these patients. **Objectives:** Determine the prevalence and associations of anxiety disorders, depression and Charles Bonnet syndrome (CBS) in patients with

ABCA4pathies. **Materials and/or methods:** The PHQ-9, GAD-7 tests and a questionnaire for the detection of CBS were applied in patients with confirmatory molecular diagnosis of ABCA4r and in controls. Statistical analysis was performed with R software. **Results:** Patients with ABCA4r had a prevalence of depression 34%, anxiety 38% and a diagnosis suggestive of CBS of 60%, while controls had a prevalence of depression, anxiety and CBS of 9%, 9% and 0%, respectively. A relationship was observed between the diagnosis of ABCA4r, and the diagnoses of depression, anxiety and diagnosis suggestive of CBS with a p value <0.05, obtaining OR of 4.6 (CI 1.46-17.8), OR 5.5 (1.76-21.03) and OR 71.7 (CI 10.5-3062.09) respectively. **Conclusions:** The relationship between ABCA4r, and anxiety, depression and a diagnosis suggestive of CBS was confirmed. The results are relevant in view of the absence of precedents in Mexico of associations between ABCA4r and its effect on mental health. We propose the permanent incorporation of these questionnaires and of a Mental Health Service for a comprehensive care of these patients.

No. 50
Efficacy of Clozapine in a Patient With Autism Spectrum Disorder With Behavioral Disturbances, Self-Harming Behavior, and Chronic Suicidal Ideation

Poster Presenter: Yuvraj Singh, M.D.
Co-Author: Allie Thomas-Fannin, M.D.

SUMMARY:

Clozapine is a second-generation antipsychotic, with high-affinity antagonism of the 5-HT₂ receptor. Clozapine is commonly used for treatment-resistant schizophrenia. Here, we present a patient with the diagnosis of autism spectrum disorder with severe behavioral disturbances. The patient also presented with hallucinations, self-harming behavior, and chronic suicidal ideation with an active plan. The patient was started on clozapine in an inpatient psychiatric unit for worsening symptoms of hallucinations, behavioral disturbances, and chronic suicidal ideation. Prior to this admission, the patient was prescribed Risperidone and Aripiprazole for several years with minimal improvements, despite adherence. The patient was safely discharged to a

group home after being started on an evening dose of clozapine 125 mg. At a three-week follow-up, the patient showed a mild reduction in self-harming behavior, a decrease in intrusive thoughts of suicidal ideation, a decrease in hallucinations, and an overall improvement in behavior. The patient actively participated in a sixty-minute evaluation with few outbursts, requiring no changes to the medication regimen (clozapine 125 mg). During a four-week follow-up after discharge, the patient showed significant improvement in her mood and denied suicidal ideation and hallucinations. In addition, a group home staff member reported patient was completing tasks without the need for redirection. Furthermore, the patient meaningfully participated in a ninety-minute evaluation without any outbursts or disruptions. Before administration of clozapine, the patient had six hospitalizations over the course of five months with an average stay of 13.6 days and an interval of 13.5 days between hospitalizations. After clozapine titration, the patient had no hospitalizations over the course of two months. The group home setting may have aided in adherence to routine labs, medication administration, outpatient follow-up, and overall improvement in patient symptoms. There is a need for guidelines in the initiation of clozapine in patients suffering from intellectual disability with disruptive and self-harming behavior. This will reduce the lag time in the initiation of clozapine by physicians, leading to reduced hospitalizations, prevention of harm, and improved patient outcomes.

No. 51

Recognizing Emotions in Music, a Novel Way of Evaluating Social Maturity Through Music

Poster Presenter: Hyunchan Hwang, M.D., Ph.D.

Co-Authors: Hee Jin Kim, Yuna Hong, Jin Hyung Lee, Juri Yun

SUMMARY:

Background: Correlation between social maturity and emotion perception has been acknowledged in past literature. However, facial emotion recognition test has limitation in that they have a ceiling effect, the results may vary depending on exposure time and the tests can be disadvantageous to autism spectrum disorder patients. Recently, music emotion

recognition has been studied as an alternative way for evaluating emotion perception. Therefore, we aimed to explore the relationship between social maturity and musical emotion recognition in both neurodevelopmental disorder groups and healthy controls groups. Methods: People with neurodevelopmental disorders (NDD) and healthy controls (HC) between the ages of 14 to 40 were chosen for the study. Individuals with severe intellectual disability or other problems that made them unable to follow test instructions were excluded. Participants were evaluated using the Wechsler Intelligence Scale of corresponding age for intelligence quotient (IQ), social maturity scale for social quotient (SQ), childhood autism rating scale 2 (CARS) for autism. Emotion perception was evaluated using two separate tools. The emotional perception test (EPT) gives the individual multiple facial expressions and asks them to find the face with a different emotion than the rest. The music emotional recognition test (MEPT) provides a short 15 second piece of music and asks the user to choose the emotion best representing the musical passage between happiness, sadness, and anger. Results: 84 people in the NDD group (mean age: 21.1±3.8) and 50 people in the HC group (mean age: 22.0±3.7) were included in the study. There were no significant differences between age ($t=1.43$, $p=0.16$), sex ($\chi^2=0.36$, $p=0.57$) and economic status ($t=-1.04$, $p=0.41$), but years of education was significantly higher in the control group ($t=-5.15$, $p<0.01$). The control group also had significantly higher IQ ($t=-11.36$, $p<0.001$), SQ ($t=-17.41$, $p<0.001$), EPT scores ($t=-9.27$, $p<0.001$), MEPT scores ($t=8.44$, $p<0.001$), and significantly lower CARS scores ($t=-13.92$, $p<0.001$). The SQ was positively correlated with EPT scores in all participants ($r=0.736$, $p<0.001$) and NDD group ($r=0.549$, $p<0.001$) but significance was not found in HC group ($p=0.16$). In the case of MEPT, SQ was positively correlated in all participants ($r=0.644$, $p<0.001$), and both NDD group ($r=0.545$, $p<0.001$) and HC group ($r=0.343$, $p=0.02$). Conclusion: The MEPT has shown positive correlation with SQ in all study groups. Therefore, music emotion recognition could be a viable alternative to evaluating social maturity.

No. 52

Temporal Relationships Between Latent Symptoms in Psychosis: A Longitudinal Experience Sampling Methodology Study

Poster Presenter: George Gillett

SUMMARY:

Background: A wide variety of symptoms are thought to be implicated in psychosis. However, the validation of clinical assessment scales, and their latent variable structure, is often derived from cross-sectional rather than longitudinal data. Using experience sampling methodology (ESM), we assess potential latent variables of commonly-reported symptoms in psychosis, and explore the temporal relationship between them. **Methods:** N = 36 participants with a diagnosis of schizophrenia or schizoaffective provided data for up to one year, as part of the Sleepsight study (London, UK). Using a smartphone app, participants self-reported clinical symptoms once daily for a mean duration of 323 days (SD: 88), with a response rate of 69%. Symptoms were rated using seven-point Likert scale items. Items included symptoms traditionally implicated in psychosis (feeling “cheerful”, “anxious”, “relaxed”, “irritable”, “sad”, “in control”, “stressed”, “suspicious”, “trouble concentrating”, “preoccupied by thoughts”, “others dislike me”, “confused”, “others influence my thoughts” and “unusual sights and sounds”). We employed a sparse PCA (SPCA) model to identify latent variables in the longitudinal data. SPCA has previously been applied to longitudinal ESM data, and was developed to achieve a compromise between the explained variance and the interpretability of the principal components. We then used a multistage exploratory and confirmatory differential time-varying effect model (DTVEM) to explore the temporal relationship between the latent variables. DTVEM generates a standardised β coefficient reflecting the strength of relationship between variables across multiple time lags. Only significant lags ($p < 0.05$) are reported here. **Results:** The SPCA analysis identified five latent variables, explaining 61.4% of the total variance. Tentative interpretation of the SPCA loadings suggested these latent variables corresponded to i) cognitive symptoms, ii) feeling in-control, iii) thought interference and perceptual disturbance, iv) irritability and stress and v) paranoia. Time lag

analysis revealed an effect of feeling in-control on subsequent cognitive symptoms ($\beta = -0.19$), and of cognitive symptoms on subsequent thought interference and perceptual disturbance ($\beta = 0.14$). Irritability and stress was also associated with subsequent cognitive symptoms ($\beta = 0.09$).

Conclusion: Using longitudinal data, we employ novel methodology to identify potential latent symptoms among commonly reported symptoms in psychosis. We identify five latent symptoms, and elucidate important temporal relationships between them. These findings may inform our understanding of the psychopathology of psychosis, potentially offering data-driven simplification of clinical assessment and novel insights for future research.

No. 53

Temporal Dynamics of Mood Psychopathology in Borderline Personality Disorder and Bipolar Disorder

Poster Presenter: George Gillett

SUMMARY:

Background: Borderline personality disorder (BPD) and bipolar disorder (BD) share clinical features, meaning they can be difficult to differentiate. Analysis of longitudinal, high-frequency, remote monitoring data collected from naturalistic settings offers the potential to identify distinguishing features, which may aid clinical diagnosis and treatment. **Methods:** BD (n=20), BPD (n=19) and healthy control (HC; n=20) participants self-reported mood measures using a smartphone application as part of the Automated Monitoring of Symptom Severity (AMoSS) study. Clinical measures included six mood items (“angry”, “anxious”, “elated”, “energetic”, “irritable” and “sad”), which were rated using a seven-point Likert scale. Symptoms were measured once daily for 12 weeks. A multistage exploratory and confirmatory differential time-varying effect model (DTVEM) was used to analyse temporal dynamics between mood items. DTVEM generates a standardised β coefficient reflecting the strength of relationship between variables across multiple time lags. Participant diagnosis was inputted as an interaction term to explore differences between clinical groups. Only significant lags ($p < 0.05$) are reported here. **Results:** Median

adherence was 84.7% (IQR: 21.2). Autoregression of energy (BD: $\beta=0.59$, BPD: $\beta=0.81$) and sadness (BD: $\beta=0.82$, BPD: $\beta=0.96$) were specific to both clinical groups and the autoregression of elation was potentiated in both clinical groups (BD: $\beta=0.19$, BPD: $\beta=0.08$). Autoregression of anger was specific to BPD ($\beta=0.65$), and autoregression of anxiety was attenuated in BPD ($\beta=-0.23$). Effect sizes were potentiated for anxiety on irritability in both clinical groups, particularly BD (BD: $\beta=0.41$, BPD: $\beta=0.07$). Finally, the effect of irritability on anger was attenuated in BPD ($\beta=-0.26$). **Conclusion:** Our results suggest that affective features (energy, elation and sadness) are more self-perpetuating and long-lasting in BD and BPD compared to HC, possibly reflecting a mechanism by which individuals' symptoms precipitate into clinical relapses or episodic crises. In BPD, anger may be a more readily self-perpetuating symptom compared to anxiety, potentially reflecting a proclivity for externalising psychopathology. Further, the attenuation of irritability's effect on anger in BPD may reflect known alexithymia and mentalisation difficulties, given that self-reporting of irritability may require greater reflective capacity compared to other mood symptoms. In BD, the potentiation of anxiety's effect on subsequent irritability concurs with previous findings that anxiety may be an under-appreciated symptom of the condition, and may represent an important mechanistic role or early warning sign of manic relapse. Together, these findings identify potential differentiating patterns of mood psychopathology in BPD and BD, which may inform future research investigations and the development of clinical prediction models.

No. 54
Psychometric Properties of the Korean Version of Functioning Assessment Short Test in Bipolar Disorder

Poster Presenter: Hangoeunbi Kang
Co-Authors: Bo-Hyun Yoon, Hyunju Yun, Yuran Jeong, Jye Heon Song

SUMMARY:

Background: The Functioning Assessment Short Test (FAST) is a relatively specific test for bipolar disorders designed to assess the main functioning problems

experienced by patients. This brief instrument includes 24 items assessing impairment or disability in 6 domains of functioning: autonomy, occupational functioning, cognitive functioning, financial issues, interpersonal relationships, and leisure time. It has already been translated into standardized versions in several languages. The aim of this study is to measure the validity and reliability of the Korean version of FAST (K-FAST). **Methods:** A total of 209 bipolar disorder patients were recruited from 14 centers in Korea. K-FAST, Young Mania Rating Scale (YMRS), Bipolar Depression Rating Scale (BDRS), Global Assessment of Functioning (GAF) and the World Health Organization Quality of Life Assessment Instrument Brief Form (WHOQOL-BREF) were administered, and psychometric analysis of the K-FAST was conducted. **Results:** The internal consistency (Cronbach's alpha) of the K-FAST was 0.95. Test-retest reliability analysis showed a strong correlation between the two measures assessed at a 1-week interval (ICC = 0.97; $p < 0.001$). The K-FAST exhibited significant correlations with GAF ($r=-0.771$), WHOQOL-BREF ($r=-0.326$), YMRS ($r=0.509$) and BDRS ($r=0.598$). A strong negative correlation with GAF pointed to a reasonable degree of concurrent validity. Although the exploratory factor analysis showed 4 factors, the confirmatory factor analysis of questionnaires had a good fit for a six factors model (CFI=0.925; TLI=0.912; RMSEA=0.078). **Conclusion:** The K-FAST has good psychometric properties, good internal consistency, and can be applicable and acceptable to the Korean context

No. 55
Assessing Spirituality and Religion in Psychiatry: A Method to Improve Patient Evaluations and Medication Compliance?

Poster Presenter: Ariella Maghen, M.D.
Co-Author: Rimal B. Bera, M.D.

SUMMARY:

Spiritual and religious practices play a role in promoting mental health as a positive coping method and providing community and support to patients. Research has shown that psychiatrists appreciate the importance of spirituality and/or religion and are more likely to be comfortable addressing spiritual and religious concerns,

compared to other physicians. However, there is still little known about how spirituality and religion may impact medication compliance particularly among psychiatric patients, and which group of patients might be more likely to engage in spiritual and religious activities, such as prayer or church attendance. As part of a routine evaluation to assess standard of care in the psychiatric clinic, we administered surveys to 63 patients who were diagnosed with at least one of the following conditions: schizophrenia spectrum disorders, bipolar disorder, anxiety, or depression between January and March 2020. The purpose of this study was to assess their spiritual and religious involvement and level of medication compliance as part of a routine evaluation for standard of care in the clinic. We adapted and slightly modified the Duke University Religion Index to fit the objective of our study and assess spirituality, religiosity, and spiritual/religious activity of participants. Our revised questionnaire consisted of three items: "I am a spiritual person", "I am a religious person" and "I attend church or religious meetings regularly". Participants were asked to respond to each statement on a 5-point Likert scale ranging from 0 (strongly disagree) to 5 (strongly agree). We measured patient medication compliance using the Medication Adherence Rating Scale (MARS), a 10 yes/no item scale, with the sum of items ranging from 0 to 10, with a higher score indicating better medication adherence. Our results indicate that the schizophrenia patient group scored highest on spirituality, religiosity, spiritual/religious activity, and MARS. These findings can help advise psychiatric teams to include the assessment of spirituality/religion in patient evaluations, as it may be an important source of support that patients utilize, which may in turn improve their adherence to treatment and enhance quality-of-life outcomes. Our findings are consistent with previous research that found schizophrenic patients who adhered to their medication treatment were more likely to be associated with a religious affiliation, considered religion to be an important aspect of their lives, and were involved with religious practices in group at least once a month, compared to the non-adherent patients. Future research should aim to identify additional factors that may play a role in moderating medication adherence among psychiatric patients,

such as social support, follow-up of medical appointments, adverse medication side effects, and personal acceptance of psychiatric diagnosis.

No. 56

Mental Health Gone Viral: A Digital Revolution or a Thirty Second Fad?

Poster Presenter: Madeleine Andreas, B.S.

Co-Authors: Sebastian Acevedo, M.P.H., Chaden Nouredine, M.D., Douglas Opler, M.D.

SUMMARY:

Introduction: Adolescents today live in a hybrid reality – a combination of offline and online worlds. Many teens view social media networks as impartial sources of health information. The technological landscape has grown alongside an emerging mental health crisis with rates of suicide among youth aged 10-24 increasing 56% from 2007 to 2017. In an age where child and adolescent psychiatrists remain overbooked, we find that influencers on platforms such as TikTok are becoming resources for health information. The present study seeks to evaluate the quality of content, which is trending on TikTok as of September 6th, 2022, across three highly prevalent psychiatric concerns: ADHD, OCD, and addiction.

Methods: A TikTok search was conducted using the phrases "ADHD," "OCD," and "Addiction". The first 100 TikToks in the trending page were categorized for a total n=300. Content was coded according to user status (mental health professional, verified TikTok user, individual with lived mental health experience or a user without lived experience). Videos were then evaluated for educational content, presence of evidence-based resources and whether content encouraged self-diagnosis. Three raters were assigned to independently review one of three topics. An interrater reliability analysis using the kappa statistic was performed to determine consistency among raters. Data analysis was conducted utilizing SPSS. A Pearson chi-square test was performed alongside a z-test to assess for statistically significant variance in column proportions at the .05 level. **Results:** The interrater reliabilities between raters 1 and 2 ($\kappa = .740$, $p < .0001$) and raters 1 and 3 ($\kappa = .804$, $p < .0001$) indicated substantial agreement. TikTok content on addiction was significantly more likely to be created

by a mental health professional (41%) compared to OCD (4%) and ADHD (5%) ($X^2=69.588$, $p < .001$). However, all three topics were most likely to have content produced by individuals with lived mental health experience. TikToks on addiction were significantly less likely to be educational (66%) compared to OCD (41%) and ADHD (41%) ($X^2=16.371$, $p < .001$). All three topics were unlikely to contain evidence-based references or content, with only .33% of videos meeting criteria. OCD (44%) and ADHD (25%) content was significantly more likely to encourage self-diagnosis compared to addiction (0%) TikTok ($X^2=54.925$, $p < .001$). **Conclusion:** Mental health content on addiction, OCD and ADHD within TikTok were most likely to be produced by individuals with lived mental health experience. Heightened visibility may aid mental health de-stigmatization. Evidence-based resources are almost entirely absent from content on the platform. OCD and ADHD videos frequently encouraged viewers to self-diagnose based on vague symptoms, but addiction videos were unlikely to do so. The lack of evidence-based content produced by non-mental health professionals is concerning given the youth mental health crisis in America.

No. 57

Prevalence of Behavioral and Mental Health Conditions and Related Characteristics of Young People in Foster Care

Poster Presenter: Madeline Tovar

Co-Author: Mohsin Khan

SUMMARY:

Background: Over 400,000 children and adolescents are in foster care any given day. Children within the foster care system can be particularly susceptible to adverse childhood experiences (ACEs), as the top reasons for removal reported are often neglect, parental substance use, and multiple forms of abuse.¹ Additionally, the act of removal itself, along with unstable living conditions, place further stress on this population.² Such exposures have been found to place children within the foster care system at increased risk for development, physical, and mental disorders.³ **Objective:** The purpose of this study is to 1) provide a comprehensive description of the characteristics of the patient population in a United

States foster care clinic; 2) determine the prevalence of mental health diagnoses within this population, particularly as compared to the general pediatric population, and 3) explore any potential associations between a mental health diagnoses and various factors including physical health status, maltreatment history, placement type, and demographics. **Methods:** Data for this study was collected from healthcare visits occurring between January 2017 and December 2020 from two integrated primary care clinics exclusively serving children in foster care. All patients 3 years and older seen within the clinics during this time period ($n=3,066$) were included in this study. Demographic information collected for this study included age, sex, race, ethnicity, language, placement type, and maltreatment history. Age, sex, race, ethnicity, and placement type were all taken from patient records. Maltreatment history was gathered from both intake survey and utilization of appropriate ICD codes for each exposure (neglect, physical abuse, sexual abuse). **Results:** Half (50.0%) of patients had at least one behavioral health diagnosis, with trauma stressor-related disorder (31.5%) and ADHD (22.6%) being the most common diagnoses. 26.6% of patients were on at least 1 psychotropic medication. Non-complex chronic (OR=1.22, 95%CI=1.03-1.46) and complex chronic physical health conditions (OR=1.57; 95%CI=1.28-1.93), sexual abuse (OR=1.82, 95%CI=1.16-2.86), having a maltreatment exposure (OR: 2.03, 95%CI=1.11-3.69), having a kinship caregiver (OR= 1.29, 95%CI=1.03-1.63), being female (OR:0.75,95%CI=0.64-0.88), and being 6-11 (OR: 2.66, 95%CI=2.23-3.18) and 12-20 (OR: 4.32, 95%CI=3.48-5.35) years were significantly associated with having a mental or behavioral health diagnoses in multivariate analysis. **Conclusions:** This study has similar findings as other literature focused on this population. This further emphasizes the need for trauma-informed screening in this population to prompt early recognition and intervention, the importance of integrated care centers to treat the complex needs of this population, and the value of training in trauma-informed care for providers.

No. 58

Sequelae Unexplained: A Case of Phenibut-Induced Delirium Requiring Hemodialysis and Exploration

Poster Presenter: Zachary Bean, M.D.

Co-Authors: Jackson Moran, Shivani Kumar, M.D., Marie Tobin, M.D.

SUMMARY:

Mr. M., a 31-year-old male with no past medical or psychiatric history presented as a level 1 trauma transfer after he was found down. He required intubation for GCS 3. Imaging showed pneumomediastinum and subcutaneous air from his neck to his thighs. Bilateral chest tubes were placed. Primary trauma survey was unremarkable. Secondary survey revealed diffuse crepitus and ecchymosis throughout his anterior. Initial labs demonstrated elevated creatinine, ALT, AST, and creatine kinase. Urinalysis showed haematoproteinuria. Urine toxicology was positive for cannabinoids. He received two rounds of hemodialysis followed by EGD, bronchoscopy, and diagnostic laparoscopy, which did not identify perforation or other sources of the subcutaneous emphysema. He was placed on continuous fluids, his condition gradually improved, and he was extubated on hospital day 3. Shortly after he reported taking phenibut prior to losing consciousness. On day 5 he clarified that he had taken 30+ pills of phenibut. Psychiatry was consulted for possible suicide attempt. On evaluation he exhibited slowed speech, thought blocking, and disorganized thought consistent with phenibut-induced psychosis versus delirium. He denied suicidal ideation. He received one dose of olanzapine 2.5mg and returned to baseline mentation over the next two days with normalizing labs, thus his presentation was most consistent with delirium. He was discharged with outpatient follow-up. Literature on phenibut toxidromes is limited: only five cases on ingestion and 12 on withdrawal (Graves 2020, Hardman 2019). Other reports describe rhabdomyolysis, elevated creatinine, transaminitis, and positive urinalysis, which we appreciated in our patient (Hardmon 2019, Acosta 2021). Phenibut has known renal excretion, though the pathophysiology of other mechanisms of injury are unknown. In our case we present a patient with delirium attributed to phenibut ingestion requiring hemodialysis and intubation for medical sequelae, prompting need for further investigation of mechanism of injury.

No. 59

Creating a Safe Space for Intensive Care Patients and Staff: Evaluating the Impact of Proactive Psychiatric Consultation on Safety Outcomes

Poster Presenter: Elisabeth Ann Dietrich, M.D.

Co-Authors: Christopher T. Greene, B.S., Lisa Davis, M.Ed., B.S.N., R.N., Melissa P. Bui, M.D.

SUMMARY:

Delirium is a neuropsychiatric condition frequently experienced by intensive care patients and associated with higher rates of adverse outcomes, such as increased mortality and prolonged length of stay.¹ Additionally, it is associated with significant increases in aggressive behavior toward providers; a previous study found that inpatients with delirium were 11 times more likely to experience events of aggression compared to general inpatients.² According to the U.S. Bureau of Labor Statistics, 73% of all nonfatal workplace injuries and illnesses as a result of violence in 2018 were experienced by those working in healthcare.³ Workplace violence in healthcare impacts individuals physically, psychologically, and professionally, while contributing to larger organizational consequences. In 2016, the estimated financial burden of violence response efforts for U.S. hospitals and health systems was \$2.7 billion, including \$1.1 billion spent on hospital security and violence prevention training and \$429 million for insurance, staffing, and medical care for employees who experienced workplace violence.⁴ Given that delirium is strongly associated with increased risk of assaultive behaviors toward care providers, early identification and treatment of delirium is crucial for improving workplace safety. The expansion of psychiatric consultation to include a proactive approach has been shown to improve clinical outcomes for patients in the medical intensive care setting.⁵ In recent years, a proactive model of psychiatric consultation has been implemented in the Medical Respiratory Intensive Care Unit (MRICU) at VCU Medical Center. Through the use of objective screening criteria for delirium, patients have been systematically identified for proactive psychiatric consults. In this study, a retrospective review of behavioral emergency rapid response team (BERRT) data and assault data will be conducted to evaluate the impact of proactive psychiatric consultation for delirious patients in the

MRICU on the volume of BERTT calls and the number of assaults against staff. A statistical analysis will be performed to identify trends in safety outcomes and BERTT calls since the implementation of this proactive model of psychiatric consultation in November 2020. After reviewing data from the four most recent fiscal years spanning from July 1, 2018 to June 30, 2022, the median annual number of BERTT calls for VCU Health System was 347. During this four-year period, the percentage of BERTT calls due to delirium peaked at 47.09% during Fiscal Year 2020 (July 1, 2019 through June 30, 2020) and subsequently decreased to 24.00% during Fiscal Year 2022 (July 1, 2021 through June 30, 2022). With earlier identification of delirium and intervention for patients exhibiting violent behavior in the setting of delirium, a culture of safety can be promoted, decreasing the rates of assaults on nursing staff, improving burnout rates, and hopefully reducing the turnover of staff.

No. 60

Grandiosity in Behavioral Variant Frontotemporal Dementia: A Case of Misfortunate Misdiagnosis

Poster Presenter: Rachel H. Han, M.D.

Co-Authors: Joseph McCullen Truett, D.O., Rosina Darden

SUMMARY:

Behavioral Variant Frontotemporal Dementia (BvFTD) is the most common presentation of Frontotemporal Dementia and is characterized by personality changes, decline in socially appropriate behavior, and decreased executive function. Often confused for other psychiatric syndromes, early onset (prior to age 65 years old) BvFTD remains notoriously difficult to identify and manage, posing clinical, case management, and ethical challenges, including concerns of racial diagnostic bias. Patient is a 52 year-old Black man with a past medical history of type 2 diabetes, hypertension, and a purported stroke without residual deficit in 2019, admitted to medicine for work-up of a possible syncopal episode after a fall at a homeless shelter. The psychiatry consult service was requested for management of bizarre behavior attributed to prior psychiatric diagnoses. Initial chart review revealed conflicting diagnoses of bipolar disorder and schizophrenia that

were first diagnosed only eight months prior, after his first involuntary psychiatric admission for manic symptoms. On exam, he was disinhibited, sexually inappropriate with staff, grandiose at times with delusions regarding wealth and influence, emotionally labile, and seemed to exhibit signs of confabulation. Bedside cognitive assessment, including the clock draw test, revealed significant impairment in executive function, abstraction, and orientation. Attention remained intact and without fluctuations in alertness. Initial surveillance lab work was unremarkable for metabolic disturbance or infectious process. Neurology consultation and cerebrospinal fluid encephalitis panel demonstrated no other acute autoimmune or paraneoplastic processes. Brain MRI without contrast was notable for age-inappropriate bilateral frontal and temporal lobe atrophy in addition to diffuse small vessel ischemic changes. Collateral from family revealed that he had no substance history nor previous psychiatric history. In fact, the patient had been at his baseline functioning, managing his job and family until a month prior to his first psychiatric admission. Behavioral changes included impulsive buying of vehicles, inviting unknown homeless individuals into the home, toileting in inappropriate locations, and reckless driving. He was discharged from his first psychiatric hospitalization with valproic acid and risperidone without noted benefit and eventually went through two additional psychiatric inpatient units before presenting for this medical admission. Given the above history and exam findings, BvFTD was found to be the most appropriate diagnosis. This case highlights the difficulties associated with delayed diagnosis, behavioral management, and interdisciplinary care coordination for general hospital patients diagnosed with BvFTD.

No. 61

Difficulties in Assessing Psychiatric Symptoms Following Gastric Bypass Surgery

Poster Presenter: Jose Bou Nassif

Co-Author: Amy Gallop, M.D.

SUMMARY:

Ms. J is a 58-year-old Caucasian female, with a past psychiatric history of major depressive disorder, who presents to her outpatient psychiatric clinic with

worsening mood, loss of energy, non-restorative sleep, memory loss, and a sense of dull and slowed thinking for several months. On review of symptoms, she also describes numbness in her fingers and toes. The patient's psychiatric history is notable for chronic depression since adolescence, but no prior psychiatric hospitalizations or suicide attempts. Her medical history is significant for gastric bypass surgery 4 years prior, with a 50-lbs weight loss since. She added that she had not been taking vitamin supplementation since her surgery and had not been following any specific type of diet. The treating psychiatrist considered the differential diagnosis of depression due to mineral or vitamin deficiency, in addition to a recurrent major depressive episode. She underwent laboratory testing, which revealed macrocytic anemia and a marginal vitamin B12 level of 164 pg/mL. She was started on monthly B12 injections of 1000 mcg. Although her depression persisted and required additional treatment with antidepressants, she reported significant improvements in memory, thinking clarity, fatigue, and neuropathy. She reported regretting her gastric bypass surgery due to the changes required to maintain a healthy lifestyle. Being that depressive episodes present with varied symptoms often overlapping with other disorders, psychiatrists treating patients with chronic depression should always be alert to the possibility of a new medical condition mimicking, worsening, or precipitating a recurrent depressive episode. This poster presents the challenges of evaluating chronically depressed patients following gastric bypass surgery. The criteria for bypass, types of surgeries, as well as psychiatric and weight-related outcomes of the procedures are also discussed.

No. 62

Functional Neurological Symptom Disorder Following Covid-19 Vaccination or Maybe Not?

Poster Presenter: David Choon Liang Teo, M.B.B.S.

SUMMARY:

A 56-year-old Chinese lady was referred by an otolaryngologist to the consultation-liaison psychiatry services of a general hospital to exclude functional causes of dysphonia following SARS-CoV-2 vaccination. She developed an anaphylactic reaction

after receiving her first dose of the Pfizer-BioNTech/Comirnaty COVID-19 vaccine. Three months later, she received her first dose of the Sinovac-CoronaVac vaccine uneventfully. However, following her second dose of the vaccine, she developed acute bilateral facial numbness and paraesthesia of her fingers and soles, postural giddiness, dysphagia and slurring of speech. Extensive work-up including magnetic resonance imaging (MRI) of her brain and nasoendoscopy did not reveal any significant abnormality. Speech and swallowing assessment showed dysphonia with a hoarse and breathy vocal quality, as well as moderate pharyngeal dysphagia. An otolaryngologist and neurologist both deemed her symptoms incompatible with any recognized neurological disease. The patient's dysphagia quickly resolved but her dysphonia persisted. Psychiatric evaluation revealed that in the year preceding the onset of her dysphonia, she had been experiencing intermittent depressed mood, anxiety, and insomnia triggered by work stress. Her dysphonia caused her additional stress as the sole breadwinner of her family. She had no other depressive or anxiety symptoms. Her articulation and phonation were variable and inconsistent with periods of relative clarity, worsening whenever she related how her bosses were unsympathetic to her plight. She attributed her symptoms to side effects of the COVID-19 vaccines and was concerned about government policies on booster doses and their potential implications on her job. Functional Neurological Symptom Disorder (Conversion Disorder) (FND) was considered given the inconsistency of her dysphonia with any recognized neurological disorder, as well as the temporal relationship its onset with work stress. She was diagnosed with adjustment disorder with mixed anxiety and depressed mood pending further neurological investigations. A positron emission tomography scan later revealed hypometabolism in bilateral temporal lobes raising the possibility of early frontal temporal dementia. However, she lacked other supporting clinical features and has made gradual improvements in her speech over the ensuing year with ongoing speech therapy. FND has been reported post-COVID-19 vaccination (1, 2). Mandatory COVID-19 vaccine policies have been used around the world during the COVID-19 pandemic to increase vaccination rates. However,

such policies may have unintended harmful physical and psychological consequences (3). FND can be triggered by physical and/or emotionally valenced events including vaccinations. Nonetheless, comprehensive clinical evaluation and judicious medical investigations remain essential so as not to miss other possible physical diagnoses for unusual clinical presentations.

No. 63

Hepatitis C Screening of Adult Patients Hospitalized in the Largest French Psychiatric Hospital: A Retrospective Study

Poster Presenter: Alexandra Pham-Scottet

SUMMARY:

Introduction The prevalence of Hepatitis C Virus (HCV) is high in patients with psychiatric disorders. A meta-analysis of 29 studies in severe psychiatric patients found a HCV prevalence of 17.4% in the USA and 4.9% in Europe. Our objective was to determine the rate of HCV screening and the HCV prevalence among adult patients hospitalized in the largest French psychiatric hospital. **Methods** We conducted an observational retrospective study with all adult psychiatric inpatients of the GHU Paris (976 full-time beds, serving a population of 1316500 inhabitants), for three years : 2019, 2020 and 2021. Descriptive analyses included means +/- SD and percentages. Comparative analyses used Student t-tests and chi-2 tests. **Results** The overall screening rate was 42.8%, and has increased over the three years : 37.1% in 2019, 42.9% in 2020 and 49.2% in 2021. Screened patients were significantly younger and with a substance use disorder than non-screened patients. The overall VHC prevalence was 3.3%, and remained stable for the three years : 3.6% in 2019, 3.5% in 2020 and 2.6% in 2021. VHC positive patients were significantly older, and more with a substance use disorder than negative ones. **Discussion** The consequences of chronic hepatitis C can be potentially serious or fatal and new direct-acting antivirals are effective in 95% of cases, even in psychiatric patients. The psychiatric hospital can therefore be a privileged place for HCV screening. The treatment of psychiatric patients with chronic hepatitis C must be coordinated and multidisciplinary, involving psychiatrists and medical

doctors, and hepatologists for complex cases. In addition, HCV has a direct toxic and inflammatory action on the central nervous system, which can lead to depressive or anxiety symptoms, cognitive disorders, sleep disorders and fatigue, leading to an altered quality of life. HCV treatment could therefore also improve the clinical status of psychiatric patients. In this context, our rate of HCV screening is too low, from a clinical but also from an ethical point of view. The GHU has decided to eradicate HCV, with an objective of 100% of inpatients screened and 100% of positive patients treated. Our HCV prevalence rate (3.3%) should be compared to the HCV prevalence rate in the French general population, 0.3%. A history of injecting drugs is the most evident risk factor of HCV positivity in our sample, but we can evoke other modes of HCV transmission, like exchange of teeth brushes or razors, without excluding the possibility of sexual transmission during the hospital stay. **Conclusion** We consider, as our French colleagues, that psychiatric inpatients could constitute a "forgotten" of VHC positive people. The admission in a psychiatric hospital could be a unique opportunity to systematically screen for HCV and to treat patients infected with HCV, in a collaborative way between psychiatrists and medical teams.

No. 64

Challenges in Management of Catatonia in Patients With Chronic Use of Antipsychotics: Case Report

Poster Presenter: Gustavo Adolfo Perdomo Patiño, M.D.

Co-Author: Edith Liliana Patarroyo Rodriguez, M.D.

SUMMARY:

Ms. R is a 19 y.o female with past medical history relevant for right spastic hemiparesis secondary to a resected intracranial fibrosarcoma, convulsive disorder and past psychiatric history with mixed anxiety and depression disorder. She was on a psychopharmacological regimen with sodium valproate, lamotrigine, and risperidone. Ms. Rodriguez presented to the emergency department in our hospital with two days of anxiety, delusional persecutory ideation, and insomnia. Multiple differentials were considered including CNS infection, seizures, neoplasia, and vascular event. She was

extensively studied in the ED with several blood tests, brain imaging, EEG, and lumbar puncture with unremarkable results. She was hospitalized by the general neurology service, her psychotropics were maintained and she underwent additional test for autoimmune encephalitis; which came back negative. Patient's symptoms worsened with decreased oral intake, mutism, and withdrawn prompting a psychiatry consultation. Patient's presentation raised concern for catatonia; her initial Bush Francis score was 15. Proper treatment was initiated with lorazepam with partial response. A management dilemma arises given her chronic use of antipsychotics and the possibility that these drugs may be causing or worsening her symptoms and deteriorating her convulsive and motor disorder. In this poster we discuss the challenge in the approach and management of patients with catatonia who need an antipsychotic as part of the treatment for the underlying condition of a catatonic presentation.

No. 65

A Comparison Between the Korean Version of the Gotland Male Depression Scale and Conventional Depression Scales in Detecting Depressive Symptoms

Poster Presenter: Seryoung Je

SUMMARY:

Abstract Background: Screening of male depression is important since their symptoms differ from females, such as aggression, alcohol use and suicide attempts. However, there are no tools that have been verified, developed for screening male depression in Korea. **Method** Gotland Male Depression Scale (GMDS) was translated into Korean. The K-GMDS and BDI (Beck Depression Inventory) and PHQ-9 (Patient Health Questionnaire-9) were administered to 258 outpatients who visited department of psychiatry of Daegu Catholic Medical Center for the first time. Internal validity was evaluated using Cronbach's α -coefficient and external validity was evaluated using Pearson's coefficient of correlation. **Results** 233 patients were recruited. The internal validity of the K-GMDS was demonstrated by a Cronbach's α of 0.92. External validity for the K-GMDS and BDI was demonstrated by an intercorrelation of 0.82, and for the K-GMDS

and PHQ-9, intercorrelation of 0.85. 93 patients were diagnosed as depression by psychiatrists. The sensitivity of the K-GMDS was 72%, while those of BDI and PHQ-9 were 95.7% and 90.3%. The specificity of the K-GMDS was 74%, while those of BDI and PHQ-9 were 23.6% and 28.6%. The K-GMDS identified one additional case of depression compared with other scales. However, some cases of depression were missed. **Conclusion** The Gotland Male Depression Scale was proven to be reliable and valid. However, GMDS is not a better screening option than other conventional depression scales due to low sensitivity. **Keywords:** Gotland Male Depression Scale, Beck Depression Inventory, Patient Health Questionnaire-9

No. 66

Hippocampal Volumes, Cortisol and Crp Relationship With Level of Anxiety in Major Depressive Patients With or Without Remission Under Treatment

Poster Presenter: Jose Alfonso Ontiveros, M.D., M.Ed., M.Sc.

Lead Author: Ana Lucila Vales Rodríguez, M.D.

Co-Authors: Patricio Zárate, M.D., M.Ed., Jessica Ortega Balderas, M.D.

SUMMARY:

METHODS: We recruited 21 naive treatment patients with major depression with no other psychiatric disorders, suicidal risk and contraindication for MRI scanning. Severity of major depression (DSM-5, MINI interview) was studied with HAMD, MADRS and CGI scales and anxiety with HamA, BECK-A and State Trait-Anxiety Inventory. A brain MRI scanning was obtained prior treatment (Philips Ingenia 3T MRI). The hippocampus volume was calculated blind to patients' diagnosis. Cortisol and c-reactive protein levels were also obtained prior treatment. Patients were then treated (sertraline 50 mg or escitalopram 10 mg/day). After 8 weeks of treatment, remission of depression was defined if patients achieved ≤ 7 in HAM-D, < 6 MADRS and $\text{CGI-S} \leq 2$ scores. **RESULTS** Of the 21 patients 13 met remission criteria after the 8 weeks of treatment. These patients were younger than the non-remission subjects ($p = 0.040$). A higher HAMA score was found in non-remitted VS remitted patients ($p=0.028$). Also, right ($p=0.012$) and left

($p=0.001$) hippocampal volumes were found smaller in subjects with no-remission. While we did not find statistically significant differences in the cortisol levels, CPR levels were higher in patient with remission ($p=0.018$). Also, the cortisol/CPR ratio was also statistically different higher in those patients non-remission ($p=0.039$). **CONCLUSIONS** Our main finding is that antidepressant naïve patients who did not achieved remission after 8 weeks of antidepressant treatment had higher anxiety scores, smaller hippocampal volumes. lower CRP and higher cortisol/CRP values. Our results are consistent with the hipotesis that changes in hippocampal volumen, level of anxiety and peripheral inflammation are markers of risk factor sfor treatment-resistant depression. Further studies need to be done to corroborate our findings.

No. 67

Doble-Blind Treatment of Patients With Generalized Anxiety Disorder With L-Glutamine and Creatine Monohidrate

Poster Presenter: Jose Alfonso Ontiveros, M.D., M.Ed., M.Sc.

Lead Author: Luis Armando Centeno Gandara, M.D.

Co-Authors: Gerardo Quintanilla Flores, M.D., Grecia Alejandra Perez, M.D.

SUMMARY:

BACKGROUND: Generalized anxiety disorder is a persistent condition with poor treatment outcome. Side effects, tolerance and dependance are a high risk of available pharmacological treatment for anxious patients. No doble-blind studies had been published with L-glutamine and creatine monohidrate, despite its generalized use for patients with anxiety syptoms. **METHODS** Generalized disorder patients (DSM-5, MINI interview) without major depression, substance dependance or psychotic disorders were recruited (N=38). HAMA, GAD-7 and CGI scales were used for anxiety syptoms, Also, UKU and MADRS scales for side effects. Patients received double-blind L-glutamine or creatine monohidrate 5 to 25 mg/day or placebo for 6 weeks. **RESULTS** The 38 patients included in the study had a mean age of 35.5 years (SD 10.05) and 52.6% (N=20) were males. The most common comorbidity was specific phobia (28.9%, N=11).

Patients with concomitant treatment (antidepressants or benzodiazepines) were 13 (33.3%). No differences were found in baseline HAM scores for patients in L-glutamine (27.29 SD 5.18) VS creatine monohidrate (25.79 SD 4.51) at baseline. Two patients in the L-glutamine treatment group and 3 on creatine monohidrate drop out the study. One due to side effects on placebo. Patients on L-glutamine received $16.1 \pm SD 7.18$ and patients on creatine monohidrate $17.5 \pm SD 6.32$ grs/day. End-point analysis showed a statistically significant improvement ($p < 0.01$) and no differences in any of the anxiety outcomes scales in patients who received L-glutamine or creatine monohidrate. **CONCLUSIONS** L-glutamine and creatine monohidrate seems to be a well tolerate and effective treatment on anxiety symptoms in patientes with generalized anxiety disorder. The commonly used food supplements need to be submitted to double-blind studies to know its real place in the pharmacological treatment for psychiatric disorders. Our findings need to be corroborated in further studies.

No. 68

Benzodiazepines for Suspected Delirious Mania in a Patient With Traumatic Brain Injury

Poster Presenter: Daniel Liaou, M.D.

Co-Authors: Lauren L. Beal, B.A., Tyler Kimm, M.D.

SUMMARY:

Background: Delirious mania (DM) poses a diagnostic and treatment dilemma when suspected in patients with preceding traumatic brain injury (TBI). Described as “rapid onset delirium, mania, and psychosis,” and sometimes conceptualized as an excited catatonia subtype, DM may mimic refractory psychosis. Treatment of DM should start with benzodiazepines.¹ However, confusion with psychosis, as well as hesitancy surrounding the risk of paradoxical agitation from benzodiazepines in patients with TBI, may delay adequate treatment.² We present a case of suspected DM in a patient with TBI to highlight the importance of benzodiazepine use in this population. **Case Report:** A 33-year-old man with history of unspecified mood and psychotic disorders and TBI (left mid-lateral frontal and inferolateral temporal contusions) presented as a transfer from county jail for psychosis, with acute

auditory and visual hallucinations and disorganized behavior including self-talk, drinking out of a toilet, playing with feces, public masturbation, and chasing staff. Pre-transfer records revealed patient was nonadherent to scheduled olanzapine and benztropine for which haloperidol decanoate 100 mg was given five days prior to transfer. Routine lab tests were unremarkable, and vitals remained stable throughout admission. The patient was restarted on olanzapine 10 mg qHS and benztropine 0.5 mg BID. The patient continued to be grossly disorganized, publicly masturbating on day 2, telling peers he was God on day 3, and disrobing and ripping a wooden bedframe from the wall on day 4. Patient was unable to participate in interviews and disoriented to place, time, and situation. Consideration of DM led to a lorazepam challenge on day 4, after which patient was more engageable in interview and oriented to place and time at immediate follow-up. Lorazepam 2 mg qAM/qHS was scheduled, and olanzapine was switched to haloperidol 5 mg qHS to avoid antipsychotic polypharmacy given recent haloperidol decanoate administration. Valproate 500 mg qAM/qHS was also initiated. Patient's disorganized and hypersexual behavior rapidly resolved with marked improvement in engagement with interview, and patient reported resolved hallucinations. Lorazepam was weaned to 1 mg qAM/qHS starting day 6, 0.5 mg qAM/qHS on day 8, and discontinued on day 10. Presenting psychotic symptoms improved significantly, and at discharge, the patient was fully oriented and agreed to continue medication and to follow-up outpatient. Discussion: While mania is associated with TBI, DM and TBI is seldom reported.³ Though typical antipsychotics can potentially worsen DM, scheduled lorazepam led to rapid clinical improvement in our patient despite recent haloperidol decanoate administration. DM should be considered in patients with acute onset delirium, incontinence or inappropriate toileting, and denudativeness with psychotic symptoms.⁴ Treatment should include benzodiazepines despite hesitancy to prescribe in patients with TBI.

No. 69

A Case of Severe Neuropsychiatric Symptoms in the Early Stages of Major Neurocognitive Disorder Due to Cerebrovascular Disease

Poster Presenter: Mounica Reddy Thootkur, M.D.

Co-Authors: Yezhe Lin, Akhil Pola

SUMMARY:

Title: A Case of Severe Neuropsychiatric Symptoms in the early stages of Major Neurocognitive Disorder due to Cerebrovascular Disease. Authors:

Mounica Thootkur, MBBS¹, Yezhe Lin, MB, MMed¹, Akhil Pola, MBBS¹, Michael Greenage, DO¹, Justin White, MD¹, Mamta Sapra, MD¹. **Affiliation:**

¹Division of Psychiatry and Behavioral Medicine, Virginia Tech Carilion School of Medicine, Roanoke, VA, USA **Address correspondence to:** Mounica Thootkur, mrthootkur@carilionclinic.org, 2017 South Jefferson St, Roanoke, VA, 24014 **Consent:**

Written informed consent was obtained from the patient **Conflict of interest:** The authors declare that they have no conflicts of interest **Funding/Support:** No funding was secured for this study **Abstract:** The incidence of neurocognitive disorders (NCD) has been on a rise as the global aging has become more prominent. Studies have indicated that as the disease progresses 50-80% of adults with NCD will develop neuropsychiatric symptoms (NPS). Patients with NCD usually undergo an impairment in one or more cognitive domains mainly in the form of attention, planning, inhibition, learning, memory, language, visual perception, spatial skills, or social skills. The progression of NCD and the consequent NPS requires tremendous care from both trained medical professionals and family members. Thus, NCD has proven to be one of the major burdens for the society and economics. This signifies the need for early identification of individuals at higher risk, understand the trajectory of their NCD and explore treatment modalities. Some of the most studied NPS include apathy, depression, anxiety, disinhibition, delusions, hallucinations, and aberrant motor behavior. The association of NPS in later stages of NCD is well studied but the relationship between NPS and NCD, especially NPS as early signs is unclear, prompting further evaluation. In this abstract, we present an 82-year-old male with a past medical history significant for extensive ischemic vascular disease requiring multiple surgeries and 2 episodes of cerebrovascular accident (CVA.) The patient did not have any past psychiatric history. The patient was primarily admitted in our facility for new onset symptoms of depression, anxiety, persecutory delusions who on further evaluation was diagnosed

with major neurocognitive disorder, vascular type (MNCD.) We discuss the differential diagnoses, possible mechanisms of NPS in NCD, and explain the significance of more thorough evaluation by clinicians for early detection and understanding the prognosis of NCD.

No. 70

Overlooked and Undertreated: Ocs in Schizophrenia Spectrum Disorders

Poster Presenter: Nicholas Klempf

Co-Author: Megan Shedd, M.D.

SUMMARY:

Background: Obsessive compulsive symptoms (OCS) are known to be highly co-morbid with schizophrenia spectrum disorders.⁴ Oftentimes it is challenging to differentiate between true obsessive thoughts with compensatory compulsive behaviors from delusional beliefs and delusionally-driven repetitive behaviors. Yet, these distinctions are important, as they inform diagnosis, prognosis, and treatment. Classically, obsessions are defined as persistent intrusive egodystonic thoughts recognized as irrational,³ while delusions are defined as false beliefs firmly maintained as true without awareness of their irrationality.² However, with the addition of the specifier “with absent insight/delusional beliefs” to the DSM-5 criteria for OCD, there is increasing recognition that patients with severe OCD may not acknowledge their obsessions are irrational and may believe them with the same intensity as delusions, blurring the line between delusion and obsession and often creating a diagnostic conundrum. In this poster, we present a diagnostically complicated case of a male with a history of a manic episode who presented with delusional beliefs and severe OCS. His OCS went unrecognized at previous hospitalizations. After careful analysis of his symptomatology, he was given the diagnoses of schizoaffective disorder bipolar type and co-morbid OCD. **Case Synopsis:** A 30-year-old male presented to the psychiatric hospital with severe, intrusive thoughts, compulsive headshaking, poor insight, and delusional beliefs of thought insertion/broadcasting. He scored 36 on the YBOCS, indicating severe OCS. Initially, he had difficulty with articulating his symptoms, but was able to describe a past history of

manic episodes. He was preliminarily diagnosed with severe OCD with delusional beliefs and bipolar 1 disorder. One month prior to the admission, he presented with the same symptoms, yet his OCS went undiagnosed and he received only antipsychotic treatment without improvement in his OCS. Our psychiatric team initiated escitalopram and CBT, and his OCS and delusions improved significantly. The antipsychotic was maintained for mood stability. Later, he elaborated that his obsessive thoughts lacked first-person quality, and he perceived them as separate from his own thoughts. Moreover, he described a past period in which he had auditory hallucinations (AH) and delusions in the absence of OCS and mood symptoms, thus his diagnosis was updated to schizoaffective disorder with co-morbid OCD.

Conclusion: This case demonstrates many important points when approaching a patient with OCS and delusions. OCS can be easily overlooked in schizophrenia spectrum illness, if obsessive thoughts are misinterpreted as delusions or AH¹, thereby potentially delaying identification and treatment of OCD. Furthermore, certain features of obsessions, such as lacking first-person quality, may alert the clinician to consider OCS in the setting of a primary psychotic disorder.³

No. 71

Increasing Paternalism in Maternal-Fetal Rights Across the United States: A Case Report and Literature Review

Poster Presenter: Elizabeth Monis, D.O.

SUMMARY:

Introduction The recent overturning of Roe vs. Wade by the supreme court has put the issue of women’s reproductive rights into the hands of individual states. Similarly, states exert control over laws governing civil commitments in pregnant women with mental health disorders, including substance use disorders (SUDs). In a North Carolina training hospital, a pregnant woman with comorbid schizoaffective and SUDs endured a lengthy involuntary commitment (IVC), extending beyond her clinical stabilization, in an effort to protect the fetus from in utero exposure to substances. Through this case report, we aim to understand state-specific laws

pertaining to pregnancy with substance use and abortions, and to offer insights into overlapping trends. **Methods** A literature review was completed through PubMed, ACOG, NC Pregnancy and Opioid Exposure Project, and other validated resources describing current IVC and abortion laws across the state and country. Data was compiled to compare abortion access (stratified into 5 categories) and the presence of state laws deemed punitive towards pregnant women with SUDs. **Results** Preliminary data suggests that states with more restrictive laws toward abortion access are more likely to have additional punitive laws towards pregnant individuals with SUDs. Conversely, states that protect access to abortion are the least likely to have additional laws governing substance use during pregnancy. Overall, policies regarding substance use in pregnancy have become more punitive between the 1980s and the present day. **Conclusions** Our data support a trend towards greater paternalism in women's reproductive health. The correlation between limiting abortion access and enacting punitive laws toward pregnant individuals with SUDs suggests that these laws may become more commonplace as states move towards restricting abortion rights.

No. 72

Enhancing the Cultural Relevance of Mom Power: Centering Insight From Mothers and Providers

Poster Presenter: Reni Forer

Co-Authors: Alyssa Warburton-Silva, M.D., Maria Muzik, M.D., M.Sc., Angela Johnson, Ph.D.

SUMMARY:

Background: Many pregnant and postpartum people experience mental health difficulties, with a multitude of associated adverse outcomes for parents and infants. Perinatal mental health (PMH) support is critical, especially for vulnerable populations, yet insufficient. However, there are effective programs that exist to support PMH. It is vital they are examined and improved to increase effectiveness and raise awareness. The goal of this study was to learn how the Mom Power (MP) program, an effective intervention for improving mental health and parenting outcomes for high-risk mothers of young children, might be enhanced to

ensure culturally responsive support. **Methods:** MP is a 13-session group program for mothers with a history of trauma/abuse and psychopathology, focused on enhancing mental health, parenting competence, and engagement in treatment. Five focus groups, a total of 32 participants, were conducted iteratively through topic saturation. Focus groups were composed of a) mothers with MP experience, b) mothers without MP experience, c) professionals with experience facilitating MP, or d) professionals from community organizations without MP experience. There were two individual interviews conducted with former staff members. Thematic analysis of transcripts was done using a grounded theory framework. Codes were determined using constant comparative strategy as part of Classic Analysis Strategy. Salient themes were determined by code frequency, extensiveness, intensity, specificity, and participant perceived importance. Results were reported to participants to confirm validity. **Results:** Topic saturation was obtained and 5 major themes identified: focus on maternal emotional needs, time and labor commitment, tools for reshaping parenting strategies, addressing physical needs of families, and increasing responsiveness to the diverse racial and socioeconomic status of families. Focus groups yielded thoughts from participants that will inform improvements to program design, content, and training as strategies to optimize participation and bolster integration of diverse cultural perspectives and practice parenting. **Conclusions:** These results reveal opportunities to improve cultural responsiveness of MP to ensure long-term relevance and success. Particularly, a need for specific training on cultural responsiveness and increased diversity in regards to multiple aspects of the program. This is key to improving MP and similar programs because program perception by participants/community members is inextricably tied to their experiences with healthcare institutions. Initiating and maintaining positive relationships with community stakeholders is a vital component of program success. Additionally, making programs more accessible is essential to reach a diverse group. More work must be done to ensure these programs center birthing families' needs, engage them in program design, and offer culturally responsive support to diverse populations.

No. 73

Distinctions Between Subjective and Objective Cognitive Dysfunction in Multiple Sclerosis

Poster Presenter: David Eli Freedman, M.D.

Co-Author: Anthony Feinstein

SUMMARY:

Background: Many people with multiple sclerosis (MS) present with subjective cognitive concerns, with significant adverse effects on their work capacity [1]. However, prior research demonstrated mixed findings regarding their association with objective cognitive deficits [2, 3]. This study examines the links between subjective and objective cognitive impairment. **Methods:** A sub-sample of 425 adults with MS who attended a tertiary neuropsychiatry clinic completed the Perceived Deficits Questionnaire (PDQ), with sub-scores for attention, retrospective memory, prospective memory, and planning/concentration [4]. Additionally, participants engaged in the MS-validated cognitive battery, the Minimal Assessment of Cognitive Function in MS (MACFIMS) [5]. MACFIMS cognitive measures include the Controlled Oral Association Test (COWAT), Judgment of Line Orientation (JOLO), California Verbal Learning Test Second Edition (CVLT-II), Brief Visuospatial Memory Test-Revised (BVM-T-R), Symbol Digit Modalities Test (SDMT), Paced Auditory Serial Addition Test (PASAT), and Delis-Kaplan Executive Function Test (D-KEFS). Bivariate correlation analyses were conducted between total scores on the PDQ and MACFIMS and their respective sub-measures. Global cognitive dysfunction was determined from how many tests demonstrated impairment (>1.5 standard deviations below the mean). **Results:** There was no significant association between total PDQ score and global cognitive dysfunction. However, greater objective cognitive dysfunction correlated with perceived retrospective ($p = .02$) and prospective ($p = .02$) memory deficits. Elevated subjective cognitive impairment was also associated with worse COWAT ($p < .01$), JOLO ($p = .04$), PASAT ($p < .01$), and D-KEFS ($p = .03$) scores. **Discussion:** Although there is no consistent link between global subjective and objective cognition, perceived memory deficits may suggest cognitive dysfunction in multiple sclerosis.

Global subjective cognitive concerns are also weakly associated with deficits in executive function and visuospatial processing. For patients with MS presenting to their clinician with memory complaints, these findings emphasize the importance of objective neuropsychological testing for clinical assessment.

No. 74

The Age-Dependent Effects of Depression and Anxiety on Cognition in Multiple Sclerosis

Poster Presenter: David Eli Freedman, M.D.

Co-Author: Anthony Feinstein

SUMMARY:

Background: Multiple sclerosis (MS) is an inflammatory demyelinating condition with significant neuropsychiatric sequelae, including cognitive impairment, that influence employment and quality of life [1, 2]. Recent attention has explored how depression and anxiety impact cognition [3, 4], without focus on whether age moderates these effects. This study examines how depression and anxiety affect cognition in younger and older adults with MS. **Methods:** 802 adults with MS completed the Hospital Anxiety and Depression Scale (HADS) and the Minimal Assessment of Cognitive Function in MS (MACFIMS) [5, 6]. The HADS has sub-scales for depression (HADS-D) and anxiety (HADS-A). The MACFIMS cognitive battery includes the Controlled Oral Association Test (COWAT), Judgment of Line Orientation (JOLO), California Verbal Learning Test Second Edition (CVLT-II), Brief Visuospatial Memory Test-Revised (BVM-T-R), Symbol Digit Modalities Test (SDMT), Paced Auditory Serial Addition Test (PASAT), and Delis-Kaplan Executive Function Test (D-KEFS). Cognitive impairment was determined as more than 1.5 standard deviations under the mean on each cognitive measure. For analyses, participants were divided into younger (under age 50) and older (50 or older) adults. From depression, anxiety, and their interaction, linear regression analyses predicted global cognition (from the number of cognitive tests demonstrating impairment) and raw scores of specific cognitive domains, controlling for years of education, sex, disease course, and level of physical disability. **Results:** Compared to younger adults ($n =$

558; mean age = 37.80 years), older adults ($n = 244$; mean age = 55.10 years) had more progressive illness ($p < .01$), longer disease duration ($p < .01$), greater disability ($p < .01$), less education ($p < .01$), and less anxiety ($p < .01$). Among younger adults, HADS-D scores negatively predicted global cognition ($p = .02$), and COWAT ($p = .02$), CVLT-II ($p < .01$), BVMT-R ($p = .02$), SDMT ($p < .01$), and PASAT ($p < .05$) scores. In this sub-group, the interaction of depression and anxiety adversely affected CVLT-II ($p < .01$); however, there were no other significant effects of anxiety or the interaction of depression and anxiety on cognitive measures. Among older adults, the HADS-D negatively predicted scores on the COWAT ($p = .01$), while HADS-A scores negatively predicted D-KEFS scores ($p = .03$). The interaction of depression and anxiety adversely affected global cognition ($p < .01$), and scores on COWAT ($p = .03$), CVLT-II ($p = .02$), BVMT-R ($p = .02$), SDMT ($p = .01$), and D-KEFS ($p = .01$). **Discussion:** Anxious distress in depression has a greater impact on cognition in older adults with MS. In contrast, depressive symptoms may contribute to executive dysfunction in all adults with MS, with greater effects on cognition in younger adults. These results emphasize the importance of considering age when determining how depression or anxiety influence cognition in people with MS.

No. 75

Anti-NMDA Receptor Encephalitis Induced Psychosis Post-Covid 19 Infection in an Adolescent

Poster Presenter: Sandra Jovanovic

Co-Authors: Van Nguyen, M.D., Cristian Zeni, M.D., Ph.D.

SUMMARY:

Anti-NMDA receptor encephalitis is an autoimmune condition associated with a variety of neuropsychiatric symptoms, sometimes mimicking psychotic spectrum disorders. The pathogenesis involves antibodies forming against the NR1 or NR2 subunits of the NMDA receptor, and the confirmatory test is the presence of antibodies against NMDA receptors on CSF studies. The condition is found in association with a variety of viral illnesses, and the theory behind COVID-19 causing anti-NMDAR encephalitis is centered on elevated cytokines caused by the viral infection.

Experiments with in vitro glial cells infected with COVID-19 demonstrate the secretion of high amounts of inflammatory markers: IL-6, IL-12, IL-15, and TNF-alpha. The overall implication is that the virus activates the immune system, including the glial cells of the CNS. This glial cell activation then leads to inflammation and subsequent development of anti-NMDAR encephalitis. We report the case of a 13-year-old boy with a history of psychosis and seizures beginning after a case of COVID meningitis requiring a medically induced coma in April 2021. He was evaluated for his worsening psychosis in March 2022, and CSF studies confirmed a diagnosis of anti-NMDAR encephalitis. He was started on immunotherapy of IVIG, IV Methylprednisolone, and Rituximab with clinical improvement, and he was discharged with a plan to continue outpatient immunotherapy. However, he was readmitted two weeks later due to a suicide attempt of walking into traffic in the context of worsening agitation and hallucinations. He received a second round of Rituximab and IVIG with improvement, and he was readmitted one week later due to a similar presentation. In July 2022, he was referred to our psychiatric hospital on a mental health warrant with command auditory and visual hallucinations of the devil, homicidal and suicidal ideations, and aggression, with a diagnosis of schizophrenia. His psychosis worsened throughout his admission, so he was transferred to general hospital one week later for further medical treatment with IVIG and IV Methylprednisolone. Anti-NMDAR encephalitis is a rare condition but should remain on the differential in the setting of acute psychotic symptoms especially with a recent history of a viral infection. Our patient is still experiencing his psychiatric symptoms and receiving immunotherapy, antiepileptics, and psychotropic medications to help manage his symptoms. The outcome of anti-NMDAR encephalitis varies for every patient, and we observed a failure of traditional antipsychotic treatment which required an escalation in the immunotherapy regimen. Given our patient's chronic state of psychosis caused by inflammation, we aim to explore the potential value of the anti-inflammatory activity of antipsychotics. Antipsychotics have been proven to decrease pro-inflammatory cytokines such as TNF-alpha, IL-6, and IL-1 which could clinically improve symptoms of encephalitis.

No. 76

Neuropsychiatric Symptoms in NPH: A Case Report

Poster Presenter: Binh Pham

Co-Author: Maria Rueda-Lara

SUMMARY:

Background We discuss a case illustrating a patient with normal pressure hydrocephalus (NPH) that presented with prominent neuropsychiatric symptoms. NPH is a condition characterized by enlarged ventricular size with normal opening pressures on lumbar puncture. NPH can be idiopathic, in which no definitive cause is identified, or secondary. NPH presents with the classic triad of dementia, gait disturbance, and urinary incontinence. A wide range of neuropsychiatric symptoms have also been described including anxiety, aggression, apathy, personality changes, psychosis, depression and mania. As this condition is potentially reversible with treatment, a prompt and accurate diagnosis is important. **Methods** We summarize the clinical encounters and chart review of a 43-year-old female patient with craniopharyngioma evaluated at a large urban university hospital to illustrate the presentation of neuropsychiatric symptoms in the context of NPH. **Results** The patient is a 43-year-old female with a history of depression who presented to the emergency department for a court-petitioned involuntary assessment initiated by the patient's mother due to recent personality changes, increased impulsivity and intermittent aggressiveness. For the past month, the patient experienced short-term memory loss, urinary incontinence, and photophobia. The patient was admitted to the inpatient psychiatry unit for evaluation of acute behavior change. Within four days of hospitalization, the patient was no longer exhibiting aggressive behavior and was discharge with a diagnosis of acute psychotic disorder. She was discharged on sertraline and trazodone. Two weeks after discharge, the mother observed a recurrence of the behavior change and the patient was brought back to the emergency department. At that time a CT of the head was performed that revealed a craniopharyngioma. A right frontotemporal craniotomy was performed and patient's symptoms

improved post-operatively. **Conclusions** This case exemplifies the importance of considering organic causes of psychiatric presentations. Psychiatrists and health care providers should always screen for organic pathology when evaluating acute psychiatric symptoms.

No. 77

Two Cases of Breakthrough Psychosis in the Postpartum Period

Poster Presenter: Rosemary Talbot Behmer Hansen, M.A., M.P.H.

Co-Authors: Ryan A. Behmer Hansen, M.S., Kristy Bono, Najeeb U. Hussain, M.D.

SUMMARY:

For women with schizophrenia, prior research has found mixed results regarding whether the postpartum period is associated with an increased risk for psychosis (Jones et al., 2014; Matevosyan, 2011). We present the cases of two hospitalized patients with primary psychotic disorders, in remission on antipsychotics, who experienced breakthrough psychosis in the immediate postpartum period. The first patient, a 36-year-old G10P5 female with schizophrenia, was admitted for psychosis with paranoia, persecutory delusions, and religious delusions. She gradually improved after initiating haloperidol, 10 mg, twice daily. Five days prior to birth, her haloperidol dose was decreased to 5mg, twice daily, due to tremors. The patient gave birth to a male infant at 37 weeks. Five days after delivery of her child in the hospital, the patient became paranoid, internally preoccupied, minimally reactive, and guarded, despite no changes to her medications. The second patient, a 28-year-old G1P0 female with schizoaffective disorder, bipolar type, was admitted for mania, delusions, and threatening behavior towards others. The patient was started on haloperidol 10 mg, twice daily and her symptoms remitted gradually over the next week. Eight days into admission, the patient delivered a newborn girl. Four days postpartum, the patient developed religious delusions, paranoia, grandiosity, and loosened associations, despite no changes to her medications. Her haloperidol dose was then decreased to 5mg PO twice daily and she was started on paliperidone 6mg PO daily. Depakote 500mg PO

twice daily was added for mood stabilization. Seven days after her acute psychiatric decompensation, she was discharged home on that medication regimen to her boyfriend and newborn. A review found that only in some studies have women with schizophrenia been found to experience worsened mental health during pregnancy or in the immediate postpartum period (Jones et al., 2014; Matevosyan, 2011). In the case of bipolar disorder, higher recurrence rates of psychosis both during and after pregnancy have been consistently documented (Howard, 2005; Jones et al., 2014; McCauley-Elsom & Kulkarni, 2007). Collectively, our cases illustrate that while patients with psychotic disorders may be stabilized on an antipsychotic regimen throughout pregnancy, they remain at risk of relapse in the immediate postpartum period. Possible reasons for this include hormonal changes, differential pharmacodynamics of antipsychotics in the postpartum state, the physical and emotional stress of childbirth, and/or a psychological benefit of anticipation of delivery. Careful follow-up of these patients is critical to optimize health outcomes.

No. 78

Impact of the Covid-19 Pandemic on Postpartum Depression and Length of Stay in a Large Academic Center in New Jersey

Poster Presenter: Rupinder Kaur

Co-Authors: Jagneet Kaur, Antonia Francis, M.D., Kanchi Chadha, M.D.

SUMMARY:

Title: Impact of the COVID-19 Pandemic on Postpartum Depression and Length of Stay in a Large Academic Center in New Jersey Authors: Rupinder Kaur; Jagneet Kaur; Antonia Francis, MD, MSCI; Kanchi Chadha, MD Background: Approximately one in four women is diagnosed with postpartum depression (PPD) within the first year of childbirth. One widely accepted method of screening PPD is the Edinburgh Postnatal Depression Scale (EPDS). Patients scoring above 13 are likely to suffer from PPD and patients scoring above 10 may be suffering from PPD. Previous studies have described an overall increase in PPD during the recent COVID-19 pandemic. We aim to describe the impact of the pandemic on clinical cases of PPD and length of stay

(LOS) at a large academic center in NJ. Methods: Five peaks of the highest number of COVID-19 cases recorded in NJ were collected from the CDC database from January 2020 to March 2022. EPDS scores were collected from over 10,000 patients who delivered at Hackensack University Medical Center (HUMC) during that period. Patients were grouped into two categories: EPDS of 10–12 and ≥ 13 . The two groups were then correlated with the five peaks of the pandemic in NJ. Results: There were 10,967 patients who delivered at HUMC from January 2020 to March 2022. Approximately 2.5% of patients scored 10-12 ($n = 279$, group 1) and 1.4% of patients scored at or above 13 ($n = 154$, group 2) on the EPDS. The average number of patients in a 1-month period was 10.3 (group 1) and 5.7 (group 2). Chi-squared testing revealed no significant difference between the average number of patients in group 1 (p -value 0.90) and group 2 (p -value 0.93). The average LOS in a 1-month period was 3.6 and 3.7 days in groups 1 and 2, respectively. There was no significant difference between LOS and EPDS groups with p -values of 0.99 and 0.99, respectively. Conclusion: There is no significant correlation between screening results of PPD and the number of patients during the five peaks of the COVID-19 pandemic in NJ. LOS was not significant and may have been impacted by early discharge initiatives to prevent spread of COVID-19 as well as early outpatient referrals for PPD.

No. 79

An Examination of Alterable Pregnancy Conditions Related to Future Tic Disorders in the Fetus

Poster Presenter: Christina Raquel Roldan

Co-Authors: Elizabeth Anne Deckler, M.D., Zelde Espinel, M.D.

SUMMARY:

Objectives: Tourette Syndrome is strikingly common, expected to afflict approximately 1% of the population. Despite its pervasiveness, Tourette Syndrome is poorly understood, and its method of inheritance is unclear (Chao et al., 2014). Furthermore, tic disorders generally have few robust treatment options and from a public health perspective, the scientific community should focus on the *prevention* rather than *management* of tic disorders. We set out to review the relevant

literature on the relationship between alterable maternal pregnancy conditions and the development of tic disorders in offspring. *Methods:* The National Library of Medicine “PubMed” database was queried. Keywords used to narrow search results included “tourette,” “tic disorder,” and “pregnancy.” No randomized controlled trials or clinical trials were available. The search criteria generated 65 general articles and thirteen reviews (systematic and meta-analyses included). *Results:* An expanding literature proves that maternal conditions may affect the offspring’s likelihood of developing a tic disorder. Risk factors include maternal smoking during pregnancy, low birth weight, and chronic maternal anxiety (Ayubi et al., 2021). For instance, maternal smoking during pregnancy raises the risk of the offspring developing chronic tic disorders by up to 35% (Ayubi et al., 2021). Moreover, “heavy smoking,” defined as consuming ten or more cigarettes daily, is related to a 66% increased risk of both chronic tic disorder and Tourette Syndrome (Browne et al., 2016). A protective factor is high birth weight in children born specifically to multiparous women (Leivonen et al., 2016). Animal models argue for a likely correlation between maternal inflammation, including but not limited to “obesity, asthma, autoimmune disease, infection and psychosocial stress” (Han et al., 2021) and neurodevelopmental disorders in the offspring, such as tic disorders. *Discussion:* While tic disorders remain elusive to treat, resources should be dedicated to finding ways to prevent their development. Studies have shown that maternal pregnancy conditions such as smoking – an entirely preventable condition – may have a direct correlation with future tic disorders in the infant. Low birth weight may also increase the risk of tic disorders, and in certain situations, steps can be taken to prevent maternal practices that lead to underweight neonates. More research is needed to determine which initiatives can be taken by pregnant women alongside their physicians to decrease the likelihood that their offspring develop a tic disorder. Our results also show the tremendous value of maternal education on preventable risks of tic disorders.

Poster Session 9

No. 1

What Are We Missing? The Case for a Computational Approach to Early Psychosis

Poster Presenter: David Alessandro Benrimoh, M.D., C.M., M.Sc.

Co-Authors: Srividya Iyer, Jai Shah, Martin Lepage, Ridha Joobar

SUMMARY:

Background: Early intervention, a key development in psychosis care, has yielded improved patient outcomes [1]. Despite this, early and reliable detection of those at risk of developing psychosis remains challenging. Since the recent focus on attenuated positive symptoms has yielded decreasing rates of conversion to psychosis [2], symptom-driven prodrome descriptions appear limited. Computational approaches have provided putative markers, such as a state-sensitive over-dependence on prior beliefs relative to sensory evidence in people with hallucinations [3]. Re-examining the prodrome may yield novel targets for computational modelling that can facilitate early detection. For example, if over-weighted prior beliefs drive hallucinations, we might ask which priors; if sensory precision is reduced, we might ask how this manifests. *Methods:* We explored data from the PEPP-Montreal early intervention service for psychosis (n = 586 with data for at least one measure of interest). Patients aged 15-35 participated in clinical assessments and retrospective reconstructions of the prodromal period using the CORS/TOPE [4]. Assessment of first psychiatric, first prodromal, and first psychotic symptoms was conducted. Symptoms related to altered beliefs (odd beliefs, delusions, paranoia) were considered the “delusion spectrum”; altered perceptions and hallucinations were considered the “hallucination spectrum”. At service intake, correlations between severity of hallucinations, delusions, and candidate modifiers of the precision of sensory information (e.g. attention and thought disorder) were assessed. *Results:* At each timepoint, delusion-spectrum symptoms were more often the first symptom compared to hallucination-spectrum symptoms (first psychiatric symptom: 13% vs. 4%; first prodromal symptom: 22% vs. 7%; first psychotic symptom: 62% vs. 22%). At intake, hallucinatory behavior correlated positively with worsening attention ($r_{555} = 0.19$, $p <$

0.01) while delusion severity correlated weakly with thought disorder ($r_{560} = 0.09$, $p = 0.03$). Delusions did not correlate with poor attention; hallucinations did not correlate with thought disorder. Thought disorder and poor attention were positively correlated ($r_{554} = 0.24$, $p < 0.01$). Conclusions: This exploratory analysis revealed that delusions often precede hallucinations in the prodrome and early psychosis, and that each symptom is correlated with different alterations in information processing. Future computational work could determine if the odd or persecutory beliefs that emerge first during the prodrome serve as a source of priors for the development of hallucinations and if the reduction in the capacity to attend to or properly utilize information to update beliefs (reflected by poor attention and thought disorder) is related to this process. This would cohere with previous *in silico* work [5]. Prospective studies are needed to capture more data on symptom timecourse alongside computational and cognitive measures.

No. 2

Early Changes in Lassitude Differentiate Active Versus Sham and Predict Outcomes for Stanford Neuromodulation Therapy in Treatment Resistant Depression

Poster Presenter: David Alessandro Benrimoh, M.D., C.M., M.Sc.

Co-Authors: Jakob Keynan, Andrew Geoly, Ian Kratter, Nolan Williams, M.D.

SUMMARY:

BACKGROUND: Treatment-resistant depression (TRD) continues to present a significant clinical challenge. Recently, Stanford Neuromodulation Therapy (SNT), which uses fMRI-guided, accelerated rTMS to target the region within the left dorsolateral prefrontal cortex (LDLPFC) with the greatest anticorrelation with the subgenual anterior cingulate cortex (sgACC), has shown efficacy in this population in a randomized, sham-controlled trial (RCT) [1]. However, the mechanism underlying the rapid improvement observed in this treatment remains unknown. We hypothesized that examining trajectories of individual symptom change, and specifically looking at the earliest changes, may improve our understanding of the mechanism of

action and help improve outcome prediction.

METHODS: We conducted an exploratory analysis of data from 23 TRD subjects from a small RCT[1] (12 active, 11 sham) for whom daily ratings during treatment were available. Individual items from the Montgomery-Asberg Depression Rating Scale (MADRS) were examined at baseline; daily during treatment; and, at 1-, 2-, and 4-weeks post-treatment. Our outcome of interest was treatment response, defined as a 50% or greater decrease from baseline MADRS score, measured at 4-weeks post-treatment; last observation carried forward was utilized for 2 subjects missing week-4 data. First, ANOVA was used to identify differences between active and sham groups in individual symptom trajectories at each treatment day. A repeated measures general linear model (GLM) was used to assess between-group differences in symptom trajectory. Bootstrapped binary logistic regression was used to determine if early symptom change predicted outcome. As this is an exploratory analysis in a small sample, there was no correction for multiple comparisons. **RESULTS:** 58% of active patients and 9% of controls responded. The earliest MADRS item to show differences between the active and sham condition was lassitude, as early as treatment day 2 ($F = 4.95$; $p = 0.037$), and prior to significant differences in total score. Repeated measures GLM showed that lassitude trajectory was significantly different between active and sham groups ($F = 6.09$; $p = 0.024$). In logistic regression, lassitude score at treatment day 3 was predictive of response when controlling for MADRS baseline total score (model: $X^2(2) = 8.28$; $p = 0.016$; lassitude ($B = -1.55$, $p = 0.005$, 95% CI: $[-53.57, -.69]$)); the model had a classification accuracy of 78.3% and Naegelkerke R^2 of 0.42. **CONCLUSION:** Lassitude was the first item to show differences between active and sham SNT, and this early change was predictive of outcome. Similar findings have been reported previously for pharmacological treatments [2]. As SNT specifically targets the LDLPFC-sgACC circuit, the findings may be related to the role of sgACC in mediating perceived energy [3]. Further work will seek to understand the neurobiological and computational significance of this finding.

No. 3

Understanding Inhalant Use Disorder in Missouri

Poster Presenter: Cyrus Abbaszadeh

Co-Author: Val Bellman

SUMMARY:

Recreational use of inhalants such as computer dusters and spray cleaners is a growing problem among adolescents and young adults, and is by no means a stranger to the state of Missouri. Even though inhalant use is most frequently seen in younger populations, it is not unexpected to encounter inhalant use disorder in adult populations as well, especially in those who have continued use since childhood or adolescence. We present a case of an upper middle class 37-year-old Caucasian male with a past history of inhalant use disorder, tobacco use disorder, MDD, insomnia, obesity and OSA, employed and well who was found deceased by authorities at a motel with signs of acute 1,1-difluoroethane (a type of inhalant commonly found in commercial air duster and aerosol cans) intoxication. Our patient was participating in a drug rehabilitation program for his 20+ year history of inhalant use, but then checked into a motel on a weekend pass and ended up overdosing on aerosol, with 27 empty aerosol cans found in the room by authorities. In Missouri, as of 2022, the average age of first inhalant use (9.5 years) is younger than any other substance measured across the state. Additionally, this is the youngest average age of first inhalant use recorded by the Missouri Department of Mental Health ever since they started reporting the statistic back in 2010 [1]. Typical inhalant-using adults are usually less educated, have an extensive history of unsuccessful psychiatric treatment, tend to use everyday products—including spray paints, glue, and gasoline— on a weekly basis and demonstrate impaired executive functioning [2] [3]. Given that most people who abuse inhalants meet criteria for at least one lifetime mood, anxiety, or personality disorder, it is important that treatment for patients with history of inhalant use, and substance use in general, is multimodal and interdisciplinary in nature [4]. Our case emphasizes the importance in treating comorbid psychiatric conditions when treating substance use disorders. In this poster, we examined common clinical findings in adults with inhalant use

disorder, discussed difficulties with management and outlined current trends in the state of Missouri.

No. 4

Association Between Dual Diagnosis and Drug-Related Problems in Workplace in Egypt: A Case-Control Study

Poster Presenter: Eman Fathi Abdelfattah

SUMMARY:

The purpose of this study was to estimate the prevalence of psychiatric and personality disorders among industrial workers with substance use disorders and to investigate the association between this comorbidity and drug-related problems. A total of 353 industrial workers were included in the study. Sociodemographic and clinical data were collected from participants. Compared to controls, workers with substance use disorders were about 19 and 8 times more likely to have psychiatric and personality disorders respectively. Anxiety (35.4%) and mood disorders (29.2%) were the most common psychiatric disorders among substance use workers. The most common personality disorders among substance use workers included antisocial and borderline (24.6% and 16.9%, respectively). There was a significant association between drug-related problems/dependence and psychiatric ($\chi^2 = 14.04$; $P < 0.001$) and personality disorders ($\chi^2 = 18.74$; $P < 0.001$). Psychiatric and personality disorders are common among substance use workers and are associated with drug-related problems.

No. 5

Parental Influence and Major Substance Use Disorders Among Adolescents: The Role of Social Determinant of Health

Poster Presenter: Adeleye Adaralegbe

Co-Authors: Oghenetega Ayisire, Justice E. Obiora, Mujeeb Salawu, Ngozi J. Adaralegbe

SUMMARY:

The prevalence of substance abuse continues to be a significant public health issue globally. While adolescents are usually vulnerable to the initial commencement of drug use, earlier age to drug use exposure has predicted a faster transition to substance use disorder. Adolescent use of substances

and their associated SUD are influenced by psychosocial factors. Research suggest that substance use problems in young individuals are due to role-modeling by parents, and parental influence are deemed to have the strongest effect on adolescent substance use behavior. This study sought to examine the role of social determinants of health (SDOH) on parental influence on adolescent major substance use disorders. The study utilized publicly available online data from the National Survey on Drug Use and Health (NSDUH). We used the five years data collected from 2015-2019 consisting of 68,263 adolescents aged 12-17 years. Outcome variables were alcohol and marijuana SUD, based on DSM V criteria, and tobacco dependence, based on the Nicotine Dependence Severity Scale (NDSS). Parental influence was measured using parental monitoring and parental approval from previous studies. SDOH included gender, ethnicity, poverty level, metro area, and health insurance. Bivariate analysis and multinomial logistic regression were used to examine the relationships between parental influence, SDOH, and SUD. Adolescents without SUD but drink alcohol versus those that never drink, higher parental monitoring lowered the odds of regular alcohol consumption by about 40%. With the SDOH, regular alcohol consumption (with and without SUD) compared to not using alcohol, the likelihood of excessive alcohol consumption is 1.2 times higher for adolescents with higher household income. For tobacco dependence, when adolescents who smoke, but not dependent, were compared to those who never smoked, higher parental monitoring lowered the odds of regular tobacco use by about 40%. The addition of the SDOH did not significantly influence parental influence and tobacco dependence. However, the risk of heavy cigarette smoking is increased with living in a small to non-metro area by 45% and 49%. Regular users of marijuana, with and without SUD, when compared with those that never used, higher parental monitoring lowered the likelihood of marijuana use without SUD by 39% and developing SUD by 36%. The SDOH did not significantly influence the relationship between parental influence and marijuana SUD. However, being male and a racial minority increases the risk of developing marijuana SUD by 8% and 6%, respectively. Conclusively, the parental influence stands out in bearing significant

impact in modifying the adolescents' substance regular use and use disorder. Our collective efforts bear more dividend in exploring the further utility of appropriate parenting in controlling adolescents' substance use and advocacy for achieving health equity.

No. 6

The Covid-19 Pandemic and the Impact of Anxiety on Substance Use Behavior and Attitudes Towards Substance Use Detoxification Treatment

Poster Presenter: Albulena Ajeti, B.S.

Lead Author: Ulziibat Shirendeb Person, M.D., Ph.D.

Co-Authors: Zaid Tahir, Joshua Fogel, Ph.D., Rebecca Brendel, M.D., J.D.

SUMMARY:

Objective: Social distancing during the COVID-19 pandemic may have caused anxiety. This study focuses on anxiety and substance use during the COVID-19 pandemic. **Methods:** This was a cross-sectional survey (n=628) of substance use disorder patients. Substances consisted of alcohol, benzodiazepines, cannabis, cocaine, heroin, opioid, stimulants, and tobacco. **Results:** There were greater odds for those with an anxiety disorder than for those without an anxiety disorder for alcohol use (OR:1.94, 95% CI:1.37, 2.75, p<0.001), benzodiazepines (OR:3.00, 95% CI:1.95, 4.62, p<0.001), cannabis (OR:1.56, 95% CI:1.09, 2.23), p=0.02), cocaine (OR:2.04, 95% CI:1.42, 2.95, p<0.001), and other stimulants (OR:1.91, 95% CI:1.06, 3.44, p=0.03). The attitudes of, "The COVID-19 pandemic has directly impacted my ability to get the support I need while I am in detox/rehab" (p=0.02) and "Social distancing has made it difficult for me to detox/rehab from my drug of choice" (p=0.01) had significantly greater means for those with anxiety disorder as compared to those without an anxiety disorder. **Conclusions:** Anxiety was significantly associated with substance use during the COVID-19 pandemic. There may have been maladaptive coping by self-medicating with substance use. Psychoeducation about anxiety symptoms and seeking professional psychiatric care may benefit patients to disrupt the cycle of substance use. We recommend increasing social support patients may require during state mandated

isolation through electronic means (e.g., Google Meet or Zoom) to strengthen patient coping during uncertainty.

No. 7

Selective Serotonin Reuptake Inhibitor-Induced Gastrointestinal Bleeding in an Adolescent: A Case Report and Literature Review

Poster Presenter: Dinesh Sangroula, M.D.

Co-Authors: Niraj Sangroula, Sandesh Pokhrel, Kaushtuv Jung Thapa

SUMMARY:

Background: Selective serotonin reuptake inhibitors (SSRIs) are most commonly indicated antidepressants in adult and pediatric population commonly for depressive disorder, anxiety disorder, and obsessive-compulsive disorders. It acts by blocking presynaptic serotonin reuptake and thus increasing serotonin level within the synaptic cleft. It also blocks uptake of serotonin in platelets thus inhibiting platelet aggregation and increasing the risk of bleeding, mostly gastrointestinal (GI) bleeding. Some evidence exist including observational and case studies in adults and elderly population reporting association of SSRI with GI bleeding but none reported in children and adolescents. We present the youngest adolescent (13 year old) with acute upper GI bleeding associated with SSRI use.

Case Presentation: A 13-year-old boy diagnosed with depression presented with two episodes of severe upper GI bleeding two weeks after initiation of Sertraline. He had no other risk factors except for occasional use of Non-Steroidal Anti Inflammatory Drugs (NSAID). His labs including Hemoglobin and RBCs were normal in Emergency Room (ER) during the first visit and he responded well to intravenous fluids, Omeprazole, and Sucralfate. After 5 days, he revisited ER with second episode of hematemesis and dark colored stools with hemoglobin of 6.6, was admitted and received blood transfusion. Endoscopy and other laboratory investigations ruled out other causes of GI bleeding and hence Sertraline was considered as the potential cause for the patient's presentation. Sertraline was tapered and stopped and Bupropion was started. Patient recovered well without any further episodes of bleeding.

Discussion: The risk of upper GI bleeding with SSRIs

increases with increasing age, previous history of bleeding and concomitant use of NSAIDs, low-dose aspirin or anticoagulants/antiplatelets. Multiple studies have frequently demonstrated increased risk of GI bleeding with higher degree of serotonin reuptake inhibition among antidepressants.

Conclusion: SSRI can increase the risk of GI bleeding in children and adolescents as well. Patients with increased risk factors should be treated with SSRI cautiously; taking lowest dose possible and careful monitoring. Treating the GI bleeding medically, lowering the dose or stopping the medication, and considering antidepressants with low serotonin activity such as Bupropion are the appropriate steps to treat patients with SSRI-induced GI bleeding. Educating patient and family about potential risk, especially for high risk patients is the key.

No. 8

Lamotrigine in the Treatment of Pediatric Bipolar Disorder: A Systematic Review of Literature

Poster Presenter: Dinesh Sangroula, M.D.

Lead Author: Rojal Rijal

Co-Authors: Hridaya Ghimire, Yash Bhattarai

SUMMARY:

Introduction: Pediatric bipolar disorder presents similar to adults, but children with mania frequently demonstrate a chronic course, severely irritable mood, early onset of depression, presence of psychotic symptoms, and a mixed picture with depressive and manic symptoms co-occurring. It greatly impairs the growth and functioning of a child as it is frequently misdiagnosed, untreated, or mistreated for a comorbid disorder. The current Food and Drug Administration (FDA)-approved treatment options for pediatric bipolar disorder include Lithium, second-generation antipsychotics (SGA), and psychotherapy. However, adverse effects like extrapyramidal symptoms, sedation, metabolic disorders, and weight gain are common with SGA, while the narrow therapeutic index of Lithium, including nephrotoxicity, scares the child and the family. Lamotrigine (LTG) is an anti-epileptic drug that has shown safety and efficacy in treating seizure disorders in both adults and children and has been FDA approved for treating adult bipolar disorder (not in children) since 2003. However, it has not been FDA

approved for pediatric bipolar though it is commonly used in clinical practice. We aim to perform a comprehensive literature review to explore the evidence to support or refute the efficacy and safety of LTG in the use of pediatric bipolar disorder.

Methods: A systematic literature search was conducted following PRISMA guidelines with keywords, "Child", "Adolescent" "Bipolar Disorder", and "Lamotrigine" and their corresponding MeSH terms using the databases "PubMed/MEDLINE", "PsycInfo" and "Embase." The "Covidence" software was used to screen and review the articles against the eligibility criteria (open-label and controlled prospective studies only) by three independent reviewers. **Results:** A systematic search produced 306 hits. Eight articles (seven open-label and one double-blind trials) were comprehensively reviewed after initial screening. LTG significantly reduced bipolar disorder symptoms in all seven open-label studies and in the open-label phase of the double-blind trial, while the double-blind phase of the trial failed to show any significant difference in the onset of bipolar episodes in patients maintained on LTG. The most frequently reported side effects from the patient population were benign rashes, followed by abdominal pain, sedation, agitation, irritability, and suicidality. The small sample size, open-label design, and absence of placebo control were the main limitations for the majority of the studies.

Conclusion: The safety of LTG in children has already been established through its use for seizure disorders and Epilepsy. Open-label studies demonstrated promising evidence to support the efficacy and safety of LTG in the treatment of pediatric bipolar disorder, but a single double-blind study did not. LTG could potentially be a promising drug for treating pediatric bipolar if more evidence could be demonstrated in larger double-blind trials.

No. 9

Utilization of Music Therapy in the Healing and Therapeutic Management of Schizophrenia

Poster Presenter: Amy Agrawal, M.D.

Co-Author: Fe Festin, M.D.

SUMMARY:

Background: Treatment of schizophrenia requires the addition of non-medication therapies like music

to improve the health of those with schizophrenia, as those with schizophrenia often have issues with medication non-compliance due to side effects, paranoia, poor self-care, and disorganization. Antipsychotic medication alone has not been effective in managing negative symptoms and cognitive dysfunction in those with schizophrenia compared to treating the positive symptoms of schizophrenia; adjunct therapy is needed to improve the interaction of patients with schizophrenia with the world and their overall thinking. This review focuses on the role of music therapy in the improved clinical management and functioning of patients with schizophrenia with the hypothesis that incorporating adjunct music therapy into treatment regularly for those with schizophrenia in inpatient psychiatric settings will lead to the improved mood, symptomatology, participation in care, communication, social functioning, quality of life, and clinical outcomes of patients with schizophrenia.

Methods: Three databases (PubMed, National Library of Medicine, Cochrane Library) were searched using the terms "music therapy," "schizophrenia," "inpatient settings," "2022," and "2020," identifying studies focused on music therapy in schizophrenia. **Results/Discussion:** Review of the literature shows that music therapy improves the negative symptoms, sleep disturbance, depression, emotional behavior, social functioning, and quality of life of patients with schizophrenia. Studies consistently show that music therapy helps the negative symptoms of schizophrenia but conflict regarding music therapy's effects on the positive symptoms of schizophrenia. This suggests that combining psychopharmacological management to treat positive symptoms of schizophrenia with music therapy to treat negative symptoms of schizophrenia can improve the overall care of patients with schizophrenia. **Conclusions:** Adding music therapy into the treatment approach of patients with schizophrenia can improve clinical outcomes per the literature. It would be beneficial to start incorporating music therapy groups regularly in the inpatient psychiatric settings of patients with schizophrenia in addition to using medication management to treat patients with schizophrenia to treat both the positive and negative symptoms of schizophrenia. Psychiatrists, psychologists, nurses, social workers, occupational therapists, and

recreational therapists can work together to provide music therapy in a controlled and therapeutic environment in the inpatient psychiatric setting to help patients with schizophrenia have a safe space to heal through creative expression in the form of music. More research is needed to determine how long the positive effects of music therapy last on patients with schizophrenia and if patients with schizophrenia can continue to use music to cope with their illness after discharge to decrease readmission rates.

No. 10

Anemia and Disease Severity in Schizophrenia. Is There a Connection?

Poster Presenter: Miguel Alfonso Ramos, M.D.

Co-Authors: Gemma Safont, Miguel Bernardo, Belen Arranz

SUMMARY:

INTRODUCTION. Several studies have shown a reduction in blood iron concentrations in patients with schizophrenia. Moreover, the prevalence of microcytic anemia in adult patients with schizophrenia ranges from 2.5% to 4.5%, with an OR from 1.90 to 3.0].^{1,2} Our group has reported a prevalence of 5,2% of Chronic Inflammatory Iron Deficiency in a large cohort of schizophrenic patients, proving for the first time a relationship between human iron metabolism and the chronic inflammatory status secondary to psychosis.³ Our aim is to analyze the relationship between anemia, disease severity, inflammatory markers, and lifestyle variables in patients with schizophrenia.

METHODOLOGY. We performed a cross-sectional cohort study over 434 patients diagnosed with schizophrenia. We studied hemoglobin (Hb) and Mean Corpuscular Volume (MCV). We assessed disease severity (PANSS and GAF scores), lifestyle habits (Questionnaire of Adherence to Mediterranean Diet (PREDIMED) and the Short Scale of Physical Activity (IPAQ)), and inflammatory markers (C-reactive protein (CRP), Erythrocyte Sedimentation Rate (ESR), Platelet-Lymphocyte Ratio (PLR,) and homocysteine concentration). We also measured other metabolic biochemical markers. We assessed the prevalence of anemia (Hb <12 mg/dl in women, <13 mg/dl in men). We performed an

independent Pearson correlation between hemoglobin levels, disease severity markers, lifestyle variables, and inflammatory and biochemical markers. Moreover, we performed an ANOVA study comparing disease severity and cognitive status scores, lifestyle variables, and inflammatory and biochemical markers between patients with and without anemia. **RESULTS** 10.8% (n=48) of the patients were diagnosed with anemia. Regarding the inflammatory markers, hemoglobin correlated with PLR (p<0.01), ESR (P<0.001), and Homocysteine levels (p<0.01). In the lipid metabolism analysis, hemoglobin correlated with LDL cholesterol (p=0,015), triglycerides (p=0.02) and ApoB (p<0.01), while it also inversely correlated with HDL (p<0.01) and ApoA1 (p=0.03). The group with anemia presented a higher score in the negative PANSS scale (p=0.045), a lower GAF score (p=0.019) and lower cognitive reserve CRASH scale (P=0.022). Regarding inflammatory markers, the anemic group presented higher PLR (p=0.045) and ESR (P>0.01), higher concentration of arteriosclerotic markers such as Apo-B (p>0.04) and homocysteine (p>0.02), and lower concentrations of Apo-A1 (p>0.01).

CONCLUSIONS. This is the first report of the role of anemia in the clinical course of schizophrenia. Our data show a prevalence of anemia of 10.8% among patients with schizophrenia. Furthermore, those patients with anemia have a more severe disease course, lower cognitive reserve, and higher risk of arteriosclerosis.. GRANT FEDER, PI17/00246

No. 11

Interpersonal Trauma and Discharge Symptom Severity Among Individuals With Psychotic Disorders: A Population-Based Cohort Study in Ontario

Poster Presenter: Tina Behdinan, M.D., M.Sc.

Lead Author: Simone N. Vigod, M.D., M.Sc.

SUMMARY:

Background. Interpersonal trauma – emotional, physical, and sexual abuse and/or assault – is associated with poorer clinical prognoses for individuals with psychotic disorders. Its association with symptom severity at hospital discharge in this population is unknown. **Methods.** Among 57,106 individuals hospitalized for a psychotic disorder in

Ontario, Canada (2009-2019), 12,805 (22.4%) with a history of interpersonal trauma were compared to 44,301 (77.6%) without on a positive symptom scale (PSS) score at hospital discharge. Mean differences were adjusted for baseline score (aMD) and other important confounders. In a subcohort of individuals with an elevated score of at least 6 on the PSS at admission, we calculated the relative risk (aRR) of positive symptom remission (PSS < 6) at discharge comparing those with and without interpersonal trauma, adjusted for the same confounders. **Results.** Interpersonal trauma was associated with a higher PSS discharge score (aMD 0.20, 95% CI 0.14-0.26). Effect sizes were greater for those with who experienced interpersonal trauma in the past year. Results were similar by type of trauma (physical, sexual, emotional) and specific diagnosis (schizophrenia, schizoaffective disorder, other psychotic disorder). In the subcohort, fewer inpatients with vs. without a history of interpersonal trauma had PSS < 6 at discharge (61.9% vs. 63.8%, aRR 0.95, 95% CI 0.93-0.97). **Conclusion.** Individuals with psychotic disorders who have a history of interpersonal trauma are at risk for elevated symptom burden at hospital discharge. Integration of trauma-informed frameworks and trauma-focused therapies in the inpatient psychiatric setting may optimize outcomes at discharge.

No. 12

Preferences for Characteristics of Oral Antipsychotic Treatments: Survey Results of Patients Living With Schizophrenia or Bipolar I Disorder

Poster Presenter: Marco Boeri

Co-Authors: Martha Sajatovic, M.D., Hemangi Panchmatia, Leslie L. Citrome, M.D., M.P.H.

SUMMARY:

Background: Antipsychotic treatments are effective in managing symptoms in patients with schizophrenia (SZ) or bipolar I disorder (BD-I); however, they are associated with various side effects, including weight gain and sexual dysfunction. This study assessed patients' preferences for characteristics associated with oral antipsychotics. Further, this study explored potential tradeoffs that patients may make between efficacy and tolerability.

Methods: A cross-sectional online survey was

designed to collect preference data using a discrete choice experiment (DCE). The DCE consisted of a series of choices between pairs of hypothetical oral antipsychotic treatments with 5 characteristics: treatment efficacy (i.e., symptom improvement), weight gain over 6 months, sexual dysfunction, sedation, and akathisia. The DCE was pretested to ensure its comprehension and understanding among people with SZ (n=15) or BD-I (n=15). The final survey was administered to US adults with a self-reported diagnosis of SZ or BD-I. **Results:** A total of 144 respondents with SZ (mean age 41 years, 50% female, 69% White) and 152 respondents with BD-I (mean age 40 years, 70% female, 78% White) completed the survey. Most respondents with SZ or BD-I experienced side effects included in the DCE: weight gain (85%, 83%), sedation (82%, 93%), sexual dysfunction (75%, 76%), and akathisia (71%, 72%). Symptom improvement was the most important treatment attribute for respondents with SZ or BD-I. Weight gain and sexual dysfunction were 2 side effects that respondents most wanted to avoid. Respondents preferred treatments associated with 0, 4, or 7 lb of weight gain over 6 months significantly more than treatments associated with 11 lb of weight gain. Respondents were willing to accept an increase in weight of 7 to 9 lb over 6 months for smallest improvements in symptoms (1 incremental step of improvement in disease severity). For the largest improvement in symptom severity (2 incremental steps of improvement in disease severity), respondents were willing to accept weight gain of more than 11 lb over 6 months. With respect to sedation, respondents were willing to accept higher than 25% risk of sedation for any level of symptom improvement. **Conclusion:** In this survey, treatment efficacy was the most important attribute of oral antipsychotics among the respondents with SZ or BD-I; weight gain and sexual dysfunction were 2 side effects patients most wanted to avoid. Respondents with SZ or BD-I were willing to accept some weight gain as a side effect for better efficacy. As oral antipsychotics have different efficacy and tolerability profiles, it is important to understand the features that patients value in a treatment and how they balance benefits and risks when choosing among treatments.

No. 13

Financial Incentives for Outpatient Engagement in an Urban, Public Sector Health System

Poster Presenter: Beth Broussard, M.P.H., C.H.E.S.

Co-Authors: Emily Griner, Aniket Malhotra, Robert Cotes, M.D.

SUMMARY:

The period of transition from a psychiatric hospital to outpatient mental health treatment is a critical time for engagement in services for people with serious and persistent mental illness (SPMI). However, rates of follow-up at scheduled outpatient appointments post-discharge are low. More recent studies have found rates between 35% and 52% within seven days of discharge - reflecting the numerous and complex barriers individuals often encounter in community care settings (Smith et al., 2017; Smith et al., 2020). Initial research has shown that financial incentives for engagement may be an effective way to increase follow-up (Noordraven et al., 2017). As part of a Transformation Transfer Initiative awarded through NASMHPD in 2020, the Nice Incentives for Care Engagement (NICE!) program was developed. Individuals with SPMI scheduled for discharge from an adult inpatient psychiatric unit were offered an opportunity to sign up to receive \$15 incentives at kept follow-up outpatient appointments earning up to a total of \$75 within a 6-month timeframe. Upon enrollment, individuals were asked to participate in an additional brief, voluntary research questionnaire surveying demographics, access to technology, service satisfaction, and program experience at baseline and follow-up to assist in program evaluation. The project was delayed due to the COVID-19 pandemic and recruitment was extended until April 2022.

A total of 188 participants enrolled in the NICE! Initiative ranging in age from 18 to 69 (M=31, SD=10.85). Of those enrolled, 54 (27%) completed the voluntary research questionnaire. In the overall sample, 105 participants identified as male (56%)

and 83 identified as female (44%). The majority of the sample identified as Black or African American (n=159; 85%), with 13 (7%) identifying as White, 8 (4%) identifying as Hispanic, Latino, or Spanish origin, 3 (1%) identifying as Other, and 5 (3%) were unknown. 80 (42%) kept and attended their first appointment scheduled at the outpatient clinic. Initial results showed similarly low rates of first appointments kept as found in previous literature. The COVID-19 pandemic presented multiple challenges to the project including delays in recruitment, a push to virtual appointments during waves, and the mailing of gift cards rather than receiving them in clinic due to staff challenges. Follow-up data collection is in progress ending in October 2022 and data on appointments kept over period of program enrollment, and after receiving incentives, will be presented. For those participating in the voluntary research questionnaire, program experience will also be examined.

No. 14

Violence Behavior Among Young Adults Experiencing Early Psychosis: Patient and Clinician Perspectives on a Novel Treatment Approach

Poster Presenter: Deirdre Caffrey, M.D.

Co-Authors: Stephanie Rolin, M.D., Paul Appelbaum, M.D., Lisa Dixon, M.D.

SUMMARY:

Background: The absolute risk of violence among persons with serious mental illnesses (SMI) is small. However, young adults experiencing early psychosis appear to be a subgroup at higher violence risk, with estimates that up to one-third of individuals engage in violence during the early course of their illnesses. Because of the relatively increased risk of violence for young adults with early psychosis, this period presents a unique opportunity for intervention. Early intervention services (EIS) for young people with psychosis have been associated with improved outcomes and reduction in symptoms. While cognitive behavioral therapy (CBT) interventions appear to be the most promising non-pharmacological approach to reducing violence for patients with SMI, no studies exploring the use of CBT-based interventions in EIS settings have been identified. This study uses formative research to

explore the perspectives of EIS clients and EIS staff (including psychiatrists, psychologists, social workers, and peer specialists) about violence and CBT-based interventions to reduce violence. **Methods:** This study is based on data from qualitative interviews with approximately 20 EIS clients and 15 EIS staff members. Inclusion criteria for clients included (1) 16–30 years old; (2) diagnosis of a non-affective psychosis and a history of psychotic symptoms lasting at least one week; (3) enrolled in an EIS program in New York State and (4) recent violent ideation or behavior. Inclusion criteria for EIS staff included working with a client with recent violent behavior. Individual interviews explored perspectives on violent behavior and a potential CBT-based intervention for violent behavior. Interviews were conducted either in-person or remotely, and were audio recorded and professionally transcribed. All transcripts were reviewed and coded by two reviewers (DC and SR), and differences in coding were resolved through consensus. Transcripts were analyzed using immersion and crystallization process and thematic content analysis, following a systematic, iterative process. **Results:** Preliminary findings found repeated themes regarding drivers of violent behavior including symptoms of psychosis, recent substance use, anger, and trauma. Consequences of violence included physical injuries, legal charges, as well as significant impacts on housing, treatment, and engagement in work or school. Feedback regarding the CBT intervention was positive overall from both EIS client and staff participants, though EIS staff emphasized the needs for staff training and flexibility in the proposed model to meet patient needs. **Conclusions:** A CBT intervention aimed at reducing violence in patients experiencing early psychosis may be an acceptable treatment in the EIS setting. Future work will seek to implement a CBT intervention to reduce violence for EIS clients.

No. 15

Sexual Functioning in Chemsex Users

Poster Presenter: Robert Kowalczyk

SUMMARY:

Background: The literature concerning the epidemiology and etiology of sexual disorders in

heterosexual men is abundant, whereas it is relatively limited in the case of men preferring homosexual relations (MSM) and the findings differ due to the employed methodology and the sample analyzed in the study. Additionally results are affected by factors such as socio-cultural differences or minority stress. For chemsex users, the data is even more scarce. This poster presents data from an unpublished research concerning MSM chemsex users in Poland assessing the quality of sexual life in comparison to a non-chemsex MSM group. **Methods:** A group of 163 men was assessed, including 46 men aged between 18-29 years, 67 between 30-39 years and 49 aged 40 years or more. Their educational level was primary/vocational for 18 subjects, secondary for 57 and higher for 88 subjects. The tools used consisted of a questionnaire concerning various aspects of sexual and medical history and socio-demographic questions as well as other scales: The quality of life questionnaire in relation to sex - Male (Polish version of the SQoL-M), Premature ejaculation questionnaire and the International Index of Erectile Function (IIEF). **Results:** There were 93 chemsex users (ChS) and 70 non-ChS subjects, and both groups did not differ significantly in terms of education ($p=0.261$). Eighty subjects had HIV-positive status (ChS vs non-ChS: $p=0.456$). Age of sexual initiation was lower in ChS than non-ChS (17.2 vs 18.1yrs, $p=0.032$) whereas self-identification with sexual orientation was later in ChS vs non-ChS (17.5 vs 14.8yrs, $p<0.001$). ChS have sex a bit less frequently than non-ChS ($p=0.014$) although they do not differ in their experienced sexual desire ($p=0.491$). There is nearly a significant difference between ChS and non-ChS subjects in quality of sexual life (SQoL-M mean score respectively: 47.4 vs 50.8, $p=0.059$), and a significant difference between both groups in relation to delaying ejaculation during an intercourse, where ChS declared slight troubles more often ($p=0.012$). Both ChS and non-ChS felt similarly discriminated against due to being MSM ($p=0.857$). **Conclusion:** Chemsex users among MSM seem to significantly differ from non-users in several, mainly psychosexual aspects of their sex life, while having similar socio-demographic background.

No. 16

Standard Assessment of Selected Personality Characteristics of Rape Perpetrators

Poster Presenter: Robert Kowalczyk

SUMMARY:

Background: Rape is regarded as an especially hideous crime not only among the general public, but also within the community of inmates. Statistical data collected by the police indicate that in recent years the rate of sexual crimes has been growing, including especially violent acts such as rape or sexually motivated murder. However, objective data on such sexual offenses are very difficult to obtain and often reveal only some aspects of the problem. This report is intended to shed light on selected psychological characteristics of convicted rape perpetrators. Methods: The sample consisted of 30 subjects incarcerated in accordance with article 197 of the Penal Code in penitentiaries in Kielce and Pinczow. Their educational level was either primary (56.7%) or secondary (43.3%). The tools used included Psychopathic Personality Inventory – Revised (PPI-R), Impulsivity Questionnaire (IVE), Psychopathy Check List - Revised (PCL-R) and Buss Durke Inventory (BDI) to assess aggression. Results: The aggression measured with BDI consisted of two subscales measuring aggressiveness (mean \pm sd: 35 ± 18.9 ; % with sten score above 5.5: 33.3%) and hostility (12.1 ± 8.1 ; 50%). IVE results assessed impulsivity (7.1 ± 4.1 ; 60%), propensity to risky behavior (7.3 ± 3.9 ; 50%) and empathy (12.8 ± 3.5 ; 63.3%). General psychopathy score based on PPI-R equaled 285.6 ± 37.4 , whereas the subscales identified with this questionnaire included egocentric impulsivity score: 147.7 ± 25.5 , fearless domination score 108 ± 17.7 , and callousness score: 39 ± 8.1 . Conclusions: The results indicate that rape perpetrators do not significantly differ from general population regarding psychopathy, aggressiveness, impulsivity, risk propensity and empathy scores assessed with popular questionnaires. Such results raise doubts about potential bias in self-presentation resulting from impression management.

No. 17

Investigating Family Functioning and Mental Health Service Use in Suicidal Adolescents

Poster Presenter: Amanda Chang

Co-Authors: Dariana Gil Hernandez, Michele Berk

SUMMARY:

Background: Suicide is the second leading cause of death among 10 to 14-year-olds and the third leading cause of death among 15–24-year-olds in the United States (CDC, 2020). Mental health treatment is a critical component of suicide prevention for youth at risk for suicide; however, research has found low rates of engagement in treatment among suicidal youth (Hom et al., 2015). These youth are treated in a variety of types and levels of care, including inpatient treatment, residential treatment, partial hospital programs (PHPs), intensive outpatient programs (IOPs), outpatient clinics, and school-based mental health services. At present, little is known about the relative effectiveness of these different levels of care. The majority of youth under 18 are dependent on caregivers to access treatment. Caregivers face multiple barriers to sustaining youth mental health services, such as a lack of transportation, lack of childcare, scheduling conflicts, low motivation for treatment, and lack of knowledge about mental illness/mental health services (Harvey & Gumpert, 2015; Shafran et al., 2009; Weisz, Ugueto, Cheron, & Herren, 2013). Hence, family functioning is likely to have an impact on service usage for suicidal youth. We will examine the relationship between service usage and family functioning among a sample of youth at high suicide risk enrolled in a community-based IOP program. We will: (1) describe patterns of mental health service usage within the six months prior to IOP admission, and (2) investigate whether family functioning is associated with types of mental health service usage. **Methods:** Participants are $N = 30$ youth-parent dyads participating in an IOP designed for suicidal youth ages 13-18. Data on prior mental health service usage are currently being collected using the Child and Adolescent Services Assessment (CASA; Burns et al., 1991), and family functioning are being measured using the McMaster Family Assessment Device (FAD; Epstein et al., 1983) and Conflict Behavior Questionnaire (Prinz et al., 1979). **Results:** Descriptive statistics will be presented on types of

treatment accessed in the six months prior to starting the IOP program and family functioning. Spearman correlations will be used to examine the relationship between prior service usage and family functioning. **Conclusion:** Study findings will expand our understanding of the relationship between mental health service usage and family functioning. Given the vital role the family environment plays in adolescents' access to mental health services (Logan & King, 2001), results can inform ways to decrease barriers in accessing mental healthcare. Moreover, this study focuses specifically on adolescents at high risk for suicide and their families, thereby contributing knowledge on this particularly vulnerable population. Further investigation will be needed to determine whether family functioning is a causal factor in predicting prior service usage.

No. 18

A Cross-Sectional, Descriptive Content Analysis on the Use of Coded Language for Suicide on Tiktok

Poster Presenter: Sophia Choi

Co-Authors: Jeffrey Liu, Benjamin Woo

SUMMARY:

Background: TikTok, a unique short-video-based social media app, has now become one of the most popular platforms for mental health content in the past 4 years. With its rapid adaption by adolescents and young adults globally, coded language for depression and suicide has simultaneously arisen to avoid censorship and demonetization of videos. This cross-sectional study aims to describe the TikTok content that used the word "unalive" as a code for suicide ideation, attempt, or completion. **Methods:** Utilizing the TikTok proprietary search algorithm that organized results via relevance, the first 100 videos that included the word "unalive" in relation to suicide were included. The content was coded for various categories consisting of describing or referring to personal experience with suicide ideation/attempt, describing or referring to another individual's experience with suicide ideation/attempt/completion, describing symptoms related to suicide ideation/attempt, providing resources for therapy or support, expressing support, raising awareness, humorous entertainment, or related to spirituality. Additional categories detailing

video characteristics were also included, such as the number of likes, comments, and whether the video involved music, audio, speaking, or text. A second rater coded for 10% of the sample to determine inter-rater reliability. **Results:** The 100 videos included in the sample had a total of 20,604,261 likes and 183,906 comments. The content that appeared the most was a description or reference to personal experience with suicidal ideation or attempt, appearing in 44% of the videos. Following closely behind, 42% of videos referred to suicide in a humorous context, often overlapping with personal experience content. 8% of videos referred to individuals other than the creator that had experienced suicidal ideation or attempt and 17% of videos referred to individuals who had completed suicide. The TikTok content categories with the lowest percentages contained videos that detailed symptoms and signs related to suicide ideation (5%), provided resources for help (4%), were related to spirituality (2%), and were created by mental healthcare professionals (6%). 16% of videos express support and 36% of videos addressed the importance of raising awareness for suicide ideation. A Cohen kappa of 0.877 was calculated, indicating near-perfect agreement among both raters. **Conclusion:** With over 20 million likes for TikTok videos that use the coded word "unalive" reflects the changing cultural view on discussions surrounding suicide. Future research should focus on the potential role of intervention on social media platforms by health care professionals, as well as the roles that online communities and humor have as coping mechanisms for those struggling with suicidal ideations.

No. 19

Use of Glp-1 Receptor Agonists in Patients With Severe Mental Illness: A Narrative Review

Poster Presenter: Omotola A. Akinkunmi, M.D.

Co-Author: Jason Cafer, M.D.

SUMMARY:

Background: Patients with severe mental illness (SMI) frequently experience cognitive deficits, in addition to an increased risk of metabolic abnormalities. Furthermore, antipsychotic drugs (APDs), an integral treatment for SMI, cause

metabolic adverse effects that can lead to life-threatening cardiovascular morbidity. Given their FDA approval for the treatment of diabetes and obesity, glucagon-like peptide receptor agonists (GLP-1 RAs) stand out among the pharmaceutical agents for metabolic dysregulation. Intriguingly, pro-cognitive effects of GLP-1 RAs in humans have been proposed, beyond mere prevention of diabetes-induced cognitive decline. GLP-1 RAs are known to bind GLP-1 receptors in the brain. In animal models, GLP-1 RAs agonists show neuroprotective effects including reduction of A β deposition, tau hyperphosphorylation and hippocampal neurodegeneration. We aim to review the metabolic and cognitive effects of GLP-1RA in patients with SMI. **Method:** From inception to December 2022, we conducted a literature search on PUBMED, EMBASE, and Google Scholar databases on topics focusing on GLP-1RAs' use in adult patients with SMI, using the keywords "GLP-1," "glucagon-like peptide receptor," "antipsychotic," "psychiatry," and "SMI." We incorporated all primary literature—chart reviews, clinical trials, randomized controlled trials, and case reports. Secondary literature, studies on animals, and articles unrelated to the study's objective were excluded. **Result:** Our search yielded three case reports, four retrospective chart reviews, and eleven clinical studies. Two clinical trials each evaluating the cognitive effect of GLP-1-RAs in patients with affective disorder and schizophrenia reported conflicting results. In general, literature on the metabolic effects of GLP-1 RAs in APD-treated patients described a clinically significant reduction in weight and glucose biomarkers. Serum lipid levels were unchanged or not reported in most studies. Blood pressure was not significantly affected by GLP-1 RAs. Liraglutide, semaglutide, and exenatide were the most used GLP-1 RAs, along with olanzapine and clozapine as APDs. Notably, the existing publications on this topic are minimal with few included participants (sample size N = 8–113). **Conclusion:** GLP-1 RAs are potentially useful in psychiatry to ameliorate antipsychotic-induced metabolic syndrome, and may serve the dual purpose of improving cognition. To further substantiate this suggestion, robust clinical trials on the effects of GLP-1 RAs on patients with SMI are needed with emphasis on metabolic indicators, cognition, and the cost-benefit ratio. **KEYWORDS:** Glucagon-like

peptide-1 receptor agonists (GLP-1 RAs); antipsychotic drugs (APDs); psychiatric; Severe Mental Illness (SMI); metabolic; pro-cognitive

No. 20
WITHDRAWN

No. 21
Antipsychotic-Induced Fecal Impaction in a Patient With a History of Schizophrenia

Poster Presenter: Monik Gupta

Co-Author: Anderson Lee

SUMMARY:

Mr. S., a 44-year-old male with a psychiatric history of schizophrenia treated with the second-generation antipsychotic (SGA) paliperidone, is admitted to the ED with symptoms of severe abdominal distention, nausea, feculent vomiting, and diarrhea that has progressively worsened over the past 4 days. He states that he has not had normal bowel movements over the past few months. Subsequent evaluation and CT imaging revealed severe fecal impaction and distention of the bowels with dilation up to 20cm in this patient. Over the following 6 days of his hospital course, he underwent multiple enemas, two decompressive colonoscopies, and multiple manual disimpactions at bedside under sedation to relieve the stool burden within his colon until his clinical status improved substantially. He was eventually discharged without complications. Antipsychotic medications are complex and have a variety of side effects that can manifest as serious life-threatening complications. Although side effects are variable from patient to patient, it is important to closely manage and understand these medications. This case illustrates a unique incidence of antipsychotic-induced constipation that resulted in distention requiring numerous procedures under anesthesia for treatment. In this poster, we aim to discuss the importance of close management and prescription of antipsychotics and hope to prevent future cases like this.

No. 22**Pilot Study of Single-Dose Psilocybin for Serotonin Reuptake Inhibitor-Resistant Body Dysmorphic Disorder**

Poster Presenter: David Joel Hellerstein, M.D.

Lead Author: Franklin Schneier

Co-Authors: Michael Wheaton, Ronit Kishon, Jamie Feusner

SUMMARY:

Objective: Body dysmorphic disorder (BDD) is an often-severe condition in which individuals are preoccupied by misperceptions of their appearance as defective or ugly. Only serotonin reuptake inhibitors (SRIs) and cognitive-behavioral therapy have been demonstrated efficacious in randomized controlled trials. Psilocybin is a psychedelic drug with growing evidence for safety and efficacy in treatment of depression. This study aimed to test the feasibility, tolerability, safety, and efficacy of psilocybin treatment of adults with BDD. *Methods:* In this open-label trial, 12 adults (8 women, 4 men) with moderate-to-severe non-delusional BDD that had been unresponsive to at least one SRI trial received a single oral dose of psilocybin 25mg. There was no control group. Psychological support was provided before, during, and after the dosing session. The primary outcome measure for efficacy was the Yale-Brown Obsessive Compulsive Disorder Scale Modified for BDD (BDD-YBOCS) score during 12 weeks of assessments after dosing. *Results:* Participants completed all dosing and follow-up assessments. BDD-YBOCS scores decreased significantly over 12 weeks of follow-up ($p < 0.001$) (mean decrease $-13.33 \pm X$) with a large effect size (partial eta squared = .54), and significant changes from baseline were present at week 1 and persisted through week 12. Secondary efficacy measures of BDD symptoms, conviction of belief, negative affect, and disability also improved significantly, and no serious adverse events occurred. At week 12, seven participants (58%) were rated responders, based on $\geq 30\%$ decrease in BDD-YBOCS. *Conclusion:* This study provides promising preliminary support for psilocybin as a treatment of BDD, warranting future controlled studies.

No. 23**Commercial and Medicaid Opioid Analgesic Policies and the Revised CDC Treatment of Chronic Pain Guidelines**

Poster Presenter: Cynthia Arfken, Ph.D.

Co-Author: Victoria Tutag Lehr, Pharm.D.

SUMMARY:

Background: Prescribing policies following the 2016 CDC Treatment of Chronic Pain Guidelines often restricted access to opioid analgesic medications, particularly for patients with intractable pain receiving long-term opioids at dosages ≥ 90 MME/day. Additionally it was used to restrict payments for high-dose opioid prescriptions. In 2019, the CDC advised against hard opioid daily limits and abrupt tapering. Their guidelines were officially revised with a draft released February 2022 for public comment. In the draft, the CDC no longer recommends specific opioid dose limitations or treatment duration. In previous analysis, we showed opioid daily limits of 90 MME implemented by commercial insurance and Medicaid policies increased in Michigan after 2016 guidelines publication. The impact of the revision is unknown. We hypothesized an increase in the prescribing policies allowing opioid dosage limits above 90 MME/day and longer duration. *Methods:* Using the same Michigan payer entities as our prior analysis, we examined the number and timing of commercial and Medicaid payer opioid policies implemented from 2019-2022 (following the publication of their warning and during the CDC Clinical Practice Guideline for Prescribing Opioids revision). Policies from seven large commercial payers in Michigan and Medicaid fee-for-service were categorized from 2019 through second quarter 2022 into one or more 10 discrete strategies. *Results:* The seven payers implemented 207 new strategies across the 36 months, averaging 10.3 strategies per year, with fewest during 2020 ($n=25$) and 2021 ($n=51$). The number of strategies implemented following announcement of guidelines revision 2019 and during public comment year 2022 was similar (65 versus 66). No policies were identical. The most common strategy was limitations on number of days for initial prescriptions ($n=40$) and the least common strategy was prior authorization for refills ($n=1$). Payers differed in opioid prescribing daily limit.

However, by 2022 second quarter, all payers had prior authorization and/or step edit policies for prescribing opioid daily limit ≥ 90 MME for 6 month-1 year to accommodate chronic high daily opioid therapy. Conclusion: Commercial and public payers policies on opioid analgesic prescriptions continue to be complex and rapidly changing, complicating clinical decisions. However, policies regarding opioid dosage limits and duration may be responding to revised CDC recommendations as they now allow flexibility to accommodate clinical need. Policy implementation increased during 2019 and 2022 during guideline revision and public comment but the COVID-19 pandemic slowed activity in 2020-21. The impact of these policies requires ongoing examination.

No. 24

Correlation Between Dissociation and Treatment Response in a Real World Study of Intranasal Esketamine for Treatment-Resistant Depression (TRD)

Poster Presenter: Austen Smith, M.D.

Co-Authors: Pilar Cristancho, Baris Ercal

SUMMARY:

Background: TRD is a disabling illness for which esketamine was approved in 2019 due to its rapid and robust antidepressant effects [1,2]. Data are mixed regarding if dissociation correlates with sustained response [2]. The aim of this retrospective, observational study was to examine response for patients treated with esketamine for 4 weeks in real-world conditions and if dissociation correlated with response. **Methods:** 20 patients with Major Depressive Disorder, recurrent, severe, resistant to treatment, received either 56 or 84mg esketamine twice weekly at Washington University (WU) 9/2021-1/2023. Treatment response was defined by reduction of The Quick Inventory of Depressive Symptomatology (QIDS) by $\geq 50\%$ from baseline after receiving 4 weeks of esketamine. Self-reported side effects, adverse events, and dissociation using the Clinician-Administered Dissociative States Scale (CADSS-6) were measured. Outcomes were analyzed using Student's t-test comparing baseline and week 4 QIDS, and Spearman coefficient was calculated for CADSS-6 and change in QIDS. The WU Institutional

Review Board approved this study. **Results:** 20 patients initiated treatment. Six patients dropped out due to moving, relapse of Alcohol Use Disorder, insurance disapproval, and lack of efficacy. One patient was hospitalized the day after the first treatment. 14 patients completed 4 weeks of treatment and were analyzed for response to esketamine using QIDS. The mean patient age was 45.4. The most common comorbid psychiatric diagnoses were Generalized Anxiety Disorder (n=10) and Attention-Deficit/Hyperactivity Disorder (n=7). The patients had a mean of 9.6 previous psychotropic drug trials. 3 patients required hospitalizations during the study. The mean maximum CADSS-6 score at 4 weeks was 6.3. Responders had more dissociation with a mean maximum CADSS-6 score of 11.8, while nonresponders had a mean maximum CADSS-6 score of 4.3. We found a moderately strong but not statistically significant correlation between the maximum CADSS-6 score during treatment and the reduction in QIDS from baseline to week 4; $r=0.52$, $p=0.059$. Common side effects were dizziness (n=5) and nausea (n=3). Regarding effectiveness, 4 out of 14 patients (29%) achieved response at week 4. The mean QIDS decreased from 19.2 (SD=3.1) at baseline to 12 (SD=4.2) at week 4; $t(13)=4.5$, $p=0.0006$. **Discussion:** Our results are similar to a recent effectiveness study, which reported a 28.4% response rate at 1 month [3]. Efficacy is lower in our more severe TRD population than in randomized controlled trials [1,2]. Nonetheless, our study supports the effectiveness of esketamine under real-world conditions and will help inform treatment choices for TRD. We found that increased dissociation correlated moderately strongly, but not significantly, with a decrease in depressive symptoms by QIDS. Limitations include small sample size. Future studies with larger sample sizes are needed to identify predictors of response.

No. 25

Improvement in Reported Quality of Life Following Deep TMS for Treatment-Resistant MDD

Poster Presenter: Aron Tendler

Lead Author: Tal Harmelech

Co-Author: Yiftach Roth

SUMMARY:

Background: According to the World Health Organization (WHO), quality of life (QOL) represents the individual's subjective evaluation of physical, mental, and social domains (1). Major depressive disorder (MDD), the leading cause of disability globally affecting nearly 350 million people worldwide (2), is associated with substantial deficits in QOL (3,4). Importantly, QOL deficits have been shown to persist beyond the clinical resolution of symptoms (5), placing patients at an increased risk for relapse and rising direct and indirect costs (6). A poor QOL often overlaps with depressive symptom severity (7). However, a number of studies have shown that the severity of depressive symptoms explained only a small proportion of the variance in QOL (3, 4, 8). These findings suggest that assessing symptom reduction alone may not be the best way to gauge the success of MDD interventions. Despite being increasingly recognized as an important measure of health in medical and psychiatric patients (9, 10), QOL needs to be given more attention in clinical and research efforts in MDD. **Methods:** Data on 181 patients from the Deep TMS sham-controlled pivotal trial in treatment-resistant MDD (TRD) (11) was analyzed to investigate the effect of Deep TMS treatment on QOL of TRD patients. The treatment protocol consisted of 5 Deep TMS sessions per week for 4 weeks (acute treatment phase) followed by 12 weeks of 2 sessions per week (continuation/maintenance phase). QOL was measured using the Quality-of-Life Enjoyment and Satisfaction Questionnaire (Q-LES-Q). **Results:** A significant improvement in the active Deep TMS group compared with sham was observed after the acute treatment phase at week 5 (14.4 vs. 2.5, $p=0.0495$), that was not significant at week 16 (13.1 vs. 8.2, $p=0.0701$) as some patients dropped out. Furthermore, a highly significant correlation was found between the improvement in reported QOL and the improvement in symptom severity (assessed using Hamilton Depression Rating Scale) following treatment ($r=-0.49$, $p=0.000007$ at week 5; $r=-0.47$, $p=0.00008$ at week 16). Accordingly, responders ($\geq 50\%$ decrease in HDRS score from baseline) demonstrated a significantly larger improvement in reported QOL compared with non-responders (mean(\pm SEM), 133%($\pm 19\%$) vs. 25%($\pm 11\%$), $p=0.000005$ at week 5; 105%($\pm 27\%$) vs. 35%($\pm 15\%$),

$p=0.014$ at week 16). Lastly, at week 16, 59% of the patients who showed improvement in Q-LES-Q scores from baseline at week 5 sustained their improvement (12%) or improved further (47%).

Conclusions: 20 sessions of Deep TMS not only significantly improve depressive symptoms of TRD patients but also significantly improve their reported QOL. Furthermore, the extent of improvement in QOL is correlated with the extent of depressive symptom improvement.

No. 26**Withdrawal of Antidepressants Does Not Impact the Efficacy of COMP360 Psilocybin Therapy: Results From a Phase IIb Randomized Controlled Trial**

Poster Presenter: Joyce Tsai

Lead Author: Lindsey Marwood

Co-Authors: Ania Nowakowska, Hollie Simmons, Guy Goodwin

SUMMARY:

Background: As serotonergic drugs may downregulate 5HT_{2a} receptors, the therapeutic effects of psilocybin (5HT_{2a} receptor agonist) could be reduced in those taking antidepressant drugs. Accordingly, recent studies of psilocybin in psychiatric conditions have required participants withdraw from antidepressant drugs pre-treatment. Whether effects on 5-HT_{2a} function persist is unclear. In participants with major depression treated with the investigational drug, COMP360 25mg (COMPASS Pathways' proprietary synthetic psilocybin formulation), those withdrawn from antidepressant drugs ($n=28$) showed worse efficacy outcomes than those who entered antidepressant-free. Here, we present results from a larger ($N=233$), international, randomized, double-blind trial assessing the safety and efficacy of COMP360 psilocybin monotherapy (25mg or 10mg) compared to a 1mg dose, with psychological support, in participants with treatment-resistant depression based on their antidepressant withdrawal status prior to COMP360 treatment. **Methods:** Inclusion criteria included Hamilton Depression Rating Scale – 17 item score ≥ 18 and cessation of antidepressant drugs (including antipsychotics) at least 2 weeks pre-COMP360 administration. The primary efficacy

endpoint was change from Baseline in Montgomery-Åsberg Depression Rating Scale (MADRS) total score at Week 3. Subjective psychedelic effects were measured at the end of the administration day by the 5-Dimensional Altered States of Consciousness (5D-ASC) scale. **Results:** Participants were randomized to 25mg (n=79), 10mg (n=75), or 1mg (n=79) COMP360. 67% of participants withdrew from antidepressant drugs during the screening period (5%, 21%, and 41% withdrew from >2, 2, and 1 drugs, respectively). No evidence of worsening in depression severity in those withdrawing from antidepressant drugs was observed during the screening period, nor were differences seen between those withdrawing from >2, 2, 1, or no drugs. For MADRS total score mean change from Baseline to Week 3, no meaningful differences were seen between withdrawn versus not withdrawn participants for each dose arm; 25mg, -12.2 v -11.8; 10mg, -8.5 v -9.6; 1mg, -6.4 v -7.4; and did not differ from the overall findings (25mg=-12.0; 10mg=-8.9; 1mg=-6.8). Withdrawal status did not appear to affect subjective psychedelic effects as no meaningful differences were seen between dose groups on the 5D-ASC dimensions. **Conclusion:** In contrast to previous exploratory findings, whether or not patients had withdrawn from antidepressant drugs had no impact on the efficacy of COMP360 psilocybin. Depression symptom severity remained stable during the screening period for all participants, irrespective of withdrawal status, giving support for the safe withdrawal of antidepressants in psilocybin clinical trials. Subjective psychedelic effects were similar between dose arms supporting the idea that serotonergic drug treatment does not effect a distinct change in 5HT2a receptor function.

No. 27

The Influence of Parity on Depression in Victims of Intimate Partner Violence: A Descriptive Observational Study in Guayaquil-Ecuador

Poster Presenter: Boris Vargas, M.D.

SUMMARY:

Background Intimate partner violence (IPV) is a significant public health issue that is often linked to depression. Previous research has suggested that parity may act as a protective factor against

depression and suicide attempts. However, this study aimed to determine the impact of parity on victims of IPV and depression in Guayaquil-Ecuador, where the stress of caring for children may act as a burden and worsen symptoms of depression for victims.

Methods A descriptive observational study was conducted at the main Gender Violence Prosecutor's office in Florida, Guayaquil, Ecuador. The sample consisted of 239 individuals (195 women, 44 men) who were assessed for depression using the Beck test. The sample was divided into groups based on gender, marital status, number of children, and severity of depression. **Results** The data analysis revealed that a higher percentage of depression was present in IPV victims with parity. Specifically, among those with severe depression, 29% of women with children and 18% of men with children were affected, compared to 11% of women without children and 14% of men without children. Similarly, among those with moderate depression, 14% of women with children and 9% of men with children were affected, compared to 3% of women without children and 5% of men without children. Finally, among those with mild depression, 13% of women with children and 16% of men with children were affected, compared to 3% of women without children and 5% of men without children,.

Conclusion While some studies have found that having children can act as a protective factor against depression, this was not the case in this study. Financial violence is common in Ecuador, and many mothers do not receive economic support from the fathers of their children, leading to increased stress and burden. Hormonal and social factors may also play a role in the higher prevalence of depression among women with children. These findings suggest that mental health clinicians should pay particular attention to victims of IPV with multiple children, particularly in Latin America.

No. 28

Transcranial Magnetic Stimulation Differential Efficacy on the 9 Major Depressive Disorder DSM Symptoms in 46 Hispanic Patients

Poster Presenter: Juan Velez Escalante

Co-Authors: Adriana Rodriguez, David Saucedo-Martinez

SUMMARY:

Background: Transcranial magnetic stimulation (TMS) has been an FDA-cleared treatment to treat Major Depressive Disorder (MDD) since 2013, nevertheless its differential efficacy in the 9 different symptoms of depression has been seldomly explored. **Methods:** 46 Hispanic patients with major depressive disorder (MDD) treated with TMS from January 2020 to December 2022 in two different centers in Mexico (Monterrey, Nuevo Leon and Mexicali, Baja California), patients ages ranged from 17 to 74 years old (mean age=40.5, 52,2% female). All patients completed their full TMS sessions, according to the protocol assigned to them by an expert clinician certified in TMS treatment. Treatment response was defined as at least 50% decrease in the Patients Health Questionnaire-9 scale (PHQ-9). Remission was defined as a score of 5 or less in the PHQ-9. Individual symptoms were evaluated with their corresponding score on each of the PHQ-9 items and functionality were evaluated with the answer to the last question in the scale: "If you checked off any problems, how difficult have these problems made it for you to do your work, take care of things at home, or get along with other people?" **Results:** The analysis included all 46 patients, their initial mean PHQ-9 score was 17.9, they had a response rate of 54.3% (25 out of 46) and a remission rate of 43.5% (20 out of 46), with a mean final PHQ-9 score of 8.2 (mean change of -9.8). On regard to the 9 individual symptoms, the mean change was similar for each of them with mean changes ranging from -1.4 on sadness to -0.8 on insomnia. However, we found apparent differences when measuring the percentage of patients who changed their symptom severity to mild/null after the treatment, being as follows: anhedonia 52.2%, sadness 60.9%, insomnia 28.3%, fatigue 52.2%, hiporexia/hyperphagia 41.3%, guilt 41.3%, inattention 45.7%, slowness/agitation 41.3% and death thoughts 30.4%. Function recovery was another important result, 71.6 % of patients had moderate to severe dysfunction at the beginning of the treatment, and by the end of it only 10.8% had moderate to severe dysfunction, 63% had mild dysfunction and 26.1% were fully recovered. **Conclusion:** TMS efficacy is comparable to the one found in previous studies, however its efficacy on specific symptoms seems to differ from one another,

having its highest efficacy on the main depressive symptoms of anhedonia, sadness, and fatigue and its lowest on insomnia and death thoughts. Also, TMS treatment added to the functional recovery of patients. This study had no financial support.

No. 29**Depressive Disorders and Increased Risk of Pregnancy Complications: A Retrospective Cross-Sectional Study**

Poster Presenter: Nikhila Veluri, M.D.

Co-Authors: Luis Alvarado, Silvina Tonarelli

SUMMARY:

Background: Mental illness during pregnancy has a multifaceted impact on maternal and fetal well-being. The physiological changes and hormonal shifts can lead to psychiatric disorders such as depression and anxiety. **Methods:** This is a retrospective cross-sectional study using the 2019 national inpatient sample, observing associations between depressive disorders (DD) and pregnancy complications. Of 710,984 pregnant patients, there were 118,945 pregnant women with psychiatric disorders of which 96,582 pregnant women had a diagnosis of DD. All data was adjusted using appropriate survey sampling weights and strata. Continuous variables were summarized using mean and standard deviation while categorical variables were summarized using frequency and percentages. A linear regression model and Chi-square test was used for observing the associations across DD. A univariate and multivariable relative risk (RR) analysis was conducted to interpret the relationship between having DD and pregnancy complications (i.e., hypertension (HTN), diabetes (DM), smoking, alcohol abuse, drug abuse, pre-eclampsia/eclampsia, hemorrhage). Statistical significance was considered at a p-value less than 5%. **Results:** Of the 96,582 pregnant patients with DD, 57% were between the ages of 25-35. Among races, the largest population was found in the Whites and lowest in Native Americans (60.95% vs. 0.79%). Private insurance and Medicaid were the two most common forms of payments (52.17% and 41.66%). Hospitals located in the South had a statistically significant higher proportion of pregnant patients with DD compared to the Midwest, West, and Northeast (35.40% vs. 26.77% vs. 20.97% vs. 16.87%,

p<0.001, respectively). Diagnosis of DD during pregnancy increased the risk of HTN (RR 1.76, 95% CI 1.72 —1.8), DM (RR 1.39, 95% CI 1.36 —1.42), obesity (RR 1.47, 95% CI 1.45 —1.51), alcohol abuse (RR 1.71, 95% CI 1.67 —1.76), drug abuse (RR 1.67, 95% CI 1.62 —1.72), edema (RR 1.13, 95% CI 1.1 —1.16) and eclampsia (RR 1.07, 95% CI 1.05 —1.11) with statistical significance of p<0.001. **Conclusion:** DD during pregnancy increases the risk of complications when compared to patients without the diagnosis (13.38% vs. 11.96%, p<0.001). The diagnosis of DD is common during pregnancy, and it should be differentiated it from normal changes of pregnancy. Timely and correct diagnosis is crucial for patients to receive appropriate treatment, prevent medical complications and unhealthy copying mechanisms such as use of illicit drug and alcohol, which can interfere with the development of the fetus's critical organs, structures, and physiological systems.

No. 30

Case Report of Monoamine Oxidase a (MAOA) Variant From Whole Genome Sequencing Screening of Subject With Treatment Resistant Depression

Poster Presenter: Mani Yavi, M.D.

Co-Author: Carlos Zarate

SUMMARY:

A 57-year-old Caucasian female with Treatment Resistant Depression (TRD) presented for an elective research study. Her diagnosis of unipolar major depressive disorder was confirmed by a SCID. Her work-up with CBC, chemistry panels, drug and alcohol screen, hepatitis panel, TSH, urinalysis, mineral panel, EKG, and MRI of the brain, were unremarkable. Upon completion of the research study, the patient entered standard treatment and was discharged on vortioxetine and mirtazapine. Whole genome sequencing was completed and subsequently resulted in a heterozygous missense mutation in MAOA which codes for monoamine oxidase A (MAOA) and has been associated with x-linked Brunner syndrome. The variant (c.1466 C>G, p.Thr489Ser, NM_000240.4) that was identified had a CADD score of 12 and was classified as a variant of uncertain significance, with potential clinical significance for the patient. Family history of several

males in the patient's pedigree with behavioral and mental health problems (intellectual disability, obsessive and risky behavior) further supported the significance of the trait. Mutations in the MAOA-A gene resulting in a loss of function have been linked to Brunner syndrome. However, when urinary 5-hydroxyindoleacetic acid (5-HIAA) levels were quantified, they were found to be elevated, suggesting a higher activity variant of MAOA-A. Genome-wide association studies (GWAS) examining the relationship between high-activity MAOA-A variants and depression have been linked to MDD in females, as we suspect in this case. Genetic counseling was provided to the patient regarding the potential significance of this genetic variant. The patient did not have previous trials of MAOIs, and given the genetic component identified here, may possibly benefit from a future trial to treat her depression. This case highlights the potential clinical application of whole genome sequencing towards precision psychiatry.

No. 31

Resistant Depression: Treatment-Diagnosis Mismatch

Poster Presenter: Raffaella Zanardi

Co-Authors: Francesco Attanasio, Valentina Fazio, Cristina Colombo

SUMMARY:

BACKGROUND Treatment-resistant and difficult-to-treat depression are currently two of the hottest topics in psychiatry research. The clinician daily faces the therapeutic challenges caused by the lack of a shared and clear definition of "resistant depression". The launch of many novel pharmacological treatments tailored to resistant patients, often costly, risky and with uncertain benefits, lead to even more disorientation in the management of those complex patients. We designed a naturalistic study to provide a realistic picture of resistant depression in a lifelike psychiatric population, aiming at distinctive features of different clinical treatment-resistance profiles, trying to give concrete responses to clinicians in their daily practice. **METHODS** At our tertiary referral Mood Disorders center we recruited 347 patients diagnosed with diagnosis Major Depressive Disorder. According to clinical history, subjects were assigned

at admission to one of the following groups: *Non-resistant* (NR, N=158): no resistance features in the current or past episodes; *Resistant* (TR, N=103): resistant in the current episode to at least two antidepressants at adequate dosage and duration; *Pseudo-resistant* (PR, N=86): non-responders in the current episode, not defined as TR because of inadequate dosage, duration, or suspension for poor compliance or side effects. Patients were treated according to clinical judgement. During hospitalisation and two-month follow-up symptoms were weekly assessed by 21-Hamilton depression rating scale. RESULTS At admission, 54.46% of the sample showed resistance features, but only 29.68% of the sample fit resistance criteria. PR emerged as a separate category, differing from other groups for personality disorders (NR 27.21%, PR 38.37%, TR 20.39%; $p=0.022^*$), lifetime suicidal behaviors (NR 14%, PR 25%, TR 11.24%, $p=0.031^*$), substance use disorder (NR 2.53%, PR 10.47%, TR 1.94%; $p=0.005^*$), and tobacco smoking (NR 23.42%, PR 47.67%, TR 24.27%; $p<0.001^*$). Similarly to NR, PR were mainly and efficaciously treated with first-line antidepressants (SSRI/SNRI: NR 90.51%, PR 94.18%, TR 73.79%; TCA: NR 9.49%, PR 5.82%, TR 26.21%; $p<0.001^*$), and needed fewer non-pharmacologic potentiation than TR (NR 12.66%, PR 11.63%, TR 47.57%; $p<0.001^*$), obtaining a similar remission rates to NR (NR 64.56%, PR 65.12%, TR 33.98%; $p<0.001^*$). * χ^2 -test CONCLUSION This study highlights the problem of over-diagnosis and over-medicalization of depressed patients who exhibit poor response to treatments, very often because of inadequate management or underestimated poor compliance. Here we outline some of the clinical features that could help clinicians identify these patients and avoid inappropriate labelling of *treatment resistance* that increasingly leads to aggressive, risky, and costly therapy escalations, increasing the psychological burden and self stigmatisation, important risk factors for a "chronicization" of depression.

No. 32

Raising Autism Awareness for Disadvantaged Communities as Part of Leadership in Education and Neurodevelopmental and Related Disabilities Program

Poster Presenter: Hagar Hamdy Abdelhamid Kandel, M.Sc.

SUMMARY:

LEND is a program designed to address marked disparities in the identification and treatment of Autism Spectrum Disorder (ASD) in marginalized communities. Studies show that black children are less likely than white children to be diagnosed with ASD (1, 2). Early and accurate detection of ASD is critical for access to early intervention which optimizes the outcomes (3, 4). We aimed from our project to equip immigrant communities with ASD treatments and available services, to provide a safe platform to explore cultural barriers, and to provide practical solutions to increase access to services.

Methods: It's a cross-sectional study, a flier distributed through email to parents and colleagues. Three workshops were held, two in English and one in Chinese, which included a zoom presentation and an open discussion at the end of the presentation, pre and post assessment surveys used to assess knowledge. Presentation included basic facts about ASD, assessment, available treatments and resources, and transition from childhood to adulthood. **Results:** Seventeen subjects participated in our workshops. In the first English workshop, 7 participated, in the second English workshop, 5 participated, and in the third Chinese workshop, 5 participated, with 100% versus 40% versus 100% respectively response to surveys. The data indicate that the audience became more familiar with diagnosis and treatments based on a 7-question survey. In the two English presentations, participants responded with a 70.7% increase in familiarity with common signs and symptoms, 33.3% increase for question on comfortability in applying for impartial hearing, 44.4% increase for question on knowledge in getting help with impartial hearing, and 59.7% increase in familiarity with types of special education school settings. Furthermore, participants reported a 37.4% increase in knowledge for requesting school placement evaluation, a 33.3% increase in question regarding familiarity with Medicaid waiver process,

and a 55.6% increase in question regarding accessing OPWDD services. In the Chinese presentation, participants responded with a 63.3% increase in familiarity with common signs and symptoms, 80% increase for question on comfortability in applying for impartial hearing, 80% increase for question on knowledge in getting help with impartial hearing, and 100% increase in familiarity with types of special education school settings. Furthermore, participants reported an 80% increase in knowledge for requesting school placement evaluation, an 80% increase in question regarding familiarity with Medicaid waiver process, and lastly 80% increase in question regarding accessing OPWDD services.

Conclusions: We observed significant uncertainty in areas such as impartial hearing, proper school placements, Medicaid waivers, and OPWDD. Limitations include low attendance and lack of audience participation. Future research should consider event promotions in advance and live presentations in community settings.

No. 33

Relationship Between Obesity and IDD in an Ohio Telepsychiatry Clinic: A Retrospective Review

Poster Presenter: Sana Shameem, B.S.

Co-Authors: Ramzi Nahhas, Ph.D., Megan Luft, Julie Gentile, M.D., M.B.A., Michael Harrington, M.A., B.S.

SUMMARY:

Background: The prevalence of a comorbid diagnosis of intellectual/developmental disability (IDD) and overweight/obesity (OW/OB) is an important consideration of Intellectual/Developmental Disability (IDD) psychiatric care. Awareness of medical comorbidities associated with these conditions can guide clinicians, caretakers, and researchers towards medication options or behavioral interventions and utilization of preventative medicine to minimize complications associated with OW/OB. Currently, gaps within the literature exist regarding the complex relationship between overweight/obesity and co-occurring diagnoses of Autism Spectrum Disorder (ASD) and IDD. **Methods:** We conducted a retrospective medical record review of all adult patients seen through Ohio's Telepsychiatry Project in 2021 with a diagnosis of either IDD or Autism Spectrum Disorder

(ASD) as defined by DSM-5. ICD-10 diagnosis of IDD or ASD, BMI, comorbidities, and current prescription medications with drug class were recorded. Binary logistic regression was used to estimate associations between each predictor and the outcomes overweight (BMI \geq 25 kg/m²) and obesity (BMI \geq 30 kg/m²), adjusted for age and sex. **Results:** The prevalence of obesity in this sample was 52.4% (95% CI = 47.5, 57.3). The odds of overweight and obesity were greater in those with ASD alone than in those with IDD alone or both ASD and IDD, although these differences were not statistically significant. There was a significant inverse relationship between IDD severity and the odds of each outcome ($p < .001$). A majority of patients were being actively treated with an antidepressant (80.3%), and a majority with a second-generation antipsychotic (66.3%). Patients taking an antidepressant had twice the odds of obesity (adjusted OR = 2.03, 95% CI = 1.23, 3.41, $p = .006$). **Conclusion:** The findings in this study provide a sense of urgency for early screening and prevention of OW/OB and its associated medical sequelae, including the identification of groups that are at higher risk. Further research is warranted to more closely examine age, place of living, and antidepressant and antipsychotic use as potential modifiers of the relationship between IDD and obesity. Future studies of the roles of caregiver involvement, patient independence, and patient access to healthcare would also have the potential to inform and improve patient care. **Keywords:** Intellectual developmental disorder; intellectual disability; autism spectrum disorder; trisomy 21; obesity; telepsychiatry; rural medicine; community psychiatry; antidepressant

No. 34

Assessing Needs of Hospitalized Children With Neurodevelopmental Disorders

Poster Presenter: Pallavi Tatapudy, M.D.

Co-Authors: Kinjal Patel, M.D., Victoria Novoa, M.D., Judith Crowell, M.D.

SUMMARY:

Background: With rising hospital admission rates for children with neurodevelopmental disabilities (ND), notably autism spectrum disorder (ASD), psychiatry consults are frequently called to address anxiety,

agitation, and aggressive behaviors. Uncertainty and hesitancy about identifying and responding to the needs of this population among medical, nursing, administrative, and support staff may increase aggressive behaviors and result in suboptimal care. Our project aimed to improve patient care and outcomes by identifying characteristics of children admitted to pediatric services with recognized or suspected ASD, including reasons for hospitalization/psychiatric consultation, lengths of stay, frequency of restraints/aggressive episodes, common themes occurring during episodes, and if needs (communication, sensory, physical, emotional, and behavioral) were documented and addressed. **Methods:** Chart review of 6409 orders of 1:1 observation (renewed daily) from the January 2020 to April 2022 observation data set for patients admitted to Stony Brook University Children's Hospital identified 28 encounters from the pediatric intensive care unit, pediatric general floors, adolescent medicine general floor, and pediatric hematology oncology floor. **Results:** The 28 encounters represented 26 boys and 2 girls ranging from 7 to 18 years old with 25 diagnosed with ASD and 3 with rule-out ASD. Length of stay was 2 – 262 days with an average of 28 days. Common reasons for admission to medical floors were for agitation, social disposition, and overdose. High rates of severe agitation and psychotropic medication use were noted. ASD was part of the formulation more consistently in psychiatric notes (96%) compared to primary team notes (57%). Language and sensory needs, however, were not consistently documented and available for the treatment team in either psychiatry or primary team notes. The Preventing and Managing Crisis Situations (PMCS) team was only involved in half of the cases. **Conclusions:** Common identified problems included communication and sensory challenges and the degree of flexibility shown by healthcare providers and the hospital organization in the care approach. Supportive healthcare providers were those who acknowledged parents and patients as experts, inquired about particular needs, and implemented strategies that accommodated the unique clinical presentation of the individual. Compared to the average pediatric population, these patients had unique disposition planning challenges and substantially increased lengths of stay. Future

directions include a needs assessment of staff providing care to pediatric patients with ND, an EMR banner/physical sign with alerts for important information pertaining to each patient, providing social stories to patients for common experiences on pediatric services, PMCS team to be involved in further ND care training, development of a personalized ND care team for collaboration, and interdisciplinary education.

No. 35

A 25 Year Follow Up of Pediatric Bipolar Patients Shows Partial Disease Continuity and Symptom Specific Predictive Value for Disease Severity

Poster Presenter: Carolina Badke Dandrea

Co-Authors: Alecia Vogel-Hammen, Miranda Liang

SUMMARY:

Background: TikTok, a unique short-video-based social media app, has now become one of the most popular platforms for mental health content in the past 4 years. With its rapid adaption by adolescents and young adults globally, coded language for depression and suicide has simultaneously arisen to avoid censorship and demonetization of videos. This cross-sectional study aims to describe the TikTok content that used the word "unalive" as a code for suicide ideation, attempt, or completion. **Methods:** Utilizing the TikTok proprietary search algorithm that organized results via relevance, the first 100 videos that included the word "unalive" in relation to suicide were included. The content was coded for various categories consisting of describing or referring to personal experience with suicide ideation/attempt, describing or referring to another individual's experience with suicide ideation/attempt/completion, describing symptoms related to suicide ideation/attempt, providing resources for therapy or support, expressing support, raising awareness, humorous entertainment, or related to spirituality. Additional categories detailing video characteristics were also included, such as the number of likes, comments, and whether the video involved music, audio, speaking, or text. A second rater coded for 10% of the sample to determine inter-rater reliability. **Results:** The 100 videos included in the sample had a total of 20,604,261 likes and 183,906 comments. The content that appeared

the most was a description or reference to personal experience with suicidal ideation or attempt, appearing in 44% of the videos. Following closely behind, 42% of videos referred to suicide in a humorous context, often overlapping with personal experience content. 8% of videos referred to individuals other than the creator that had experienced suicidal ideation or attempt and 17% of videos referred to individuals who had completed suicide. The TikTok content categories with the lowest percentages contained videos that detailed symptoms and signs related to suicide ideation (5%), provided resources for help (4%), were related to spirituality (2%), and were created by mental healthcare professionals (6%). 16% of videos express support and 36% of videos addressed the importance of raising awareness for suicide ideation. A Cohen kappa of 0.877 was calculated, indicating near-perfect agreement among both raters.

Conclusion: With over 20 million likes for TikTok videos that use the coded word "unalive" reflects the changing cultural view on discussions surrounding suicide. Future research should focus on the potential role of intervention on social media platforms by health care professionals, as well as the roles that online communities and humor have as coping mechanisms for those struggling with suicidal ideations.

No. 36

Epigenetic Markers in Peripheral Blood and Lithium Response in Patients With Bipolar Disorders

Poster Presenter: Antoni Benabarre, M.D., Ph.D.

Lead Author: Marina Zafrilla

Co-Authors: Marina Mitjans Niubo, Bárbara Arias, Júlia Rodríguez Maeso

SUMMARY:

Background: Lithium (Li) treatment is the first-line choice of long-term therapy in patients with bipolar disorder (BD), and is still considered the first-line treatment in bipolar disorder (BD) due to its proven efficacy in both acute and maintenance phases (Miller & Black, 2020). Still, an adequate response may range from an excellent response in 24-45% to a complete lack of response in 10-30% of patients (Nivoli et al., 2010). Evidence from in vitro, animal- and human studies has demonstrated that Li

influences gene expression through epigenetic mechanisms including histone modification (Gardea-Resendez et al., 2020). Recently, 11 differentially methylated regions (DMRs) were found between (Ex-Rp) and non-responder (non-Rp) (Marie-Claire et al., 2020). The aim of the present study is to analyse the blood methylome status in Ex-Rp and non-Rp BD patients to detect new risk epigenetic biomarkers for LR. **Methods:** A sample of 63 BD patients assessed following DSM-IV-TR criteria (APA, 2000) were recruited from the Bipolar Disorder Program of the Hospital Clinic of Barcelona and Mental Health Services in Oviedo. All patients gave their written informed consent and approval from each institution's ethics committees was obtained. Individuals presenting a 50% reduction of the episodes after the introduction of Li in monotherapy were categorized in the Ex-Rp group (N=36; 42.31% females) and individuals that did not reduce at least a 50% of the episodes and/or patients who required electroconvulsive therapy were classified in the non-Rp group (N=37; 40.54% females). Genome-wide DNA methylation was assessed using the Infinium MethylationEPIC BeadChip (Illumina) in peripheral blood. R program was used to analyze methylation status between Ex-Rp and non-Rp groups. Raw Illumina microarray data were processed with ChAMP (Tian et al., 2017). Normalization and batch correction were done using BMIQ and Combat, respectively. Blood-cell type proportions were calculated using refbase. Differentially methylated positions (DMPs) and regions (DMRs) between Ex-Rp and non-Rp were calculated using Limma and DMRcate, respectively (Peters et al., 2015; Ritchie et al., 2015). Blood cell counts, sex, smoking status (smoking score) (Bollepalli et al., 2019), and age were used as covariates. **Results:** A total of 229 differentially methylated positions (DMPs) and 24 DMRs (Adj.p-value<3.63x10⁻¹⁰) were found between Ex-Rp and non-Rp groups (p<1.53x10⁻⁵; Adj.p-value<0.05). **Discussion:** Our results show DNA methylation differences in peripheral blood between Ex-Rp and non-Rp BD patients pointing to the importance of considering epigenetic markers when studying LR. These results should be further studied for a better understanding of LR and ultimately move towards a more effective and personalized treatment. Funding FIS PI11/02006, PI16/01029, PI16/00998, PI17/01122 and 2017SGR1577. MM is

supported by MCIN/AEI (RYC2021-033573-I). AGP is supported by ISCIII (CM21/00094) and FSE+.

No. 37

Personality Traits as Predictors of Non-Suicidal Self-Injury Among Patients With Bipolar Disorder

Poster Presenter: Marsal Sanchez

Co-Authors: John Bouras, Michelle Patriquin, Ph.D.

SUMMARY:

Background: Non-suicidal self-injury (NSSI), defined as the deliberate destruction of an individual's own body tissue without suicidal intent, is frequent among patients with bipolar (BD). Literature data point to rates of NSSI ranging from approximately 20 to 50% in BD, with female sex, young age, single marital status, and unemployment representing risk factor for NSSI in that population. Moreover, while the association of borderline personality disorder with NSSI is well established, little is known about the impact of other personality traits on the risk of NSSI, particularly in BD. We carried out a cross-sectional study looking at associations between different personality disorder traits (regardless of the presence of a full personality disorder diagnosis) and lifetime NSSI among inpatients with BD. **Methods:** The sample consisted of 152 inpatients with BD (84 males, 68 females; mean age \pm SD= 31.90 \pm 13.26 years; 73 with BD I, 29 with BD II, and 50 with other BD or unspecified BD). The diagnosis of BD and the characterization of personality disorder traits were established through the administration of the Structured Clinical Interview for DSM-5-Clinical Version (SCID-5-CV) and the Structured Clinical Interview for DSM-5-Personality Disorders Version (SCID-5-PD), respectively. Lifetime history of NSSI was obtained through the administration of the Self-Injurious Thoughts and Behaviors Interview (SITBI)-Short Form. The statistical analysis was performed using univariate analysis of variance, with lifetime history of NSSI as the dependent variable and the presence of different personality traits as independent variable. A 0.05 significance level was adopted. **Results:** Forty-seven participants (31%) reported a lifetime history of NSSI. The statistical analysis revealed that the presence of avoidant personality traits positively predicted a history of lifetime NSSI ($F= 4.307$, $d.f.=2$, $p=0.015$); the same

was observed with regards to borderline personality traits ($F = 13.284$, $d.f.=2$, $p<0.001$). On the other hand, the presence of schizotypal personality traits negatively predicted lifetime NSSI ($F=5.314$, $d.f.=2$, $p = 0.006$). Results regarding other personality disorder traits were not statistically significant. **Conclusions:** The rates of NSSI found in our study were similar to the ones reported in the literature. Furthermore, our findings, although preliminary, suggest that personality disorder traits seem to have distinct impacts on lifetime risk for NSSI among patients with BD. While avoidant personality traits and borderline personality traits seem to be associated with increased risk for NSSI, schizotypal personality traits may correspond to a protective factor against NSSI in BD. These results have potential implications from a clinical and possibly pathophysiological standpoint. Further analysis involving larger samples and different settings are of interest.

No. 38

Empowering Individuals With Psychiatric Illness to Vote: A Student-Run Voter Registration Drive at a Free-Standing Psychiatric Institute and Clinic

Poster Presenter: Mariam A. Shalaby, B.S.

Co-Authors: Aria Ghahramani, Julie Graziane, M.D.

SUMMARY:

Introduction: People with psychiatric illness have lower rates of political participation than the general population¹. Empowering them to vote can promote community inclusion and civic engagement. At Pennsylvania Psychiatric Institute (PPI), previous efforts to engage hospitalized inpatients in voter support activities have been successful². In September 2022, a student-run voter registration drive was conducted at PPI to further these voter engagement efforts. **Methods:** Student volunteers from Penn State College of Medicine were recruited using communication channels within the college as well as social media. All volunteers attended a training in which they learned about Pennsylvania voting laws, addressed frequently asked voter registration questions, and discussed the intersection of mental health and voting. Student volunteers staffed three tables at PPI: the main lobby, the lobby of a substance use and recovery program, and an outpatient satellite clinic. Materials available at each

table included: voter registration and education materials in English and Spanish, snacks, and mental wellness-themed items such as stress balls and coloring books. Individuals had the opportunity to take any materials or items regardless of their interest in voter registration. Voter registration was offered electronically and on paper. One week after the drive, a debriefing session was held for volunteers to share their experiences, and all volunteers were invited to provide feedback by email. Responses were analyzed qualitatively. **Results:** 14 student volunteers were recruited for the drive. Each volunteer attended the training session and volunteered for shifts lasting between 2-3 hours. Five student volunteers attended the debriefing session. Reflections after the event revealed several themes. Volunteers agreed that the pre-drive training effectively provided education on voting laws, and that the activity placed voting in the context of social determinants of health. This is consistent with literature showing that medical students cite the desire to address social and racial inequities as a primary motivation for participating in voter engagement efforts within healthcare settings.³ Volunteers also identified that camaraderie and team-building was achieved by the training and debriefing sessions, where they were able to share meaningful experiences. Additionally, they identified challenges during the drive, including engaging patients rushing to appointments, and hesitation of patients to approach the tables. **Discussion:** This initiative successfully expanded voter registration initiatives beyond the inpatient psychiatric setting. The training, registration drive and the debriefing session also provided students an active educational experience in civic health. Future iterations may benefit from formalizing the volunteer opportunity to allow students to receive academic credit and providing innovative ways for patients to approach and engage with the table.

No. 39

"Let There Be Light!" Mental Health First Aid for Congregational Care Leaders to Identify, Understand, and Respond to Community Mental Health Needs

Poster Presenter: Ali Haider Syed, D.O.

SUMMARY:

Purpose/Introduction: Faith leaders have always provided counsel to their constituents, but most are not formally trained to handle mental health and substance use challenges. This evidence-based, skills based, public health education project seeks to evaluate the impact of adult Mental Health First Aid (MHFA) training for faith leaders as an educational intervention to decrease stigma, improve mental health literacy, recognize signs and symptoms of mental health and substance use challenges, and refer to self-help and professional resources in order to better serve their congregation's mental health needs. **Methods/Materials:** For this project, 3-day Instructor training/certification for the adult MHFA training course (8 hours long) was obtained, and both in-person and virtual training was delivered as an educational intervention to 28 Congregational Care leaders at Saint James United Methodist Church, Kansas City, Islamic Center of North Kansas City (ICNKC), and the Islamic Center of Frisco (ICF) in Dallas, Texas. Pre and post intervention surveys were used to evaluate mental health literacy, stigma, and likelihood of performing mental health actions when interacting with an individual suffering from mental health or substance use challenge. Multiple choice questions using a Likert scale were utilized in the survey. **Results:** Results revealed a significant improvement in mental health literacy/knowledge, decreasing stigma, identifying signs and symptoms of common mental health disorders, improved self-efficacy, improved willingness to perform a mental health action, and making appropriate professional referral if needed. **Conclusions:** Adult MHFA appears to be a promising public health education training intervention for faith leaders/communities to identify, understand, and respond the mental health needs of their congregation. Residents/fellows interested in community/public psychiatry, preventative psychiatry can become certified instructors in adult and/or youth MHFA and deliver the training to local faith communities, community centers, schools, and other public organizations.

No. 40

Significance and Challenges of Running a Self-Help Organization for Adolescents With Mental Illness

Poster Presenter: Haruna Nishioka

SUMMARY:

Background: Suicide is the leading cause of death among 10-39 year olds in Japan, and internationally, Japan is the only G7 country in which suicide is the leading cause of death among 15-34 year olds. One of the reasons for the high number of suicides in Japan is that support from medical and research institutions is not well connected to the people concerned. The reason for the weak relationship between the medical institutions and the victims is that there are many cases of young people suffering from mental disorders who are unable to see a medical institution due to lack of knowledge, lack of a partner to consult, or prejudice against psychiatry on the part of their parents, and are left alone with their problems. Objectives and Methods To conduct activities and research aimed at preventing suicide among adolescents with mental disorders by operating a "self-help group" for adolescents as a platform to strengthen the ties between adolescents with mental disorders and medical and research institutions. Since there are no other self-help groups for adolescents in Japan, we will conduct research on self-help groups for adults. We will then gather participants via SNS, actually participate in events such as storytelling and study groups, and interview them to see if their mental health has changed before and after participation, and if their views and knowledge of mental health have changed. Results The significance of operating a self-help group for adolescents was as follows. (1) Sense of belonging as a community, (2) Role modeling, (3) Helper therapy effect (4) Facilitating the absorption of knowledge about mental health. The role modeling effect is that the participants can find a role model in the community whom they want to emulate and who inspires them in their way of life and their role in the organization. In terms of the helper therapy effect, there was a case in which a participant who actually participated in a self-help group and helped others while suffering from a mental illness felt joy and a sense of self-usefulness from being able to benefit from his/her own experience, and his/her symptoms of mental illness were alleviated. Two problems with self-help groups arose: (1) the difficulty of continuing to run them due to the mental and physical health of the mentally ill, and (2) the risk of assisted suicide. Considerations The significance of operating a self-help group for mentally ill adolescents is four-fold,

but particularly with regard to the effects of helper therapy and the absorption of knowledge about mental health. This is very significant for a self-help organization. The issues that our self-help group faces include the difficulty of continuing to operate the group due to the mental and physical health of the mentally ill and the risk of assisted suicide.

No. 41**Psychiatrist Knowledge and Attitudes Regarding HIV Pre-Exposure Prophylaxis Across Three Sites**

Poster Presenter: Mark V. Bradley, M.D.

SUMMARY:

Background: Patients with chronic mental illness and substance use disorders have an elevated risk for HIV infection, and many present with behavioral symptoms that place them at elevated risk for HIV. Evidence-based behavioral interventions for HIV prevention have historically been complex and difficult to implement in mental health treatment settings. Pre-exposure prophylaxis (PrEP,) or the use of antiretroviral medication to prevent HIV in uninfected individuals, has been endorsed by the CDC, and represents a biomedical prevention strategy with comparatively simple implementation and dissemination. To understand the potential role of psychiatrists in identifying high-risk behavior and PrEP candidacy, this study uses a survey to gauge psychiatrist knowledge and attitudes regarding PrEP for HIV prevention. Methods: We surveyed psychiatrists regarding their knowledge and attitudes about PrEP and their screening practices regarding HIV risk behaviors. The survey was distributed to psychiatrists in a major city Veterans Affairs health care facility and to the core educational faculty at two urban academic medical institutions. Results: 62 psychiatrists completed the survey. Most (85%) had heard of PrEP, while 48% had discussed PrEP with a patient at least once, and 38% had recommended PrEP to a patient. A large majority (86%) felt that HIV risk screening fell within their role as psychiatrists, while only 21% felt that HIV screening and prevention would significantly add to their clinical burden. Very few (3%) thought referral for PrEP would increase their patient's HIV risk behaviors. While 49% of psychiatrists felt that mental health clinics are an appropriate site for prescribing PrEP,

87% thought that mental health clinics or inpatient units are an appropriate point of referral for PrEP. Having had the experience of a patient asking for PrEP was positively associated with the belief that mental health clinics are an appropriate setting in which to prescribe PrEP. Discussion: This survey found that most psychiatrists are familiar with PrEP, and see HIV screening and prevention as within their purview, while not holding negative beliefs that PrEP may increase behavioral risk. These findings suggest that psychiatrists may serve as important partners in reducing HIV incidence within their high-risk patient population. Given its relative ease of medical evaluation, prescription, and monitoring, future research may explore the possible role of psychiatrists in systematic interventions to refer for or directly prescribe PrEP for patients with high-risk behavioral symptoms. Conclusions: Future interventions focused on implementing evidence-based HIV prevention practices among patients with mental illness should build on psychiatrists' existing knowledge and attitudes regarding HIV screening and the role of PrEP in HIV prevention in order to develop interventions for mental health settings.

No. 42

A Lost Opportunity to Reduce Future Risk Among Justice-Involved Young Adults Through HIV Testing and Counseling

Poster Presenter: Nicholas S. Riano

SUMMARY:

Introduction: In 2018, rates of HIV in carceral populations were between two and five times those in the general population (OJJDP, 2018), and disparities were even greater among system-impacted young adults (Abram, et al., 2017). HIV testing is paramount to disease identification and represents the entry to prevention and treatment (Kurth, et al., 2015). However, the extent to which HIV testing affects future risk behavior among justice-involved young adults is limited. Prior research has suggested that HIV testing among this population may increase future risk behavior, regardless of the result of the test, especially in the absence of comprehensive HIV counseling and education (Sen, 2004). Methods: The present study sought to determine changes in risk behavior (e.g.,

substance use; sexual risk taking) after a first HIV test, and included 981 diverse male young adults between the ages of 14-17 enrolled in Pathways to Desistance. All individuals had been arrested for a serious felony offense at the time of enrollment and were followed longitudinally for seven years. Key measures pertinent to this study included receipt of HIV testing, substance use behavior, and risky sexual behavior when participants were 18-23. Participants were categorized based on their HIV testing status; final categories included participants who had been first tested for HIV within the past 12 months (i.e., treatment group), and participants who had never been tested for HIV (i.e., comparison group). Participants who had been tested prior to the study period were excluded. The outcome variables were measured at the interview in the year after the HIV test. Results: Compared to young adults never tested for HIV, recently tested young adults demonstrated a greater increase in the frequency of alcohol use, the frequency of unprotected sex, and the number of unprotected sexual partners in the year after their first HIV test. The results were significant even after adjusting for several predictors associated with HIV testing (e.g., mental health issues, exposure to violence, lifetime illicit drug use, age at first arrest, etc.), demographics, and prior levels of each outcome variable. Discussion: These findings are consistent with prior research suggesting that HIV testing in the absence of counseling and education can increase risk behaviors. Future research should examine the behavioral reasons and mechanisms behind these increases, as young adults impacted by the justice system represent a health disparities population unduly burdened by HIV, and preventive measures sensitive to the needs of this population should be prioritized.

No. 43

HIV, Depression and Apathy: Implications in the Neurocognitive Deterioration of Attentional Networks

Poster Presenter: Elba Beatriz Tornese

Co-Authors: Emmanuel Leidi, Monica Iturry, Blanca Lopez

SUMMARY:

Introduction: Depressive symptoms are prevalent and important in chronic diseases and have a negative impact on quality of life. People living with HIV (PLHIV) present specificities in their depression, with significant apathy, psychopharmacological resistance, underdiagnosis, inconclusive treatments, suicidality and neurocognitive alterations. Objective: To determine the specific alterations in the attentional networks of PLHIV with depressive disorder with and without apathy to determine differential parameters with clinical impact. Material and method: We studied 132 PLHIV, negative viral load, of both sexes (34 women and 98 men), with depressive disorder (F32.9-DSM IV), 62 with apathy and 70 without apathy; negative viral load, on highly effective antiretroviral treatment without therapeutic failure in the last 3 years and without protease inhibitors; without psychopharmacological treatment (except anxiolytics) or dementia due to HIV (American Academy of Neurology) or comorbidities (hepatitis C, CNS or central vascular infections). MINI, Hamilton Depression Rating Scale, Apathy Evaluation Scale clinical version and Neuropsychiatric Inventory were evaluated and neuropsychological tests were applied (Stroop, Trail Making A and B, Digit symbol, Visual and verbal direct digit, BTS-1 and BTS-3). Statistical tests were applied and ethical-legal standards were met. Results: PLHIV with depressive disorder presented a high prevalence of apathy. In patients with apathy, a greater significant alteration was found, according to decreasing differential affectation, in sustained and divided attention. Processing speed was found to be slower with no significant difference in the group with apathy. Selective attention did not present significant differences between groups. Conclusions: Apathy in patients living with HIV with depression presents specific and differential alterations in the attentional domain. The alterations in sustained and divided attention were specific to this group, with involvement of the anterior attentional circuit and would be related to subsequent cognitive disruption as a prodrome. Keywords: HIV. Depression. Apathy. Attention.

No. 44**Association Between White Tract Matter Integrity and Frontal-Executive Function in Patients With Major Depressive Disorder**

Poster Presenter: Joo Yeon Ahn

Co-Author: Kyu-Man Han

SUMMARY:

Background: Numerous studies have investigated the association of the white matter integrity and cognitive dysfunction in geriatric patients with MDD, aged more than 65 years old. However, few studies have performed on non-geriatric population - aged 19 to 64 years old – which is the most active working population, thus disability in this population can mostly stagger the socioeconomic burden. The aim of this study is to investigate the association between white matter tract integrity and frontal executive function in non-geriatric adult major depressive disorder patients, aged 19 to 64 years old and in healthy controls (HCs) using diffusion tensor images (DTI). **Methods:** A total of 57 patients with MDD and 115 HC participated in this study and underwent magnetic resonance imaging and DTI images were obtained. We calculated the integrity of white matter tracts, TRACULA (Tracts Constrained by UnderLying Anatomy tool) from FreeSurfer to reassemble 18 major white matter paths. For assessment of participants' cognitive function, we performed tests on the digit span, matrix reasoning, trail-making and Stroop task. One-way analysis of covariance was used to investigate 72 DTI parameters (4 parameters [fractional anisotropy (FA), mean diffusivity (MD), radial diffusivity (RA), axial diffusivity (AD)] x 18 major white matter tracts) as dependent variables, diagnosis of MDD as an independent variable, and age, sex, and education level as covariates. For the correlation analysis between DTI parameters and cognitive function test, Pearson's partial correlation analyses were performed in the MDD and HC groups, respectively. **Results:** The patients with MDD showed significantly decreased AD in FMajor ($F = 15.496$, $P = 1.21 \times 10^{-4}$), left CST ($F=18.365$, $p < 3.07 \times 10^{-4}$), left SLFP ($F=15.406$, $p < 1.27 \times 10^{-4}$), right ATR ($F=12.645$, $p < 4.90 \times 10^{-4}$), right CST ($F=16.841$, $p < 6.34 \times 10^{-5}$), right ILF ($F=19.783$, $p < 1.58 \times 10^{-5}$) and right SLFT ($F=17.427$, $p < 4.79 \times 10^{-4}$) and MD in left CST ($F=18.939$, $p < 2.34 \times 10^{-5}$), right CST ($F=13.713$, $p <$

2.89 × 10⁻⁴) and right SLFT (F=12.235, p= 6.01 × 10⁻⁴) compared to HCs. We found that non-geriatric patients with MDD showed significant negative correlation between response time of Stroop task and AD value of the forceps major (r = -0.553, P = 2.58 × 10⁻⁵), which remained significant after Bonferroni correction. In the HC group, there was no significant correlation between cognitive function-related variables and DTI parameters, which remained significant after Bonferroni correction.

Conclusion: We observed association between white matter tract integrity and frontal executive function in non-geriatric adult patients with MDD. The results of the present study implicate that impaired structural connectivity in the forceps major may be associated with cognitive dysfunction in patients with MDD in non-geriatric population. This can be utilized as one of neuroimaging markers in the future detecting cognitive dysfunction in patients with MDD.

No. 45

Neuroanatomical Features of Brain Aging in Bipolar Disorder

Poster Presenter: Andrea Boscutti

SUMMARY:

Background and aims The aims of this study are the following: 1) To determine whether the mood disorder spectrum is associated with accelerated brain aging compared to non-affected individuals; 2) To determine whether the neuroanatomical features driving brain aging are the same in individuals in the mood disorder spectrum, compared to non-affected subjects. **Methods** The study population included individuals diagnosed with bipolar disorder (BD), first degree relatives of individuals with BD (FDR), individuals diagnosed with major depressive disorder (MDD) and healthy controls (HC). Subjects were enrolled across three clinical sites. All data were collected cross-sectionally. T1-weighted images were collected using 1.5 and 3 Tesla Philips scanners. Cortical and subcortical measures were obtained through the Freesurfer software package (version 5.3.0). Brain age was estimated using a regression model based on shrinkage estimation that included 77 neuroanatomical features. The model was trained on a large sample of HC part of the ENIGMA

consortium (Han et al., 2021). Predicted age differences (PAD) (i.e. PAD = brain age - chronological age) values were than computed for each subject. Between-groups differences in PAD were tested through a linear mixed effect model, with site of enrollment as random effect and group (BD, MDD, FDR, HC), gender, age and BMI as fixed effects. To test whether neuroanatomical features associated with aging differed across groups, we modelled the relationship between each neuroanatomical anatomical feature, group (BD, MDD, FDR, HC) and PAD as following: Neuroanatomical feature ~ $\beta_0 + \beta_1\text{Group} + \beta_2\text{PAD} + \beta_3(\text{Group}*\text{PAD}) + \beta_4\text{Gender} + \beta_5\text{Age} + \beta_6\text{BMI} + \text{Site} + \epsilon$ with site of enrollment as random effect and Group*PAD as the interaction term between the two variables. **Results** Total sample size was 641, including 242 HC, 94 MDD, 47 FDR and 258 BD. After adjusting for age, gender and BMI, BD was independently associated with accelerated aging (p = 0.0028) (PAD post-hoc Tukey difference: BD - HC = 2.07 ± 0.70, p = 0.016). FDR was weakly significant (p = 0.062) in the model, but lost significance after adjusting for post-hoc differences (FDR - HC = 2.29 ± 1.36, p = 0.336). MDD did not differ from HC. The interaction term (Group*PAD) was significant for several brain areas, possibly implying that the variance in brain aging is explained by different neuroanatomical features across the mood disorder spectrum. Specifically, in BD individuals various frontotemporal regions demonstrate significant lower covariance with PAD when compared to HC. Conversely, ventricular volume seem to influence accelerated aging more significantly in BD than in HC. Relationships were not significant after controlling for multiple comparisons (Hochberg). BD is associated with accelerated aging, which may represent a valid endophenotype candidate for the disease. Patterns of brain aging are probably different in BD when compared to non-affected individuals.

No. 46

The Impact of Social Media Use on the Mental Health of Adolescents With Anxiety Disorders During the Covid-19 Pandemic

Poster Presenter: Maryam Abdallah, B.A.

Co-Author: Robert Suddath, M.D.

SUMMARY:

Background: Studies have found that higher social media use during the COVID-19 pandemic had a negative impact on adolescents' mental health. However, it is unknown how social media use affected the mental health of adolescents diagnosed with anxiety disorders. This study aims to explore the impact of reported use of social media on symptoms of anxiety and depression in adolescents with anxiety disorders. **Methods:** 95 subjects aged 12-18 were enrolled in the study ($\mu_{age}=14.86$, 47 females, 28 males, 20 non-binary/non-conforming). Eligible subjects had an anxiety disorder and had received care at the UCLA Department of Psychiatry during the pandemic. Subjects completed a survey that collected the average daily hours they spent using social media, as well as the following standardized measures: Generalized Anxiety Disorder-7 (GAD-7) to measure anxiety and Patient Health Questionnaire-9 (PHQ-9) and Mood and Feelings Questionnaire (MFQ) to measure depression. Subjects were split into three groups based on their reported social media use: Low (<2 hours/day), Moderate (2-4 hours/day), or High (5+ hours/day). One-way ANOVA tests were run to compare GAD-7, PHQ-9 and MFQ scores among the three usage groups. **Results:** ANOVA tests run for each measure (GAD-7, PHQ-9, MFQ) revealed significant differences in scores between social media usage groups at the $p < .05$ level, $F_{GAD-7}(2,92) = 5.34$, $p_{GAD-7} = 0.006$; $F_{PHQ-9}(2,92) = 3.12$, $p_{PHQ-9} = 0.049$; $F_{MFQ}(2,92) = 3.87$, $p_{GAD-7} = 0.024$. Post-hoc tests revealed the following: **GAD-7:** Significant difference between Low ($M=13.30$, $SD=6.67$) and Moderate ($M=9.66$, $SD=5.64$) groups, and between Moderate ($M=9.66$, $SD=5.64$) and High ($M=15.74$, $SD=6.03$) groups. No significant difference between High and Low groups. **MFQ:** Significant difference between Moderate ($M=13.60$, $SD=7.11$) and High ($M=19.32$, $SD=5.94$) groups. No other significant differences found. **PHQ-9:** Significant difference between Moderate ($M=13.54$, $SD=8.38$) and High ($M=19.84$, $SD=7.70$) groups. No other significant differences found. **Discussion:** Subjects with moderate social media use had significantly lower anxiety scores than both those that reported low usage and high usage. Additionally, moderate users had significantly lower depression scores than high users. No significant differences were found in anxiety or depression scores between

high and low users, and no significant differences were found in depression scores between moderate and low users. These findings suggest that moderate daily social media use was beneficial to adolescents with anxiety disorders during the pandemic. Moderate users had significantly lower depressive symptoms than high users, as well as significantly lower anxiety symptoms than high and low users. Moderate daily social media usage may have allowed these adolescents to experience social connectedness during the pandemic without being subject to the potential negative effects of excessive social media use.

No. 47

Risk Factors That Contributed to Emergency Department (ED) Visits for Suicidality Amongst Youth During the Covid-19 Pandemic

Poster Presenter: Sarthak Angal

Co-Authors: Sharon Houk-Syau, Jason Tran

SUMMARY:

Background: The COVID-19 pandemic disrupted the lives of children in the US and had a significant impact on their mental health, as evidenced by increased rates of depression and anxiety among youth¹. Factors such as shelter-in-place and transition to remote learning likely contributed to these mental health problems². A previous study demonstrates that the number of youths without prior psychiatric diagnosis who had presented to Kaiser Permanente Northern California Emergency Department (ED) for suicide-related concerns increased in 2020 compared to 2019³. The aim of this study is to understand the risk factors that contributed to suicidality amongst youth during the pandemic. **Study Population:** Children from age 5 to 17 who had presented to norther California Kaiser Permanente ED for suicidal ideation or behaviors and who did not have a prior psychiatric diagnosis in the past two years were included the study. **Methods:** This study was designed as a retrospective chart review. Demographic information were pulled from patient charts. Chart review was conducted to collect type of psychiatric follow-up after the ED visit and risk factors for suicidality at the time of each ED visit, including social isolation. Inter-rater reliability analysis was conducted on 10% of extracted cases.

For data analysis, Chi-squared tests were used to compare differences in the prevalence of hospitalization after ED visit and reported social isolation between 2019 and 2020. Outcomes: Inter-rater reliability was 91%. Fifty percent of charts in 2020 had themes of social isolation compared to 29.76% in 2019, which was found to be statistically significant [$\chi^2(1, N=130) = 5.2271, p < .022$]. Furthermore, 52.17% of the ED visits in 2020 resulted in hospitalization compared to 29.76% of ED visits in 2019, which was also statistically significant [$\chi^2(1, N=130) = 5.8, p < .015$]. Discussion: Social isolation was found to be a more prevalent factor amongst ED visits for suicidality in 2020 compared to 2019, which could indicate the impact quarantine had on youth mental health. Moreover, more ED visits in 2020 resulted in hospitalization compared to 2019, which could indicate increases severity in symptoms during the pandemic. This emphasizes the importance of highlighting the key risk factors for suicide that were impacted during the pandemic to identify children who are at risk.

No. 48

Systematic Review: Artificial Intelligence for Youth Suicide Prediction

Poster Presenter: Bekir Artukoglu, M.D.

Co-Authors: Mert Bircan, Cathryn Galanter, M.D.

SUMMARY:

Background: Youth suicide is a critical public health problem and a leading cause of death in 5- to 17-year-olds in the United States. Research indicates a growing crisis in youth suicide. Studies using risk factors to longitudinally predict suicidal thoughts and behaviors revealed poor performances precipitating interest in novel risk algorithms based on machine learning (ML). **Methods:** We conducted a systematic review according to PRISMA guidelines to identify studies that used ML technologies to identify the risk for suicidal ideation and behaviors in individuals under 18 years of age. We searched in PubMed using the following MESH terms (“Suicide” OR “Suicide, Attempted” OR “Suicide, Completed”) AND (“Machine Learning” OR “AI artificial intelligence”). We excluded studies that were reviews, adult-only, or did not utilize artificial intelligence (AI) technology. **Results:** We identified 7 studies

including a total number of 31,9327 participants. 3 studies were longitudinal studies (1 prospective and 2 retrospective), and 4 were cross-sectional. Sample sizes varied between 60 and 174,864. Prediction algorithms drew from survey answers (such as on demographics, physical and mental health, lifestyle, and unsafe environment), psychiatric rating scales, electronic health record information, and written or spoken language. Studies investigated the ability of ML algorithms to predict individuals who presented with suicidal ideation or behaviors, as determined by different suicide questionnaires. The average age of participants was 15. Studies were conducted in Korea (1), the Netherlands (1), the UK (1), and the USA (4). Most studies did not report participants` ethnicity or race but reported nearly equal sample distributions by gender. Active groups were made up of students who participated in school surveys (3 studies), patients who presented to emergency rooms (2 studies), or unspecified child and adolescent psychiatry patients (2 studies). Studies were assessed per NIH quality assessment tools which revealed heterogeneous results. Authors used a variety of prediction methods that held promise: Random Forest (0.79 AUC and 0.8-0.9 AUC in 2 different studies), Lasso Regression (0.76 AUC), Extreme Gradient Boosting (0.86 AUC), Light Gradient Boosting (0.91 AUC) and Natural Language Processing (>80% f1 score or 96.67% accuracy in 2 different studies). **Conclusion:** Systematic review of the literature suggests that ML resulted in accurate predictions of suicidal ideation and behaviors. Its application to large and widely available clinical data is a promising avenue to investigate its predictive value, considering youth presence on social media and more health systems utilizing electronic health records and rating scales. Given the alarming rates of suicide amongst youth, future research is needed better characterize sample diagnoses, demographics, clinical utility, and generalizability to different populations.

No. 49

Efficacy, Safety and Tolerability of Ecopipam in Tourette Syndrome With Psychiatric Comorbidities

Poster Presenter: Sarah Atkinson, M.D., M.S.

Co-Author: Atul R. Mahableshwarkar, M.D.

SUMMARY:

Objective: Evaluate the efficacy, safety, and tolerability of ecopipam in treating Tourette Syndrome (TS) in children and adolescents with the comorbidities of attention deficit disorder (ADHD), anxiety disorders (ANX), and/or obsessive-compulsive disorder (OCD) compared to those without. **Background:** TS has a high frequency of psychiatric comorbidities that may be confounded by approved treatments for TS. Conversely, alpha-2 agonists may be more effective in TS patients with co-existing ADHD. Ecopipam is a first-in-class selective dopamine-1 receptor antagonist in clinical development for TS patients. The Phase 2b D1AMOND trial of 153 children and adolescents from 6 to 18 years of age demonstrated a significant ($p=0.011$, LS mean [SE] difference: -3.44 [1.4], 95% CI: $-6.1, -0.8$) improvement in the Yale Global Tic Severity Score-Total Tic Score (YGTSS-TTS) without weight gain, metabolic, or movement disorders associated with dopamine-2 antagonists. This work sought to determine if the efficacy and safety of ecopipam was similar in subjects with and without psychiatric comorbidities. **Methods:** Patients with TS were randomized 1:1 to ecopipam or placebo for a 4-week titration period, an 8-week maintenance period, and a 1-week taper period. The primary endpoint was mean change from Baseline (BL) to Week 12 for the YGTSS-TTS. The comorbidities of ADHD, ANX, and/or OCD were determined clinically by the investigator at screening. Validated scales assessing ADHD, ANX, and OCD were collected at each visit. In this post-hoc analysis, the effect size on YGTSS-TTS was compared with subjects with one or more comorbidities and with none. **Results:** 153 patients were randomized, and 149 were included in the modified intent-to-treat population (74 ecopipam, 75 placebo). Comorbid conditions were found in 62% of participants. Multiple comorbidities were found in 27%. For the following 4 comorbidities, mean difference (ecopipam-placebo) in YGTSS-TTS at week 12 were: **1.** -4.40 with ADHD ($n=68$), 95% CI: $-8.76, -0.03, -2.18$ without ADHD ($n=81$), 95% CI: $-5.59, 1.23$; **2.** -4.15 with ANX ($n=51$), 95% CI: $-8.56, 0.26, -3.41$ without ANX ($n=98$) 95% CI: $-6.96, 0.14$; **3.** -7.84 with OCD ($n=26$), 95% CI: $-17.86, 2.19, -3.42$ without OCD ($n=123$) 95% CI: $-6.38, -0.46$; **4.** -3.88 with ADHD, ANX, and/or OCD ($n=93$), 95% CI: $-7.23, -.52; -2.66$ without ADHD, ANX,

and/or OCD ($n=56$), 95% CI: $-7.49, 2.17$. There was no significant change in any comorbidity scale from BL to Week 12. No metabolic or movement disorders emerged. Mean weight increases in the ecopipam and placebo arms were 2.1 kg and 2.5 kg respectively. **Conclusion:** Ecopipam reduces total motor and phonic tics among children and adolescents with TS. Although not powered for the subgroups, ecopipam shows strong trends for efficacy in patients with the comorbidities of ADHD, ANX, or OCD. There were no differences in efficacy, safety, or tolerability between those with and without these comorbid disorders.

No. 50**Paradoxes in Emotional Dysregulation in Borderline Adolescents: Influence of Adversity and Attachment**

Poster Presenter: Jean Belbeze

Co-Author: Marion Robin

SUMMARY:

Borderline personality disorder (BPD) in adolescents is characterized by adversity and insecure attachment, but the respective contribution of each of these factors on BPD emotional dysregulation is not yet clear. The purpose of this study is to assess the distinct impact of environmental factors and attachment on BPD affective processes, such as alexithymia, hopelessness and BPD affective symptoms within the European Research Network on BPD ($n = 85$ BPD adolescents and $n = 84$ healthy controls aged 13–19 years). BPD patients showed paradoxical emotional reactions: there was no increase of hopelessness and affective symptoms with an increased parental dysfunction. However, a decrease in affective symptoms and hopelessness with cumulative stressful life events were found, respectively $-0,43$ ($p<0,001$) and $-0,38$ ($p<0,01$). Two pathways arose, one involving attachment as an emotional dysregulation process for parent–child interactions and a second one for stressful life events, with a more direct pathway to affective symptoms, independent of attachment but dependent on early interactions, and involving alexithymia. In summary, adversity factors have distinct effects in BPD, and attachment is partly accountable for affective symptoms independently of adversity. Our results suggest that in highly insecure

conditions, cumulative adversity may produce paradoxical effects, including a lesser expression of affective symptoms and hopelessness. Borderline personality disorder (BPD) in adolescents is characterized by adversity and insecure attachment, but the respective contribution of each of these factors on BPD emotional dysregulation is not yet clear. The purpose of this study is to assess the distinct impact of environmental factors and attachment on BPD affective processes, such as alexithymia, hopelessness and BPD affective symptoms within the European Research Network on BPD ($n = 85$ BPD adolescents and $n = 84$ healthy controls aged 13–19 years). BPD patients showed paradoxical emotional reactions: there was no increase of hopelessness and affective symptoms with an increased parental dysfunction. However, a decrease in affective symptoms and hopelessness with cumulative stressful life events were found, respectively $-0,43$ ($p < 0,001$) and $-0,38$ ($p < 0,01$). Two pathways arose, one involving attachment as an emotional dysregulation process for parent–child interactions and a second one for stressful life events, with a more direct pathway to affective symptoms, independent of attachment but dependent on early interactions, and involving alexithymia. In summary, adversity factors have distinct effects in BPD, and attachment is partly accountable for affective symptoms independently of adversity. Our results suggest that in highly insecure conditions, cumulative adversity may produce paradoxical effects, including a lesser expression of affective symptoms and hopelessness.

No. 51

Elevated COMT expression in depressed patient derived neurons is associated with a higher response rate to SSRIs and lower response rate to bupropion

Poster Presenter: Daphna Laifenfeld

Co-Authors: Shahar Shohat Koren, Dana Maimoun, Aleksandra Kugel, Talia Cohen Solal

SUMMARY:

Depression is a leading cause of disability worldwide despite dozens of approved antidepressants. There are currently no clear guidelines to assist the physician in their choice of drug, with existing tools

limited to pharmacogenetics that have shown suboptimal response prediction outcomes resulting in a subscription process that is largely a trial and error one. Consequently, the majority of depressed patients do not respond to their first prescribed antidepressant, with $>30\%$ not responding to subsequent drugs. Multiple evidence suggest that genetic factors contribute substantially to the wide interindividual variability in antidepressant response. The catechol-O-methyltransferase (COMT) gene is a neurotransmitter methyltransferase enzyme which plays a crucial role in maintain proper levels of neurotransmitters in the brain. Genetic variations in the COMT gene have been associated with response to multiple antidepressant including bupropion, citalopram and sertraline in multiple studies. However, the studies disagree on the direction of the association and other studies report no-association. A possible explanation to the inconsistency in COMT polymorphism and anti-depression response associations is that studies tested only the genetic variation and not the level of gene expression which also greatly effects gene function. Here we used patient-derived lymphoblastoid cell lines from the Sequenced Treatment Alternatives to Relieve Depression (STAR*D) study to test the association of antidepressant drug response with COMT gene expression. The cells were reprogrammed and then differentiated to cortical neurons, RNA was extracted and the expression of COMT was measured vs the known response of the individuals to bupropion, citalopram and sertraline. We found that COMT showed significantly lower expression in bupropion responders compared to non-responders ($P = 0.0003$ Fold change=0.5). In addition we found higher expression in responders vs non-responders for the SSRIs sertraline ($P=0.04$ Fold change=1.4) and a non-significant trend for SSRI citalopram $P=0.08$ Fold change=1.2). Our findings indicate that testing COMT gene expression can assist in antidepressant drug selection, as it may help to predict a patient's likelihood of responding to a specific medication. In addition, the study highlights the need to combine multiple lines of evidence when predicting antidepressant drug response, rather than relying solely on genetic variations.

No. 52

Discrepancy in Perceptions of Parenting Style Between Adolescent Suicide Attempters and Their Parents

Poster Presenter: Christel Lynne Chang

Co-Author: John Chee Meng Wong, M.D.

SUMMARY:

Background: Suicide is consistently ranked among the leading causes of adolescent death globally. Previous research has found parenting factors to be associated with suicide risk [1,2]. However, little is known about how perceptions of parenting style differ between adolescent and their parents. Understanding this potential discrepancy may aid in elucidating the ways in which parenting style impacts suicide risk, which has implications on suicide prevention and risk management. **Methods:** Adolescents aged 13-19 who had attempted suicide were recruited alongside their parents (39 mothers, 27 fathers). Parenting style was assessed via the Parental Control Scale [3] and Parental Acceptance-Rejection Questionnaire [4]. Paired samples t-test was performed to investigate the differences between child and parent perceptions of the parent's parenting style. **Results:** Compared to the adolescents' perspective, mothers perceived their own parenting to be significantly more affectionate ($p < .001$, $M_{A-B} = 10.68$, 95% CI [5.91, 15.46]), with a large effect size ($d = 0.74$). Mothers also perceived their parenting to be less neglectful ($p = .046$, $M_{A-B} = -3.08$, 95% CI [-6.10, -0.06]) and have higher control ($p = .020$, $M_{A-B} = 3.13$, 95% CI [0.53, 5.73]), with small-to-moderate effect sizes ($d = 0.33 - 0.39$). Compared to the adolescents' perspective, fathers similarly perceived their own parenting style to be significantly more affectionate ($p < .001$, $M_{A-B} = 17.82$, 95% CI [11.77, 23.86]), with a large effect size ($d = 1.17$), and less neglectful ($p = .015$, $M_{A-B} = -6.15$, 95% CI [-11.00, -1.30]), with a moderate effect size ($d = 0.50$). **Discussion:** The significant discrepancies between child and parent perceptions of these aspects of parenting highlight the lack of understanding parents may have around how their parenting is perceived. As there is no value in good intentions that are ill-perceived, these findings call for greater attention towards parental awareness, beyond just parenting style, as a crucial factor in moderating suicide risk. Collaboration between

clinicians and family therapists could better equip parents who are unaware of their contribution to their child's suicidal behavior [5]. Before an adolescent is even at risk, suicide prevention initiatives should be implemented at a systemic level, such as through schools or nation-wide campaigns, to educate parents on how to effectively convey affection and assert control in the household. Post-suicide attempt, parental awareness must be assessed as part of the Emergency Department discharge protocol, and safety management plans for high-risk youth must include family support as a key factor. Future research should focus on parental awareness to engender more holistic perspectives of the family system and how it relates to suicide and associated behaviors.

No. 53

WITHDRAWN

No. 54

Is It Just a Benzo? Competency to Stand Trial in a Defendant With Suspected Catatonia and a History of Substance Abuse

Poster Presenter: Jason A. Barrett, M.D.

SUMMARY:

The capacity for a defendant to participate in their own judicial process is necessary for adjudication.¹ States have specific language defining competency to stand trial and it is generally comprised of the ability to understand a legal process and work with a defense attorney.² Most referrals from attorneys for an evaluation of their criminal defendants ask the question of competency.² This poster will highlight a case of a defendant with supposed catatonia and a history of substance abuse. He was initially found incompetent to stand trial and sent to a state hospital for competency restoration. This defendant was actively in treatment nearing the end of his restoration period. He was prescribed a high dose of benzodiazepines for his suspected catatonia.³ Before his competency restoration period expired, a second forensic evaluator conducted an evaluation. The evaluator opined with medical certainty the defendant could stand trial. Under typical circumstances a report would be provided to the court and the task of the forensic evaluator would be

complete. Yet this particular case involved careful collaboration from the evaluator given the unique circumstances of treatment with a high dose benzodiazepine. Collaboration had to be directed by the evaluator between the state hospital personnel, local jail practitioners, and outpatient treatment centers. This poster will review topics of competency, catatonia, and treatment implications to be considered with comorbid substance abuse.⁴ Additionally, guidance will be provided to help those that interact with individuals experiencing addiction and are involved in the legal system.

No. 55

Navigating Ethical Dilemmas in Forensic Psychiatry Cases Involving Trauma, Immigration, and Legal Charges

Poster Presenter: Danielle Clifford

Co-Author: Margarita Abi Zeid Daou, M.D.

SUMMARY:

Forensic psychiatrists encounter specific ethical dilemmas by virtue of their work in clinical settings where they face a high volume of high-risk patients, such as in forensic state hospitals. Treatment and discharge considerations, documentation, and otherwise therapeutic encounters become highly centered around the nature of a patient's charges and their risk level, adding to their mental health and legal concerns. This is more so relevant due to the limited confidentiality of court ordered hospitalizations and evaluations where information obtained from patients, records, and collaterals are not privileged. Cases that involve immigration are especially challenging because the legal ramifications not only have profound psychological and social effects for the patient but can also impact their immigration status. Notes documented by the treatment team are accessible to forensic evaluators who use information in determining competency to stand trial and criminal responsibility. If a patient is determined incompetent to stand trial (IST) and/or not guilty by reason of insanity (NGRI), how does this impact their immigration status? To what extent does the U.S. Immigration and Customs Enforcement have access to court records? What are protections afforded to individuals who are found NGRI compared to those found guilty? We present the

case of a middle-aged highly educated immigrant male with a significant trauma history involving kidnapping and torture in his home country by a militia-affiliated political group a few years prior to his immigration to the U.S. He had no psychiatric or substance use history predating the trauma. However, following the traumatic events, he developed complex PTSD with psychotic features and started a journey of treatment with periods of non-compliance after his immigration to the U.S. seeking education and asylum. Soon after discontinuing his treatment, our patient was charged with arson, after he lit fire to personal documents because he thought the military group was tracking him through his files. He was sent by court to our hospital forensic unit for a competence to stand trial and criminal responsibility evaluation. After resuming treatment with Zyprexa and engaging him in group activities, his psychosis improved substantially. Following a 50-day hospitalization, the treatment team and the forensic evaluator agreed to not pursue further commitment to the hospital and discharged him back to court. Our patient was highly concerned about the impact of his legal charges on his immigration status and the risk for deportation he was facing as his asylum case had not yet been adjudicated. This poster will address the different ethical dilemmas that arise in managing cases that involve trauma, immigration, legal charges, and the role of the forensic psychiatrist in navigating these challenges and advocating for our patients.

No. 56

Quality in Psychiatric Care Forensic Inpatient Staff: Psychometric Properties of the Qpc-Fips Scale in Spain

Poster Presenter: Marta Domínguez Del Campo

Co-Authors: Manuel Tomás-Jiménez, Antonio R.

Moreno-Poyato, Juan Francisco Roldán Merino

SUMMARY:

Several studies indicate that the forensic environment currently holds more people with mental health problems than any other institution; between 15 and 26% of people who have been in prison have been diagnosed with a mental health problem. There is a clear need to evaluate the quality of medical care provided by the professionals

in penitentiary psychiatric units. In forensic psychiatry there is a growing interest in the evaluation of quality of life and care as an outcome measure and also as a variable in the evaluation of the likelihood of criminal recidivism. Measuring and improving the quality of health system care is of global interest. Despite this, there is a lack of cross-cultural comparative studies on the perception of patients and professionals regarding quality of care and even fewer in the forensic field. A systematic psychometric review was published in 2018 emphasises that the QPC instrument is the most suitable instrument for the measurement of quality of care. Quality in Psychiatric Care-Forensic Inpatient Staff (QPC-FIPS) is an instrument of Swedish origin validated to measure the perception of the quality of mental health care provided by forensic psychiatry professionals. The Quality of Psychiatric Care-Forensic Inpatient Staff (QPC-FIPS), described in the introduction section, is a self-administered questionnaire consisting of 34 items and measures 7 dimensions of quality of care: encounter (8 items), participation (8 items), discharge (3 items), support (4 items), Secluded environment (2 items), secure environment (3 items) and forensic specific (6 items). Each item is related to the statement "I consider that..." and responses are based on 4-point Likert scales, where 1 corresponds to "strongly disagree" and 4 to "strongly agree". All items also have the option "does not correspond". The aim of this study was to cross-culturally adapt the QPC-FIPS instrument and to evaluate the psychometric properties of the Spanish version of the instrument. A psychometric study was carried out. For validity, content validity, convergent validity and construct validity were included. For reliability, the analysis of internal consistency and temporal stability was included. The sample consisted of 153 mental health professionals from four Forensic Psychiatry units. The adapted Spanish version of the QPC-FIPS scale was configured with the same number of items and dimensions as the original. The psychometric properties, in terms of temporal stability (ICC: .802(CI: .689 -.874)) and internal consistency (Cronbach's alpha: .916) were adequate and the factor structure, such as the homogeneity of the dimensions of the Spanish version of the QPC-FIPS, was equivalent to the original Swedish version. We found that the QPC_FIPS-Spanish is a valid, reliable

and easy-to-apply instrument for assessing the self-perception of professionals regarding the care they provide.

No. 57

Transgender and Gender Diverse Individuals in the Psychiatric Emergency Setting

Poster Presenter: Megan O'Brien, M.D.

SUMMARY:

Background: Transgender and gender diverse (TGD) individuals are at an elevated risk for multiple negative mental health outcomes. As a result, these individuals often present to emergency psychiatric care settings. This review aims to (a) characterize what is known about transgender and gender diverse individuals in psychiatric emergency settings and (b) identify what gaps persist in this literature.

Methods: A search of four electronic databases (PubMed, Web of Science, PsychINFO and GenderWatch) was used for data collection. Included were studies that looked at transgender or gender diverse individuals presenting to a psychiatric emergency room or emergency room with a primary mental health concern. Relevant data was extracted using a template and then assessed. **Results:** A total of 187 titles and abstracts were screened, 36 full texts were evaluated for eligibility and 10 studies were included. Of the studies included, The studies reviewed identified mental health vulnerabilities unique to the transgender and gender diverse population, including service denial in healthcare settings, gender dysphoria, increased rates of non-suicidal self-injury, and in some studies an increase in suicidality. Societal inequities, including the risk of discrimination and residential instability was also revealed. A subset of the studies identified best practices in caring for this population, including the use of non-judgmental, affirmative and inclusive language, and on a structural level creating emergency environments that are confidential, inclusive and therapeutic for these individuals.

Limitations: A major limitation was the scarcity of literature in this field. Additionally, the observational and subjective reporting in many of the studies increased the chance of bias. **Conclusions:** Three major themes with regards to transgender and gender diverse individuals in psychiatric emergency

settings was identified: mental health vulnerabilities, societal inequities, and best practices in caring for this population. Overall, there is a scarcity of literature in this field, and further research on the experiences of this population is needed to inform clinical practice.

No. 58

When Gender Dysphoria and Body Dysmorphia Co-Occur: A Case Report

Poster Presenter: Eric Zabriskie, M.D.

SUMMARY:

BACKGROUND: A common feature between Body Dysmorphic Disorder (BDD) & Gender Dysphoria (GD) is preoccupation with body image, with a frequent focus on specific areas. People with BDD are preoccupied with their appearance, thinking that they look abnormal, when in fact they look normal-typical areas of focus include face and hands. Gender Dysphoria is common in the transgender population, leading to dysphoria around anatomical parts of the body which belong to birth sex, but not their gender. Surgical outcomes for Gender Dysphoria tend to reduce symptoms and lead to high patient satisfaction (98%), whereas they do not reduce BDD symptoms, are associated with poor patient satisfaction (5%), and are thus contraindicated. **CASE REPORT:** A 23 year old MTF transgender patient, reporting hx c/w untreated MDD but no prior psychiatric care was evaluated to require IP psychiatric stabilization reporting acutely worsening depressive symptoms over the past several weeks with intensifying SI and plan to OD. Upon stabilization, found to meet DSM criteria for GD, with preoccupation on masculine body and facial features and wanting to pursue Top surgery and Facial Feminization Surgery. independently met criteria for BDD with BDD-YBOCS: 35-severe, identified image obsessions w/o r/t to gender: facial symmetry, Nasal shape, sees chin as misshapen. Rituals such as checking mirrors, checking/rechecking chin throughout day, grooming activities, applying makeup, camouflaging, comparing to others, searching online images of faces for comparison. **DISCUSSION:** We review some of the similarities between GD and BDD, as well as their marked differences. They have notable differences in

demographics, pathophysiology of visual preoccupation revealed through functional imaging studies, and in differing treatment responses. Per functional imaging studies BDD patients are found to exhibit abnormal spatiotemporal activation in BDD for judging appearance. Transgender and cisgender participants activate similar self-referential/body ownership networks, but the stimuli activating these networks aligns with gender identity and not birth-assigned sex. BDD can thus be thought of as a perceptual disturbance, and GD related to sensory mismatch with one's personhood. One conclusion that can be reasonably drawn from these data is perceptual distortions persist through body modifications treating BDD while aligning one's sense of self seems improved by affirming surgeries. **CONCLUSION:** These disorders overlap in intriguing ways, and in some cases are comorbid, such as in our patient. The overlap may lead clinicians to miss this dual diagnosis- if Gender Dysphoria is identified, the clinician might not investigate for other body image concerns to determine whether the additional diagnosis of BDD is appropriate. When BDD and GD co-occur, it's important to diagnose both of them because the treatments are opposing and need to be applied carefully in a matter that does not increase stigma.

No. 59

Life in 3D! Increasing Health Literacy on Delirium, Depression, Dementia

Poster Presenter: Gabrielle Kennelley

Co-Authors: Archita Chandra, Jyotsna Pandey, Chin-I Cheng, Jeffrey Cruz

SUMMARY:

Background: Depression in older adults presents with similar symptoms to delirium and dementia. Depression, delirium, and dementia are colloquially known as 'The 3Ds.' Confusion by caregivers in identifying symptoms of each of the 3Ds may result in inappropriate care for each condition and decrease quality of life. A health literacy intervention was implemented to improve understanding of risk factors, symptoms, and caregiver responses to the 3Ds. **Methods:** Educational materials on risk factors, symptoms and caregiver interventions for the 3Ds were developed by medical students at Central

Michigan University. Educational presentations with case-based scenarios and videos were led by medical students at PACE Central Michigan and PACE Southeast Michigan Centers. Target audiences included PACE participants and staff. Pre- and post-presentation surveys assessed participant understanding of the 3Ds. The associations were tested by nonparametric McNemar's test. Long-term retention will be assessed by surveys 6-months after presentations. **Results:** Participants completed pre-presentation surveys (N = 40) and post-presentation surveys (N = 36) that were compared to assess changes in comprehension of the 3Ds. A significant increase was seen in recognizing signs of depression ($p < 0.0001$). This was seen in females ($p < 0.0001$), both white ($p = 0.0120$) and non-white ($p = 0.0313$) groups, and in participants less than 68 years old ($p = 0.0160$). A significant increase was seen in recognizing signs of delirium ($p < 0.0001$). This was seen in females ($p < 0.0001$), both white ($p < 0.0001$) and non-white ($p = 0.0039$) participants, and in participants less than 68 years old ($p < 0.0001$) and greater than or equal to 68 years old ($p = 0.0078$). Delirium recognition also improved in those with a high-school level education ($p = 0.0078$) and with a college level education ($p = 0.0001$). Finally, a significant increase was seen in recognizing signs of dementia ($p = 0.0010$). This was seen in females ($p = 0.0034$), in white participants ($p = 0.0060$), and in those with a college level education ($p = 0.0117$). **Conclusion:** This health literacy intervention effectively improved symptom recognition of the 3Ds by older adults and caregivers. This knowledge will enable communities to appropriately care for the conditions their loved ones exhibit and promote the quality of life of independent older adults.

No. 60

A Case Study on Suicidality in Treatment-Resistant Premenstrual Dysphoric Disorder

Poster Presenter: Matthew Joseph Johnson, D.O.

SUMMARY:

Premenstrual dysphoric disorder (PMDD) is a severe form of Premenstrual Syndrome (PMS) that can involve mood lability, irritability, depression, anxiety, and internal tension as well as physical symptoms such as fatigue, bloating, breast tenderness, and

weight gain. Applying strict inclusion criteria, this debilitating disorder affects roughly 3-8% of women of reproductive age. In addition to impairments in quality of life and functional capacity, studies have shown that this disorder is strongly and independently associated with an increase in suicidal ideation, plans, and suicide attempts. Treatment may include medical therapies such as combined estrogen-progestin oral contraceptives (OCP) and SSRIs, as well as lifestyle modifications including engaging in regular exercise and stress reduction techniques. Further treatment may include a GnRH agonist for ovarian suppression. We describe a case of a 42-year-old female who presented after a suicide attempt secondary to treatment-resistant PMDD. In the four months leading to her admission, the patient had been hospitalized four times with two other suicide attempts. The patient failed both SSRI and OCP therapy, and had started a depot GnRH agonist with no response as of admission. At time of admission, patient had been in the process of scheduling a hysterectomy and bilateral salpingo-oophorectomy. After discontinuation of one of two SSRIs, a benzodiazepine, a mood stabilizer, a beta-blocker, and a stimulant, the patient was then stabilized after menses on a combination of one SSRI, a GnRH agonist injection, an OCP, and an antipsychotic as adjunctive treatment. Upon discharge, the patient was scheduled for a salpingo-oophorectomy, the last-line treatment option.

No. 61

Using Quality Improvement Methodology to Improve Access to Community Intellectual Disability Services

Poster Presenter: Ian Hall

SUMMARY:

Aims: Improving access to a Community Intellectual Disability Service (CIDS) using Quality Improvement (QI) methodology by reducing the time taken to complete eligibility assessment by 50% within six months, whilst improving service user and staff experience. **Background:** Community Intellectual Disability Services provide specialist mental and physical healthcare support, and social care support to people with intellectual disability living in community settings. Referrals to CIDS usually require

assessment of eligibility. It was noted that there was significant waiting time between referral and eligibility assessment, exacerbated by the COVID-19 pandemic. Service users and carers identified this as a priority for service improvement. Quality Network for Community Learning Disability Services (QNLD) guidelines suggest waiting times for those accessing adult Intellectual Disability (LD) community services be locally agreed, although there is limited literature on this topic. **Methods:** All staff members across the multidisciplinary team (MDT) were invited to participate in the QI project. We defined outcome measures as days from referral to allocation of eligibility assessment to staff member and to completion of eligibility assessment, comparing referrals received before and after start of the project. The key Change Ideas tested using Plan Do Study Act (PDSA) cycles were (1) Eligibility Screening Checklist, (2) Eligibility assessments drop-in sessions for staff, (3) Formal training for ILDS staff, (4) Eligibility Screening allocation system, (5) Template letters for eligibility decisions, (6) New CIDS referral form, (7) Workshops for local GPs. **Results:** Time taken to eligibility assessment allocation decreased from median of 184 (mean = 183.5 ± 109.8) to 13 days (mean = 19.9 ± 26.4) (93% reduction). Time to completion of eligibility assessment decreased from a median of 271 (mean = 296.0 ± 133.8) to 63 days (mean = 75.7 ± 34.8) (77% reduction). We received positive feedback from staff and service users regarding the new eligibility process. **Conclusions:** The use of formal QI methodology can have a profound impact on waiting times, with high yield. Change Ideas that we found effective in addressing this service user and carer priority included eligibility screening checklists, improvements to referral forms, staff training and primary care workshops. We recommend similar services use a QI methodology to reduce waiting times and improve the experience of staff and service users. We hope that this work can contribute to the development of national/international standards for accessing Community Intellectual Disability Services.

No. 62

Using Quality Improvement (QI) Methodology to Reduce the Referral Screening Time for Diagnostic Assessment of Intellectual Disability (ID)

Poster Presenter: Niall O'Kane, M.B., B.A.O.

SUMMARY:

Background Specialist multidisciplinary teams for people with intellectual disabilities (ID), known as Community intellectual disability services (CIDS), exist in most areas of the United Kingdom (UK) and provide a range of health and social care interventions for people with ID [1]. In addition, people with suspected or an unconfirmed diagnosis of ID can be referred for specialist diagnostic assessments. Islington CIDS is based in a diverse and densely populated area of London and supports approximately 960 people with ID. The service receives on average 25 referrals yearly for specialist diagnostic assessment of ID. Screening time for diagnostic assessments of ID can be lengthy, impacting on the individual receiving the right care and support. **Methods** Quality Improvement (QI) methodology provides a systematic approach guided by data measurement.^{2,3} In this QI project, the "Model for Improvement" was used as the methodological framework.² Key stakeholders were identified to form a working group. The working group met weekly throughout the duration of the QI project. A "Specific, Measurable, Achievable, Realistic and Time specific" (SMART) objective was agreed by the working group. Task analysis of the existing referral process was completed to identify barriers and solutions known as change ideas. Following the task analysis and identifying change ideas, a driver diagram was created. The change ideas were systematically and sequentially tested using "Plan, Do, Study, Act" (PDSA) cycles.⁴ To measure the impact of each change idea, the time needed to screen referrals was captured and represented on a control chart (c-chart). Recording on a c-chart allowed for more in-depth statistical analysis of the data and control of data variations.⁵ **Results** The baseline measurement data was captured on the c-chart and showed the referral mean screening time was 74.25 working days with an upper control limit (UCL) of 100 working days and a lower control limit (LCL) of 48.4 working days. Due to length and variation of time between referrals and extreme outliers in the initial baseline period, a second 12-point baseline was calculated once the process was more stable. Outliers were reviewed and specific circumstances in these cases were identified as part of project diagnostics. During the first phase

of testing change ideas, the overall time needed to screen was observed to fall quickly to a mean of 19.5 working days (UCL: 32.41; LCL: 6.09 working days). Further reductions were sustained following post-implementation of change ideas with time needed to screen falling to a mean of 10 working days (UCL: 19.49; LCL: 0.51 working days). **Conclusions** QI methodology enabled quick and sustained reductions in screening time of referrals for diagnostic assessment of ID even when accounting for the variations in the initial baseline period. Islington CIDS intends to implement QI methodology in other areas of the service.

No. 63

Borderline Personality Disorder Screening and Traits Among Patients on Adult Inpatient Psychiatry Units: A Cross-Sectional Study

Poster Presenter: Joann Chen

SUMMARY:

Objective: Borderline personality disorder (BPD) has been found in 15-28% of patients in psychiatric hospitals or clinics (Gunderson, et al. 2018). Further understanding of the presentation and outcomes for patients with BPD in psychiatric hospitals through BPD screening and self-report measures can thus advance effective clinical care in these settings.

Methods: Our preliminary sample included 736 patients between the ages of 17 and 79 across three inpatient units of the Division of Depression & Anxiety Disorders at McLean Hospital who completed self-assessments within 48 hours of admission and discharge as part of an ongoing QI/QC project. Self-assessments included the MSI-BPD, QIDS-SR16, GAD-7, BASIS-24, PCL-5 and a substance use screener. Statistical analyses were performed with RStudio 4.2.1. **Results:** Preliminary analyses show that the 26.4% of patients who screened positive for BPD were demographically distinct from patients who screened negative, including being younger ($P<0.001$), more likely to be female ($P=0.042$), having less education ($P=0.004$), and less likely to have stable housing ($P=0.004$). MSI-BPD+ patients were also more likely to screen positive for PTSD on the PCL-5 and for problematic substance use on the DAST-10. While the MSI-BPD+ and MSI-BPD- groups had similar lengths of stay, the MSI-

BPD+ patients had significantly higher self-reported depression, anxiety, suicidality, and self-harm at admission. MSI-BPD+ patients had mean scores in the severe range of QIDS for depressive symptoms and of GAD-7 for anxiety, compared to mean scores in the moderate range on both measures for MSI-BPD- patients ($P<0.001$). Patients screening positive on the MSI-BPD experienced significantly larger improvement in scores on all measures during hospitalization ($P<0.001$), and at discharge no longer had significantly different scores in suicidality from patients screening negative on the MSI-BPD.

Conclusion: The present study confirmed hypotheses that the MSI-BPD is effective in adult inpatient settings in identifying clinically and demographically distinct patient segments. The alignment of our findings with prior literature (Yoshimatsu et al. 2015) support the finding that BPD traits are associated with higher admission acuity as well as larger absolute improvement in symptoms during short-term psychiatric hospitalization, particularly as the self-report measures used in this study aligned with published data that utilized clinician ratings of depressive symptoms. The findings counter dated perspectives of the intractability of BPD symptoms and suggest that screening for BPD traits in adult inpatient settings could be a valuable clinical tool in assessing admission symptom severity and improvement during the course of a hospitalization.

No. 64

Assessment of Monitoring and Management Practices of Antipsychotic-Induced Hyperprolactinemia at an Academic Tertiary Hospital in Riyadh, Saudi Arabia

Poster Presenter: Bashayr Alsuwayni, Pharm.D.

SUMMARY:

Introduction: Hyperprolactinemia is a common adverse effect of antipsychotic medications. The persistent hyperprolactinemia can be associated with serious long-term effects such as osteoporosis and breast cancer. There are still no consensus recommendations for the optimal monitoring and management. This study aims to assess the monitoring and management practices of antipsychotic-induced hyperprolactinemia. **Methods:** retrospective cohort study conducted during May

2020-2021, and for each patient, five years of medical record documentation was reviewed to collect baseline and follow-up prolactin levels, documented clinical assessment and side effects reported by patients, and management plan considered when hyperprolactinemia is detected. All patients who attended the psychiatric clinics during the study period and met the inclusion criteria were enrolled. **Results:** Among 662 patients, only 35 (5.2%) had their serum prolactin monitored at baseline and 242 (36.6%) of patients had their prolactin monitored at follow-up. The prevalence of hyperprolactinemia was 212 (32%). Only 76 (35.8%) out of 212 were symptomatic. Hyperprolactinemia was found to be higher among patients using thyroid products and diabetic medications but not antidepressants. Only 127 patients of confirmed cases received management. Most common treatment strategies were: dose reduction (42.5%), aripiprazole augmentation (29.1%), switching to a prolactin-sparing antipsychotic (10.2%), and dopamine agonist (7.8%). **Conclusion:** Patients on antipsychotic with possible prolactin-raising side effects, routine prolactin monitoring is recommended regardless of symptoms. Adherence to evidence-based guidelines recommendations can improve patient's compliance and quality of life

No. 65

ADHD Assessment and Treatment Policies at Postsecondary Institutions in the United States

Poster Presenter: James Aluri, M.D., M.A.

SUMMARY:

Background: Attention Deficit / Hyperactivity Disorder (ADHD) has significant impact on college students academic and social functioning.¹ The prevalence of self-reported ADHD among college students is estimated at 5.1%, representing an increase from years past.² The nonmedical use of prescription stimulants among college students persists and diversion of prescribed stimulants is an ongoing concern. Data from a longitudinal study reports 31.0% of students have used a stimulant for nonmedical purposes at least once in their lifetime.³ Postsecondary institutions must navigate between ensuring students with legitimate ADHD diagnoses have access to appropriate assessment, support, and

treatment (including prescription stimulants), and minimizing student misuse of prescription stimulants. While postsecondary institutional policies for disability accommodations for ADHD have been reviewed,⁴ no systematic evaluation exists of clinical ADHD assessment and treatment policies at postsecondary institutions. In one small survey, most campus-based prescribers report referring students out for evaluation of ADHD.⁵ **Methods:** Using a combination of structured website reviews, emails, and phone calls, two physician raters gathered data regarding ADHD policies from a random sample of 200 US postsecondary institutions stratified by size (< 1,000 students, 1,000 – 5,000, and > 5,000) and admission category (< 33%, 33-67%, and > 67%). Key variables included the presence of an ADHD assessment and treatment policy online, whether campus-based clinicians prescribe stimulants, requirements for neuropsychological testing, and utilization of control mechanisms such as random toxicology screening and medication contracts. Kappa coefficient for interrater reliability was 0.91. **Results:** Preliminary data show that 34% of postsecondary institutions have an ADHD assessment and treatment policy on their website. Only 19% of schools clearly state that campus-based clinicians can prescribe stimulants; 9% clearly state that campus-based clinicians will not prescribe stimulants. The rest do not make a statement about prescribing stimulants. 12% of schools require ADHD testing for access to prescription stimulants. Three percent of schools require toxicology screens and 4% of schools require a medication contract. **Conclusion:** The results provide much-needed insight into postsecondary institutional policies (and their transparency) regarding ADHD assessment and treatment. Suggestions will be articulated for policy standardization at postsecondary institutions.

No. 66

Investing in Our Future: Corporate Interests in Youth Mental Health

Poster Presenter: Thomas P. Tarshis

SUMMARY:

Objectives: Participants in the capital markets have been entering the mental health field at an increasing pace over the last five years. This

submission describes the experience of a social-justice mental health agency being approached by investment groups. Methods: Bay Area Clinical Associates (BACA), a multidisciplinary, evidence-based mental health entity with clinics in California, was founded as a non profit entity in 2007 to address the mental health crisis among youth. Challenging experiences with non profit funding led to the split of their clinical services into a taxable entity in 2017 to obtain more favorable treatment from banking institutions. The COVID-19 pandemic resulted in new barriers to service provision requiring novel solutions including new ways of delivering services, changes in compensation expectations, both of which changed the underlying financial model. Results: Between December of 2020 and July of 2021, BACA spent seven months and hundreds of hours exploring various partnership and/or investor relationships with investor groups. After exiting a potential partnership in July of 2021, BACA enlisted the aid of a child psychiatrist with experience in the financial fields to screen new potential partners for goodness-of-fit with our core values, ethics and mission. Ultimately, a partnership was forged with a private-equity backed group after months of vetting to ensure compatibility. This vetting included speaking with multiple clinician entrepreneurs from different fields who could attest to the ethical practices that the group proclaimed. Conclusions: The fragmentation of mental health, large number of cash-only practices, and reduced stigmatization of mental health, have opened the floodgates on financial groups entering the field. Whether this will result in better access and improved treatments, or merely non-scientific treatment models for the sake of profit, will have drastic implications for the well-being of our youth.

No. 67

Innovation in Interdisciplinary Education: The Menopause and Minority Health Project

Poster Presenter: Sarah M. Nagle-Yang, M.D.

Lead Author: Phoutdavone Phimphasone-Brady

Co-Authors: Laura Borgelt, Helen Coons, Nanette Santoro

SUMMARY:

Objective: To reduce diagnosis and treatment disparities for racially and ethnically diverse individuals experiencing menopause by improving providers' knowledge and developing culturally appropriate treatment approaches. **Materials and Methods:** The Departments of Psychiatry, Obstetrics and Gynecology, and the School of Pharmacy partnered with the Extension of Community Health Outcomes (ECHO) Colorado, an online network that provides education to community providers about the management of complex medical conditions in underserved populations. The proven ECHO collaborative learning approach was enhanced with Extended Reality (XR) simulations using diverse avatar 'patients' with emotional responses and compounded interactions to engage a deeper understanding of menopause experiences in minority women. Seven evidence-based modules were presented, covering the topics of: 1) intersectionality, 2) vasomotor symptoms, 3) mood and anxiety, 4) sleep, 5) bleeding and hysterectomy, 6) weight, body image, and sexual health, and 7) menopause-related treatment. Most participants were either primary care or ob-gyn clinicians. Participants completed brief pre and posttest assessments prior to each session and completed the avatar experiences. Descriptive statistics are provided. This study was considered exempt research by the Colorado Multiple IRB. **Results:** To date, 74 participants have participated in the series and on average participants attended 4 out of 7 ECHO sessions. Participant's self-reported skill level after completing the series was increased ($p < 0.001$) across all learning objectives. On a 5 point scale of ease of use (strongly agree, agree, neither agree nor disagree, disagree or strongly disagree) 79% felt that the avatars were easy to use, and 61% felt that they helped prepare the provider for communicating with patients (strongly agree/agree). **Conclusions:** The ECHO Colorado learning approach combined with the innovative XR simulations resulted in positive improvements in provider knowledge, confidence and treatment of racial and ethnic differences in menopause care. **Impact Statement:** This unique training with XR simulation has the potential to change the landscape of healthcare education for underserved, racially and ethnically diverse populations.

No. 68

Opioid Dependence Among Pregnant and Postpartum Individuals: Leveraging Health Professional Perceptions to Inform Comprehensive Treatment

Poster Presenter: Serra Sozen

Co-Author: David Krag

SUMMARY:

Background: Vermont has an overall yearly Opioid Use Disorder (OUD) death rate which exceeds that of the nation by over 5%, and a Neonatal Abstinence Syndrome (NAS) rate 6 times the U.S. average. A notable subset of those who suffer from OUD in Vermont are pregnant and postpartum incarcerated individuals. Treating this population, however, presents with unique health-related and legislative barriers. There currently exists no peer-reviewed published data on Vermont's management of women who are incarcerated and parenting. Given the gaps in treatment and the minimal literature surrounding this population, the objective of this qualitative descriptive study was to leverage professional opinions on OUD treatment and identify underlying issues in Vermont's current treatment delivery to improve the care of pregnant and postpartum inmates with OUD. **Methods:** A qualitative research approach was used to gather data from individual healthcare providers, correctional personnel, and researchers through semi-structured interviews. Open-ended questions were generated based on five distinct themes: provider perceptions of MOUD, barriers to access, improvement in treatment and aftercare, patient perspectives, and health policy arenas. Participants responses were coded and emerging concepts and trends were grouped into these larger overarching domains. **Results:** Healthcare providers, researchers, social workers, and correctional personnel all perceived inadequacies in correctional OUD treatment and challenges in continuing care post-release. Participants (n=15) cited inadequate post-release supports and resources (n=14), provider bias and understaffing (n=14), modest MOUD rates (n=12), and patient drug diversion (n=9) as barriers to adequate OUD treatment for maternal inmates in Vermont. Participants also emphasized the

importance of reducing fatal overdoses (n=13), addressing the fentanyl threat (n=8), and curbing black market activity (n=6) and relapses (n=6) amongst patients. The participants stated that patients prioritized interpersonal/familial relationship building (n=9) and role fulfillment (n=7) after incarceration. All participants deemed MOUD as the "necessary" first step in managing this population. **Conclusion:** There are significant areas of unmet needs within Vermont's current OUD management system that affect both obstetric and addiction outcomes in incarcerated pregnant and postpartum individuals. Improving OUD treatment for this population will require more MOUD provision, care coordination post-release, child support, psychosocial interventions, and public policy efforts. Treatment can be improved by continuing to leverage professional perceptions and recommendations towards integrated, patient-centered care.

No. 69

Implementing a Crisis Prevention and Response Team in an Inpatient Psychiatric Hospital

Poster Presenter: Christopher Green, Ph.D.

Co-Authors: William Jennings, Ph.D., Brad Wilson, B.S.

SUMMARY:

Aggressive behavior is a serious problem in psychiatric hospitals. This study is the first to evaluate an emergency crisis prevention response team within a state-run inpatient psychiatric hospital using quantitative methodologies. Addressing the issue of patient and staff safety related to psychiatric emergencies at the hospital has historically followed normative interventions. As a last resort, PRNs, seclusions, and mechanical restraints are implemented. Despite numerous discussions and initiatives aimed at reducing aggression and violence, employee injuries and patient aggression worsened year after year. The CPRT Team was established to assist patients and staff by preventing a code emergency from occurring and reducing staff injuries. There were 1360 psychiatric emergency codes called in 2020 compared to the 848 psychiatric emergency codes called in 2021. Staff injuries at the hospital also decreased from 133 in 2020 to 92

injuries in 2021. By having these additional trained staff of 10 individuals actively engaged in the acute care units, 24 hours a day, the numbers of hospital psychiatric emergency codes and staff injuries diminished. A paired t-test was conducted using SPSS to evaluate the impact of a Crisis Prevention and Response Team (CPRT) on Psychiatric Emergency Codes and Staff Injuries at Eastern State Hospital, in 2020 and 2021. Although the program is in its infancy, early results indicate a marked reduction in psychiatric emergency codes and staff injuries. Psychiatric emergency codes decreased by 37.64% from 2020 – 2021. The corrective measure has caused a positive shift in culture and safety within the hospital. Our study shows that there is a need for a specialized response team to de-escalate patient aggression before it happens and to reduce staff injuries associated with patient aggression.

No. 70

Acceptability of Group-Based Psilocybin-Assisted Therapy in Patients With Cancer and Major Depressive Disorder

Poster Presenter: Kabir Bahadur Nigam

Co-Authors: Paul Thambi, Manish Agrawal, Yvan Beaussant

SUMMARY:

Introduction: While research on psychedelic-assisted therapy (PAT) shows encouraging results for several psychiatric conditions, the current delivery model involving two therapists per patient limits its scalability. Group and/or simultaneous administration models might optimize delivery, but their acceptability is unknown. **Objective:** To explore the acceptability of a novel model of PAT, where cohorts of patients receive individual, simultaneous administration of psilocybin (25 mg) and where non-pharmacologic preparation and integration visits include alternating individual and group sessions. In this model, a single therapist conducts individual sessions while a lead therapist supervises all concurrent and group sessions. **Methods:** In this qualitative study, semi-structured interviews were conducted with 28 cancer patients having completed a phase II open-label trial evaluating the safety and efficacy of this model to treat cancer-related major depressive disorder. Template and thematic analyses

were sequentially used to identify themes pertaining to component constructs of acceptability: affective attitude, burden, ethicality, intervention coherence, opportunity costs, perceived effectiveness, and self-efficacy. **Results:** Group preparation improved the subjective sense of safety and comfort by generating a sense of connection amongst participants. Group integration helped to reinforce insights generated during the dosing session through validation, as well as helped to expand these insights through exposure to different perspectives. Simultaneous dosing was well-tolerated and created a shared experience through which patients could relate. This experience, in combination with the nature of group therapy, where sharing of individual vulnerabilities allows other members to gain a deeper understanding of each other, helped participants transcend individual and relational differences. Additional findings related to acceptability include the following themes: 1) the importance of the therapeutic framework, 2) the complementary value of individual sessions, 3) potential interferences related to the group/simultaneous setting, and 4) opportunities and challenges related to group size and how to structure interactions. **Discussion:** Our analysis supports that this model of group-based PAT is not only acceptable but might also increase safety and efficacy, suggesting promising ways PAT delivery might be scaled up for mainstream practice. We will also discuss critical conditions related to set and setting that acceptability was contingent upon, noting how to account for a variety of comfort levels in future applications.

No. 71

Finding the Finish Line: Improving Trainee Author Dropout in the Manuscript Review Process

Poster Presenter: Danielle W. Lowe, M.D., Ph.D.

Co-Authors: Syeda Razia Haider, M.D., Joshua Hamilton, M.D., Alexander Levit, M.D., Ph.D.

SUMMARY:

Scholarly activity and publishing help trainees develop skills under the ACGME core clinical competency of Practice-Based Learning and Improvement (1). However, the peer review process can be daunting for authors at all stages of their careers, resulting in many manuscripts failing to

achieve publication (2,3). This is particularly true for trainees with competing academic demands, who are often unfamiliar with the publishing process and its requirements for success. Since being established in 2006, the *American Journal of Psychiatry Resident's Journal* (AJP-RJ) has both provided trainees with the opportunity to author manuscripts early in their careers, and to serve on the editorial board to better understand and participate in the academic publishing process (4). Peer reviews are crafted to provide constructive feedback with concrete recommendations of how to improve manuscripts, and most submissions are given the opportunity to submit a revision. However, many authors never cross the first hurdle of resubmitting a revised manuscript. In this poster, we will describe the AJP-RJ manuscript retention rates through the review process and recent strategies implemented to further encourage trainee authors to pursue their publishing goals. Since 2019, the AJP-RJ has had a 26% manuscript acceptance rate. Forty-one percent of submissions that received an initial major revision decision never subsequently submitted a revision. Of authors that submitted a first revision, 45% were eventually published. During the 2021-2022 academic year, the editorial board identified a goal to improve manuscript retention. The board reviewed manuscripts that had not resubmitted first revisions within two months and sent personalized encouragement letters to authors with strong first drafts. Eighty-one percent of these authors subsequently submitted revisions, and 56% have been accepted for publication to date. Multiple authors responded to the letters stating they likely would not have moved forward without the direct communication. Overall, trainee authors have a high dropout rate in the review process, never reaching either rejection or acceptance. While the data is limited by selection bias and a small number of submissions over the last year, personalized encouragement letters appear to improve manuscript progression through the review process towards publication.

No. 72

Treatment-Seeking Attitudes and Barriers That Prevent Medical Students From Seeking Treatment for Mental Health Concerns

Poster Presenter: Urvashi Singh

SUMMARY:

Background: Research suggests that there is a high prevalence of mental health concerns, such as anxiety and depressive disorders, among medical students compared to the general population, and many students do not seek help for these concerns. This project investigated medical students' attitudes regarding seeking a mental health professional, investigate major barriers that would prevent them from reaching out to a mental health professional, and identify differences in the types of barriers that are more important to medical students in pre-clinical years (years 1 and 2 of medical school) vs students in clinical years (years 3 and 4 of medical school). **Methods:** A Qualtrics anonymous survey was sent online to M1, M2, M3, and M4 students to collect de-identified data. The survey included demographic questions about participant's school year and gender. Other questions were about their willingness to go to a mental health professional if a future mental health issue arises, and barrier statements for students to rate according to their importance level (1 = not important, 5 = extremely important) in preventing them from seeking help. **Results:** This analysis included 106 students, which included 27.4% M1, 31.1% M2, 20.8% M3, and 20.8% M4 students. There were a total of 62 M1 & M2 and 44 M3 & M4 in their respective preclinical and clinical groups. Only 43.6% of preclinical students vs 75% of clinical students said they would "probably go" or "definitely go" seek help from a professional if needed in the future ($p < 0.012$). When comparing barriers, preclinical students rated the barrier of "I'm not sure available treatments are very effective" at an importance level of 2.6 out of 5 compared to clinical students who rated it 2.0 out of 5 on average ($p < 0.015$). The preclinical group also rated the barrier "stigma of using mental health services" at an importance level of 2.6 out of 5 on average vs clinical students who rated it 2.0 on average ($p < 0.042$). Overall, the biggest barrier noted for all classes combined was "I don't think I have enough time." **Conclusion:** Medical students in preclinical years were associated with less willingness to seek mental health professionals for future mental health problems compared to clinical students. Preclinical students rated doubts about effectiveness of treatment as well as stigma about

using mental health services as more important barriers to seeking help compared to students in M3 and M4 years. Having less time to dedicate to mental health professionals was the highest barrier noted. These results shine light on the importance of providing destigmatizing and informative mental health education to students early on in preclinical years as well as to provide multiple options of mental health professional appointments with flexible timing to encourage students to seek treatment in a timely fashion.

No. 73

Wellbeing of Rural Healthcare Workers

Poster Presenter: Mansoor Malik

SUMMARY:

Introduction Rural healthcare workers face unique challenges (rapid turnover, high work volumes, poor opportunities for professional development, etc.). While there has been considerable emphasis on support for healthcare workers especially after COVID pandemic, there is relatively little attention devoted to the specific problems faced by rural healthcare workers. We present results from an anonymous needs-assessment survey of rural healthcare employees. **Methods** As part of HRSA funded grant to implement evidence informed support resources (RISE, MESH and Crisis Leadership training) for ambulatory and rural healthcare workers, we carried out needs assessment survey in two rural hospitals: Atlantic General Hospital and University of Maryland Shore Regional Health. The purpose of this survey was to gauge the level of wellbeing and resilience in healthcare workers.

Results: A total of 80 HCW (53%) responded to the survey, of whom 40% were ages 18-44, and 55% were 45 and older; 72.5% identified as White, 11.3% Black, 5% Asian, 1.3% American Indian/Alaska Native; 1.3% Hispanic/Latino. 79% identified as female, 13% male; 85% straight, 3% gay/lesbian. The most common HCW positions were nurse (31%), receptionist/scheduler/medical assistant (13%), and leadership administration (11%); 5% were physicians. 42.5% respondents reported experiencing mild or greater anxiety symptoms (aggregated data); 9% reported these problems made it very difficult at work, home, and/or socially; 31% reported

emotional exhaustion, 15% depersonalization, and 11.3% lower resilience. 6.3% respondents rated overall HCW well-being as "excellent," and 8.8% overall organizational resilience to stressful work-related events as "excellent." 18.8% strongly agreed that their organization was committed to employee wellness; 22.5% strongly agreed that they trusted organizational management. **Discussion: Rural healthcare workforce continues to be significantly affected two years post-COVID. In our sample, nearly half of respondents experienced anxiety symptoms, one-tenth reported decreased resilience, and one-third reported feelings of burnout. Less than a quarter reported trust in organizational management and commitment to employee wellness reflecting organizational culture. There is a continued need for rural healthcare organizations to support the resilience and well-being of their employees.**

No. 74

Etiology and Treatment of Mental Illness Among Pluralistic Spiritual Healers in Johannesburg

Poster Presenter: Michael Galvin

SUMMARY:

Mental disorders are among the most poorly treated illnesses in sub-Saharan Africa. Traditional Health Practitioners (THPs) are commonly consulted for both spiritual and medical ailments as a first line of care. It is estimated that 70-80% of South Africans consult THPs for the treatment of psychological ailments. Many studies have assessed African traditional health seeking behaviors but few have examined beliefs, practices, and behaviors of THPs themselves. Additionally, few studies have examined the perceptions of THPs regarding causes of mental illness and whilst we know little about their practices, THPs maintain a strong role in assessing and treating patients with mental illness. Semi-structured in-depth interviews were conducted with 18 THPs in Johannesburg, South Africa between January and May, 2022. Interviews were transcribed and translated into English. Data was managed using NVivo 12 software and thematically analyzed. The majority of THPs interviewed indicated that initiation as a THP was almost always preceded by a sickness accompanied by dreams/visions that represented an

“ancestral calling” to become a healer. Most THPs also trained as both sangomas – who healed according to traditional beliefs – and prophets – who healed according to Christian beliefs. This reflects a syncretic relationship between traditional African beliefs and Christianity. THPs interviewed generally perceived mental illness to be of supernatural causation, either as a result of bewitchment, a calling for the patient to become a THP themselves, due to angry ancestors, or due to natural causes. THPs identified eight primary treatments that they use for treating mental illness. Among these were: throwing of bones (*tinhlolo*) to start communicating with ancestors, steaming (*ukufutha*) to start the cleansing process, sneezing (*umbhemiso*) to forcefully dispel the spirit causing the illness, vomiting (*phalaza*) and laxatives (*mahlabekufeni*) to remove the spirits poisoning the body as well as animal sacrifice to purge spirits and communicate with ancestors. This is all followed by cutting (*ukucaba*) which is the final part of treatment that ensures that the evil spirit cannot return. THPs are able to adapt elements of Western and African beliefs into healing practices that span multiple religious and medical field. Thus, collaborative and decentralized healthcare services would be highly acceptable among such a pluralistic community. Future research should continue to document ways in which healers approach healthcare as well as investigate interventions that can foster collaboration between THPs and biomedical professionals.

No. 75

Usage of Mobile Application in Behavioral Health: A Systematic Literature Review and Future Research Directions

Poster Presenter: Sushma Srinivas, M.D.

Co-Authors: Naureen Syed, M.D., Rawia Fadul, Rayan Hassan, Nadir Abdelrahman

SUMMARY:

Background: During the past decade, the development in technology has targeted patients to utilize mobile applications to conduct behavioral health interventions. Despite the rising popularity and variation in mobile health apps, there is a vast but non-cohesive body of literature. This systematic review is designed to investigate the efficacy of

mobile apps in refining health behaviors and their effect on mental health. Methods: PubMed search was performed with keywords “Mobile Applications” AND “Health Behavior” AND “Exercise” AND “Mental Health.” Two reviewers extracted data independently, and the risk of bias assessment was completed. Out of the 229 studies that were qualified, after applying the inclusion criteria, twelve studies were finalized for our review. Results We have summarized the results of five studies below. In a study by Wiljer et al., participants in 2 groups, 240 in usual care and 241 in the intervention, were given a Thought Spot app. This study showed that there were no significant differences in help-seeking behaviors at six months in both the groups, but there was a gender difference seen with females being more open to seeking formal help (Wiljer et al., 2020). Rastogi et al. studied a health care module that included emails and a Fitbit tracker that recruited Cancer survivors with 2.0±1.5 years from diagnosis. The intervention revealed moderate-to-large improvements in physical health, sleep impairment, mental health, and exercise self-efficacy (Rastogi et al., 2020). Roberts et al. analyzed fifteen studies to see the effect of digital health change behavior intervention in cancer survivors. There were improvements in moderate-vigorous physical activity, overall body mass index, and fatigue. But in cancer-specific quality of life and mental health, no change was seen (Roberts et al., 2017). Hahn et al. examined the risk of eating disorders in undergraduate women via a dietary monitoring app, MyFitnessPal. Although the adherence was high, in the intervention group, no changes in quality of life, eating disorder risk, mental health, body satisfaction, diet, exercise, screen time, or other forms of weight-related self-monitoring were seen (Hahn et al., 2021). In a study by Schrier et al., They used mobile health tracking and a game to increase physical activity among ovarian cancer survivors. Twenty-four participants showed 94% tracker adherence. At 5.5 months follow-up, most people said the study motivated them to increase their activity. Mean steps increased from 6210.7 to 7643 during the 12-week intervention (Schrier,2021). Conclusion- Overall, we can conclude that in this digital age, mobile applications and digital health apps are an effective way to motivate people to improve their physical activity, health, and in turn, mental well-

being. However, most studies showed short-term results, suggesting the need for more head-to-head longitudinal studies so that health behaviors can be maintained in the longer term.

No. 76

Consulting Psychiatry When Placing an Automatic Implantable Cardiac Defibrillator: A Life-Altering, Cost-Saving Preventative Measure

Poster Presenter: Christina Raquel Roldan

Co-Authors: Elizabeth Anne Deckler, M.D., Edmi Cortes Torres, M.D.

SUMMARY:

Background: Research has shown that new onset of depression and anxiety in patients with automatic implantable cardiac defibrillators (AICDs) is common. One study concluded that 14.5% of patients with an AICD developed depression within 24 months of receiving the device (Pedersen et al., 2021). Another study found that AICD placement in patients with chronic heart failure improved anxiety (Kindermann et al., 2021). In our report, we highlight a case of a patient who psychiatrically deteriorated after AICD placement, begging the questions of whether AICDs *decrease* anxiety in patients with pre-existing heart disease but *increase* those feelings in patients with new onset disease. We also highlight the necessity for a multidisciplinary treatment in such cases.

Methods: The case presented is of a 35-year-old woman with no past psychiatric history however, with a significant medical history of myocarditis and ventricular arrhythmias which resulted in AICD placement. The patient presented to the University of Miami Hospital with a complaint of syncope. Our consultation-liaison psychiatry service was consulted for “anxiety”, and we found the patient presented with major depressive disorder which had started after her father’s death 8 months prior. However, her mental health condition deteriorated rapidly 5 months before our encounter when she developed myocarditis and had an AICD placed. She had never consulted a psychiatrist. The patient endorsed voluntary admission to the hospital due to safety concerns – the staff could “watch her” and “make sure that her AICD does not activate.” She admitted to “hold[ing] back her anxiety” and was terrified that her heart rate would increase, thereby triggering her

AICD, as it had once in the past when she missed a dose of her cardiac medication. That episode that caused her tremendous physical pain and since then, she feared spontaneous device activation. Of note, the patient did not have acute cardiac issues during her admission. **Discussion:** The case discusses a patient who experienced dramatic worsening in her psychiatric condition after AICD placement. The constant fear of potential device activation and pain left her chronically anxious, distressed, and anhedonic, in agreement with current literature (Karczewska and Mlynarska, 2021). Access to outpatient psychiatric care and treatment would likely have prevented the hospital admission.

Conclusions: Although our case study patient may be medically complicated, she is not psychiatrically unique. We have reason to believe that all patients who undergo AICD placement should be encouraged to seek mental health services. The placement of a foreign device requires ongoing psychiatric and/or psychological follow-up to prevent future unnecessary hospitalizations.

Tuesday, May 23, 2023

Poster Session 11

No. 1

Feasibility of a Community-Based Peer Support Group for Formerly Incarcerated People

Poster Presenter: Lauren Nguyen

Co-Authors: Thad Tatum, Will R. Boles

SUMMARY:

The disproportionate burden of mental illness among justice-involved populations is an unfortunate reality. Incarceration itself perpetuates symptoms of mental illness by removing people from society, eliminating their meaning and purpose, and placing them in conditions often marked by overcrowding, solitary confinement, and routine exposure to violence. As a result, formerly incarcerated people (FIP) have a very high prevalence of psychiatric morbidity and there is a significant positive association between the high rates of potentially traumatic events during incarceration and PTSD outcomes.¹ Through expressive, emotional, informational, and materially-based means, peers (i.e. other FIP) are powerful in that they can provide

a unique form of support that has been shown to reduce behaviors leading to recidivism, mediated through the strong bonds formed as a result of mutual trust between FIP and their peers. While studies support the need for trauma-informed care and mental health counseling during the reentry period,³ there is little known about how a peer support program, particularly one led by FIP, could be developed and established. Many existing reentry services do not directly focus on mental and behavioral health. Meanwhile, many state-funded clinical services focus only on people with specific diagnoses, such as substance use disorders, rather than those with a history of justice-involvement. A peer-led support group, the Formerly Incarcerated Peer Support (FIPS) Group, has been focusing on the unique challenges facing those coming home from prison since 2015. The FIPS Group now includes a network of more than 150 stakeholders, from participants, referral organizations, community partners, academic centers, clinicians, student volunteers, advocacy groups and more. In this poster, we detail how medical, public health, activist, and formerly incarcerated community stakeholders collaborated to (1) establish and evolve the FIPS Group, (2) develop a formal curriculum of twelve specific topics in reentry, and (3) evaluate the program.

No. 2

Pseudocommando: The Lone Wolf

Poster Presenter: Yasir Masood, M.D., M.P.H.

SUMMARY:

Introduction: Gun violence and mass shootings in the United States have seen a remarkable increase over the past few decades, making this a crucial area of research in the field of public health. A better understanding of risk factors associated with such violent behaviors could provide an initial key to possible intervention strategies. The paper focuses on mass homicides suicides where perpetrators indiscriminately kill people due to their preexisting psychopathology with no personalized agenda. Methods most prominently used include multiple firearms by males who have experienced challenging setbacks in their daily lives. **Methods:** In our analysis we identified autogenic mass homicide suicide as a

mass murder involving more than ten casualties resulting from a single event. The event was not work related or adversarial and the preparator killed with a motivation directed to the people they did not know. Data was obtained from Gun Violence Archive and Mother Jones Investigation between 2010–2019. A review of the literature was performed through searches in PubMed and MEDLINE, Ebsco and ProQuest in the period January 2010 to December 2019. **Results:** Our findings highlight the importance of contributing risk factors to describe autogenic mass homicide suicide and those are: location, perpetrator psychopathology, acute and chronic stressors, relationship to the victim, motive, weapon, and outcome. We found in our analysis that all incidents occurred in public settings or school during morning hours. All the perpetrators were males with median age of 35 years. The majority of mass murderers had hostile fantasies, often revenge to kill with a motivation directed to people they did not know. It has been shown that these offenders have a lengthy history of disappointment, shame, and failure. In school shootings bullying by peers was commonly noted. The weapons most commonly used were handguns and rifles, and the outcome most commonly reported was death by suicide. **Conclusion:** Mass shootings tend to spread fear and anxiety among the general population. These findings highlight the need for a clear and consistent definition of autogenic mass homicide suicide. Individuals who take part in mass murderers have been frequently found to possess atypical personality traits.¹ Resources should be improved particularly at state level and school, with a focus on building capacity to cope with frustration and conflict, mental health and mental wellbeing. In addition, external social environment with strong social support can have beneficial effects in shaping a personality and individual well-being thus preventing negative outcomes.² Awareness of the risk factors could lead to an improvement in understanding of mass shooting facts, but also arguments to policymakers for legislation that could alleviate the burden that mass shootings place on society.³

No. 3

Addressing Therapeutic and Educational Gaps in Working With Lgbtqia+ Youth With Mental Health Issues

Poster Presenter: Chelsea R. Cosner, M.D.

Co-Authors: Tripti Soni, Mohammad Murtuza, Joshua Moss

SUMMARY:

Objectives: LGBTQIA+ youth disproportionately suffer from mental health issues and feelings of isolation due to the minority stress model. Yet, most psychiatry trainees report that they do not have adequate exposure to learning about LGBTQIA+ youths' mental health needs. The aim of this project was: To address LGBTQIA+ youths' mental health needs through creating a therapeutic group environment. 2) Create psychiatrists more prepared to serve the needs of LGBTQIA+ youth through case-based learning modules and supervised real-world experiences working with LGBTQIA+ adolescents. Methods: Forty-five learners from the department of psychiatry at the University of Maryland Medical Center filled out a pre-survey prior to exposure to a case-based learning module on LGBTQIA+ people's mental health and were asked to fill out a post survey after the module and twenty-seven completed a post survey. Learners were assessed on comfort, exposure, and knowledge of LGBTQIA+ mental health topics on a 1 to 5 likert scale with 1 being lowest score and 5 being highest score before and after exposure to the teaching module. Statistics were analyzed with an upaired t-test. Results: Compared to pre-exposure to the case-based learning module mean overall scores was 2.273, median 2 and SD 1.115 across all scores ($p = 0.0005$). For post-exposure: mean was 3.25, median 3, and SD 1.09. Compared to pre-knowledge: mean was 2.659, median 3, and SD 0.851. For post-knowledge: mean 3.63, median 4, SD 0.823 ($p= 0.0001$). Compared to pre-comfort mean was 3.182, median 3, and SD 1.072. For post-comfort mean was 3.667, median 4, and SD 0.943 ($p= 0.0562$). Compared to pre-competency mean was 2.791, median 3, and SD 1.001. For post-competency mean was 3.357, median 3, and SD 0.934 ($p=0.02$). Overall, 96.3% of learners felt they learned things that would impact LGBTQIA+ patient care. Conclusion: The case-based learning module was well received with participants

reporting statistically significant improvements in knowledge and competency in working with LGBTQIA+ people with mental health issues. Areas of expansion for the project included implementation on a larger scale and having more structured in person supervision for experiences working with LGBTQIA+ people with mental health issues. To address the lack of structured real-world learning opportunities for psychiatry trainees, and to serve the needs of the community, we created a supervised therapeutic group with LGBTQIA+ participants aged 14-18 co-facilitated by child and adolescent psychiatry fellows.

No. 4

Trajectories of Depression in Different Groups of Transgender and Gender Diverse Youth and Its Predictors

Poster Presenter: Andre Gonzales Real

Co-Author: Stephen Russell, Ph.D.

SUMMARY:

Background: Transgender and Gender Diverse (TGD; individuals whose gender identity and/or expression do not align with their sex assigned at birth) youth are at higher risk for compromised mental health¹. Experiences of victimization have been proposed as one of the main factors responsible for this negative outcome². In contrast, parental support functions as a protective factor³. Although cross-sectional research has found that TGD youth present high levels of depression, which is associated with experiences of victimization⁴ and low parental support, only little research has explored this association longitudinally. **Methods:** Data come from a community cohort sample of 78 TGD youth (mean age= 19.06; 60.3% female at birth), recruited in two U.S. cities (one in the Northeast, and one in the Southwest). Participants were 15 to 21 years old and were followed over a 3.5 year period (4 assessments every 9 months). Given that TGD participants could identify with different gender identities at each wave, participants were categorized in three different patterns. TGD groups were: 1) "TGD – TGD" (if participants identified as a TGD identity from wave 1 to wave 4; $n=28$); 2) "Cisgender – TGD" (if participants identified as cisgender at wave 1, but at wave 4 identified as TGD; $n= 19$); and 3) "TGD –

Cisgender" (if participants identified as TGD at some point of the study, but identified as cisgender at wave 4; n=31). Measures included frequency of lifetime (measured at wave 1) and recent (measured at waves 2-4) sexual orientation victimization (six items, e.g. verbal, physical, or sexual victimization due to being LGB)⁵, parental support (12 items, subscale of Child and Adolescent Social Support Scale)⁶ and depressive symptoms, using the Beck Depression Inventory for Youth (BDI-Y)⁷. **Results:** Analyses from Hierarchical Linear Modeling indicate that although participants had decreasing levels of depression over time ($b = -1.73$, $SE = .76$, $p = .022$), depression trajectories did not differ by TGD groups. While recent victimization was positively associated with depression over time ($b = .69$, $SE = .25$, $p = .005$), lifetime victimization was not ($b = .30$, $SE = .32$, $p = .205$). In contrast, parental support at wave 1 was negatively associated with depression over time ($b = -.17$, $SE = .06$, $p = .007$). **Conclusion:** There is no evidence of differences in mental health trajectories for youth with different patterns of gender identity development across time. Findings suggest that gender identity exploration in youth is not detrimental to mental health. Further, TGD youth had decreasing levels of depression over time, similar to cisgender youth⁸. Our findings extend previous research by showing that parental support seems to have a protective effect across time, whereas only recent (but not lifetime) victimization has an impact on depressive symptoms in youth. Results highlight the need for more longitudinal research to assess mental health in non-clinical populations of TGD youth.

No. 5 Health Disparities in Men Experiencing Intimate Partner Violence

*Poster Presenter: Mini Elizabeth Jacob, M.D., Ph.D.
Co-Authors: Laura LaPlante, Rana Elmaghraby, M.D.*

SUMMARY:

Background: Despite the notion that victims of Intimate Partner Violence (IPV) are predominantly female, emerging data suggests that men too are victims of IPV in increasing numbers and there might be more gender symmetry than previously recognized. Research on violence perpetrated

against men has been limited and there is limited data on the health characteristics of this population and their access to healthcare services. We aimed to evaluate healthcare disparities among men from marginalized populations experiencing IPV in the United States as compared to the general population and attitudes of healthcare providers to male victimization in IPV using a comprehensive literature review, with the future goal of assessing and addressing these disparities in healthcare settings. **Methods:** A comprehensive literature search using multiple search terms under the following categories: IPV, men/male, underserved/disparities/barriers, healthcare/clinical settings was performed. This search was limited to articles in English and United States based studies. Articles on pediatric, geriatric and military populations were excluded. Two researchers reviewed the abstracts for preliminary screening. A third researcher independently did a second screening of the articles. Finally, articles that were included were reviewed and summarized. **Results:** 79 articles met our initial inclusion and exclusion criteria. During further review, we excluded 32 articles. Preliminary results show that men are less likely to report victimhood, and are less likely to access care and be provided resources when they are experiencing IPV. Being unemployed and residing with children were barriers to accessing formal resources for help. Regarding perceptions, research indicates that violence perpetrated against men is perceived as less serious and more justified. There were no studies on physician or clinician attitude towards men with IPV, indicating an area of need in research. Final analysis is currently underway. **Conclusion:** We anticipate that there is a gap in access to care for men, particularly of minority backgrounds, who experience IPV. We anticipate further awareness training will be necessary for healthcare professionals to identify those healthcare disparities and provide interventions including access to resources. Our future direction is to create a survey to capture both patient and clinician attitudes towards IPV in men and access to resources.

No. 6 A Painful Long Wait: Availability of Psychiatry Outpatient Care in the US

Poster Presenter: Erin McDaid

Lead Author: Ching-Fang Sun

Co-Author: Robert L. Trestman, M.D., Ph.D.

SUMMARY:

Objective: To identify potential barriers to care, we examined the general psychiatry outpatient availability in the US during the COVID-19 pandemic, including in-person appointments and telepsychiatry, comparing results between insurance types (Medicaid vs. private insurance), states and urbanization levels. **Methods:** This mystery shopper study investigated 5 US states selected according to Mental Health America Adult Ranking and geography to represent the US mental health care system. We stratified sampled clinics across 5 selected states by county urbanization levels. A simulated adult patient sought initial evaluation for general mental health in a semi-scripted format. Calls were made during 05/2022-07/2022. We collected data including contact information accuracy, appointment availability, wait time and related information. **Results:** Altogether, 948 psychiatrists were sampled in New York, California, North Dakota, Virginia, and Wyoming with 864 actual calls to obtain a psychiatric evaluation being made due to list duplication. Overall contact information accuracy averaged 85.3% with state-by-state variation. Altogether, 18.5% of psychiatrists were available to see new patients with a median wait time of 67.0 days for in-person appointments and 43.0 days for telepsychiatry appointments ($p < 0.001$). The most frequent reason for unavailability was provider not taking new patients (54.0%). Mental health resources were unevenly distributed, favoring urban areas. **Conclusions:** Psychiatric care is severely restricted in the US during the COVID-19 pandemic with evidence of low accessibility and long wait times. Transitioning to telepsychiatry represents a potential solution for provider shortages and geographic barriers but does not resolve the concerning shortage of psychiatric outpatient care.

No. 7

Neocolonial Power Differentials in Refugee Psychiatry: Benefits of Local Recognition in the Context of Community-Led Interventions

Poster Presenter: Agasthya Vedre Kyanam, B.S.

SUMMARY:

The recent global surge of refugees has necessitated psychiatric researchers to address multifaceted needs, and the nuanced epidemiology of mental disorders in contexts of displacement. Many refugee psychiatrists call for increased attention towards the social determinants of mental health. However, dominant research and practice paradigms in global refugee psychiatry are rooted in the neocolonial dialectic between charitable aid and social dependence, rather than liberatory frameworks of self-determination, independence, resilience, and anti-imperialism, the former of which is abetted by bioessentialist paradigms of mental health. Participatory, critical, social epidemiological frameworks of mental health, despite facilitating demonstrably better outcomes for refugees than biomedical, individualistic epistemologies, have been sidelined due to their incompatibility with the neocolonial projects of NGOs and the imperial core of global psychiatry. Previous research casts doubt on the latter's sustainability and efficacy in resource-poor environments. The Global Refugee-led Network (GRN) has documented countless cases of refugee leaders being excluded from psychiatric systems. In this paper, a mixed-methods review approach of 34 studies on global psychiatric barriers in contexts of displacement, and psychiatric calls to action by the UN and WHO, demonstrated that participatory intervention development increases patient adherence, long-term outcomes, and mental resilience. This project found that self-reliance and community psychiatry outcomes have been degraded through NGO-imported economic policy, running contrary to the UN's goal of acknowledging the "importance of empowering local organizations" in refugee-led care networks. It was also found that the substantial progress made by local refugee physician-leaders and community organizations in psychiatric treatment- in a variety of settings- have not been sufficiently integrated into the methodological orthodoxy of refugee psychiatry, nor sufficiently assessed empirically, and that NGO foundations systematically exclude autonomous refugee care efforts, and that these power relations define poorer psychiatric outcomes and drive mental health disparities.

No. 8

WITHDRAWN

No. 9

Comparison of Eating Disorder Prevalence and Related Psychopathology Among a National Sample of Rural, Suburban, and Urban Online Screen Respondents

Poster Presenter: Jillian Shah

Co-Authors: Kexin Shang, Laura D'Adamo

SUMMARY:

Background: Eating disorders (EDs) are disproportionately investigated among urbanized populations, which may limit recognition of EDs in rural areas. We partnered with the National EDs Association (NEDA) to disseminate an online EDs screen across the U.S. In this study, we compared differences in ED prevalence by rurality among adult NEDA screen respondents. Method: Data were collected between 6/1/2020-6/1/2022 from adult respondents across the U.S. who completed the NEDA online screen. Respondents' ZIP codes were classified into three levels: rural area (RA), suburban area (SA), and urban area (UA). Holm-corrected Chi-square tests, ANOVAs, and regressions were conducted to compare rates of ED behaviors, probable ED diagnoses, treatment receipt, treatment-seeking intentions, and suicidality. Results: 194,033 respondents (91% UA, 6% SA, 3% RA) completed the screen. Bulimia nervosa and Binge ED were more prevalent in RAs (11% and 8%) vs. SAs (9% and 7%) and UAs (9% and 6%; $ps < .001$), and Anorexia nervosa was more prevalent in RAs (7%) and UAs (7%) vs. SAs (6%; $ps < .05$). Respondents from RAs reported more episodes of binge eating, vomiting, and fasting, and higher levels of weight/shape concerns and suicidality, followed by those in SAs and UAs ($ps < .001$). Current treatment rates were lower in SAs (2.3%) versus UAs (2.6%) and RAs (2.7%; $ps < .001$). There were no differences by urbanicity in subclinical EDs or purging disorder prevalence, treatment seeking intentions, or frequency of excessive exercise or laxative/diuretic use. Conclusions: This study provides evidence of higher rates of some ED behaviors, diagnoses, and suicidality among RAs compared to SAs and UAs, despite comparable intentions to seek help.

Treatment receipt is suboptimal across all areas. Given the elevated rates of certain EDs identified in RAs coupled with the barriers to mental health treatment disproportionately affecting rural populations, specialized attention to ED detection, treatment seeking, and treatment receipt in rural communities is needed.

No. 10

Treatment of Adults With Eating Disorders: Effect of TMS on Depression Severity During Eating Disorder Treatment

Poster Presenter: Theodore Weltzin, M.D.

Co-Authors: Laura Briz, M.D., Sophianne Morgan, M.D., Howard Weeks, M.D.

SUMMARY:

Eating disorders remain challenging illnesses with significant rates of depression and increased suicidal symptoms (Udo, 2019). Compared to non-eating disorder groups, people with eating disorders are more likely to have depression. A diagnosis of depression predicts an increased rate of treatment dropout in eating disorder patients. Transcranial magnetic stimulation (TMS) is an approved treatment for Treatment Resistant Depression (TRD). Neuroimaging studies suggest common alterations in brain regions known to influence emotional regulation in depression and eating disorders patients. TMS has a positive impact on both core eating disorder symptoms (including food avoidance and body weight) and mood symptoms in patients with severe and enduring anorexia nervosa (Dalton, 2018; Woodside et al, 2021). **Methods:** This study describes our experience with TMS in a transdiagnostic sample of treatment-seeking adults with eating disorders and co-occurring depression. Average patient age was 25.8 years. All patients had a primary eating disorder diagnosis and secondary depression diagnosis (MDD $n=39$, Bipolar Depression $n=1$). During the course of eating disorder treatment patients received up to 36 TMS treatments (3-minute rTMS Theta burst protocol). Location of LDLPFC was determined using BA9 BA8 BA 43 Location system. Treatment dose was then set at 120% of the MT. Depression severity was determined prior to each TMS treatment using the Quick Inventory of Depression Symptomatology (QIDS). Treatment

effect was determined by comparing QIDS score at initial treatment to QIDS score at last treatment.

Results: A total of 40 patients admitted to a residential or partial hospital eating disorder treatment program (AN n=19; BN n=5; ARFID n=2; OSFED n=13; ED unspecified n =1) received TMS 5 days a week and completed an average of 25.6 treatments. Using a paired t-test last-treatment QIDS scores were significantly lower than initial QIDS scores (n=40, 18.55 ± 3.51 vs 12.07 ± 4.46, t 10.14, P < 0.00001). Changes in depressive severity were examined in subgroups of patients based on admission BMI. All groups showed significant reductions in depressive severity at the end of TMS treatment (BMI < 18.5, n = 10, QIDS 17.1 vs 11.2, p=6.39E-05; BMI 18.5 to 25, n=19, QIDS 19.0 vs 12.8; p=6.72E-06; BMI > 25, n=11, QIDS 18.8 vs 11.1, p=0.000124). Treatment effect was similar in patients with AN (n=19, QIDS 18.9 vs 12.9, p=1.71E-05) and OSFED (n=13, QIDS 18.4 vs 11.8, p=2.81E-05). TMS appears to be well tolerated and potentially effective in reducing depressive severity in a treatment-seeking eating disorder population irrespective of diagnostic category or admission BMI. Future studies should include comparison to a similar treatment group not receiving TMS and longer-term follow-up to determine the impact of TMS for depression on the effectiveness of eating disorder treatment.

No. 11

Impact of the Covid-19 Pandemic on Postpartum Depression Screening Rates and Diagnoses

Poster Presenter: Kimberly Hower, D.O.

Co-Authors: Kathryn Ridout, M.D., Ph.D., Belia Roybal, Julia Wei, Lyndsay Avalos

SUMMARY:

Abstract Objective: As approximately 15% of individuals suffer from postpartum depression (PPD), the American College of Obstetrics and Gynecology (ACOG) recommends depression screening postpartum. Depression screening early in the postpartum period is associated with improved depressive outcomes. PPD outcomes and screening may have been impacted by disruptions in medical care and psychosocial stress associated with the early COVID-19 pandemic. This study aimed to evaluate the relation between the COVID-19

pandemic, PPD screening rates, and PPD diagnoses.

Methods: Retrospective, cohort study comparing PPD screening rates and diagnoses during the “pre-pandemic” (September 10, 2017 to September 10, 2019, N=44,619) to the “pandemic” period (March 11, 2020 to October 5, 2021, N=20,447) in a large, community-based healthcare system. The study looked at PPD screening rates through both virtual and in-person visits, and compared the severity of the diagnoses between the two time periods. Comparisons between time periods were made using chi-square tests. **Results:** There was a significant rise in virtual PPD screening (34.9% post-pandemic vs 1.9% pre-pandemic, p < .001) and decrease in office screening (29.6% post-pandemic vs 71.6% pre-pandemic, p < .001). PPD screening rates decreased overall in the post-pandemic compared to the pre-pandemic period (74% versus 64% , p < .001). Fewer PPD screening occurred within 12 weeks of delivery (62.5% in the post-pandemic versus 72.5% in pre-pandemic period, p < .001). There were higher rates of PPD diagnoses in the post-pandemic versus the pre-pandemic period (9.3% vs 7.5%, p < .001). A clinically significant difference in PPD severity was not observed between time periods. **Conclusions:** The early COVID-19 pandemic was associated with decreased PPD screening and increased PPD diagnoses rates. These differences may relate to dramatic changes in postpartum care characterized by a rapid telehealth care transition. This data can guide future work examining how healthcare delivery changes impact postpartum care and highlight the need for increased PPD screening during a global pandemic. **Key words:** coronavirus disease 19, postpartum depression, depression, anxiety, postpartum depression screening

No. 12

The Effect of Social Isolation Due to the Covid-19 Pandemic on the Mental Health of Geriatric Patients

Poster Presenter: Kalyan C. Kandra, M.D.

SUMMARY:

Title: The effect of social isolation due to the COVID-19 pandemic on the mental health of geriatric patients and their awareness of resources to cope with the stress. **Introduction:** Newly emerging viral

diseases have become a major public health threat around the world in recent years. The most recent and ongoing viral disease caused by the novel Coronavirus continues to cause severe burden on the entire world. Pandemics, such as Coronavirus Disease 2019 (COVID-19), can lead to substantial fear, insecurity, and uncertainty. These could be more prominent in people with mental health disorders as having a prior history of psychiatric disorders can be a risk factor for increased psychological distress after going through any disaster-related traumatic experience. People with history of mental health disorders could benefit from increased support during a pandemic. **Aim:** An observational study was conducted on geriatric patients to understand the adverse effects of social isolation due to the pandemic on their mental health and on their awareness of the available resources to cope with the stress. **Method:** The study included a survey questionnaire that was administered to 50 geriatric patients at the Geriatric psychiatry outpatient clinic at an academic medical center. The survey mostly consisted of “Yes” or “No” response-based questions. No other patient information was collected except for the age and sex of the patient. **Results:** 56% of the participants said that their mental health was affected due to the social isolation from the pandemic and 44% of the participants said that their mental health was not affected. Statistical significance was seen in the participants about being socially isolated and lonely during pandemic. Worsening of mood and anxiety, sleep disturbances, loss of interest, appetite changes, weight issues and concentration difficulties were the common symptoms reported in the affected patient population. Statistical significance was also found for symptom worsening compared to pre pandemic period and for awareness of lack of resources. About 60% of participants said they were not aware of the resources to cope with stress during the pandemic. **Conclusion:** The study showed that the mental health status was affected in a significant number of participants due to the social isolation from the COVID 19 pandemic. Majority of the participants were also not aware of the resources that could help them cope with the stress from the social isolation.

No. 13

Antibiotic Exposure and Depression Incidence: A Retrospective Cohort Study of Korean Population

Poster Presenter: Jaewon Lee, M.D., M.P.H.

Lead Author: Sun Jae Park

Co-Authors: Young Jun Park, Seongsong Jeong, M.D.

SUMMARY:

ABSTRACT Background Burgeoning studies have recently revealed the relationship between gut dysbiosis and mood disorders, and, therefore, there have been concerns requiring further studies over the risk of antibiotic exposure for depression. Our study aimed to investigate this critical risk using nationally representative population data to expand epidemiological evidence on this topic. **Methods** A retrospective cohort study was conducted using data from 350,189 individuals aged 40 and older who underwent health examinations in 2007 and 2008 through the National Health Insurance Service (NHIS) and subsequently registered in Health Screening Cohort (NHIS-HEALS) in South Korea. Cox proportional hazards regression modeling was used to assess the adjusted risk of depression incidence between 2009 and 2013, given cumulative antibiotic exposure from 2004 to 2008. Data on antibiotic exposure was obtained through the NHIS data system, which enabled a study on the nationally representative population. **Results** Compared with the antibiotic non-user group, those with cumulative antibiotic exposure of 1-29 days (aHR 1.35; 95% CI 1.17-1.56), 30-89 days (aHR 1.80; 95% CI 1.56-2.09), 90-179 days (aHR 2.16; 95% CI 1.82-2.56), and ≥ 180 days (aHR 2.85; 95% CI 2.30-3.54) had increased risk for developing depression in a duration-dependent manner (P for trend <0.001) after adjusting for potential confounding factors including comorbidities and lifestyle behaviors. In addition, participants prescribed five or more antibiotic classes had a higher risk of depression than those prescribed only one class (aHR 1.45; 95% CI 1.22-1.73; P for trend <0.001). Stratified analyses by age, sex, disability, comorbidity, obesity, cancer, cardiovascular and infectious disease diagnoses showed a similar tendency of treatment-duration dependent associations with no interaction terms found in the study. **Conclusion** Antibiotic exposure was found to be associated with an increased risk for depression in a treatment-duration dependent

manner in our study using nationally representative population data consistently after adjusting for confounding factors. These consistent positive associations raise concerns about the adverse effects of prolonged antibiotic exposure at the psychiatric dimension, which should be considered in clinical settings when a clinician considers a patient's long-term benefits and risks. Studies on mechanisms and modes of depression incidence after antibiotic exposure are warranted for further applications in clinical settings.

No. 14

Daily Digital Screening for Depression and Insomnia: A Validation Study for Modified Patient Health Questionnaire-2 and Insomnia Severity Index-2

Poster Presenter: San Lee

Co-Author: Jae Won Oh

SUMMARY:

Introduction: Patient Health Questionnaire (PHQ-2) and Insomnia Severity Index (ISI-2) are screening assessments that reflect the past two weeks of experience for depression and insomnia respectively. Retrospective assessment has been associated with reduced accuracy due to recall bias. This study aimed to increase the reliability of the responses by validating the use of PHQ-2 and ISI-2 for daily screening. **Methods:** A total of 167 psychiatric outpatients at the Yongin Severance Hospital (63 males and 104 females), with a mean age of 35.1 years participated in this study. Participants used a mobile application ('Mental Protector') for a period of 4 weeks and rated their depressive and insomnia symptoms daily on the modified PHQ-2 and ISI-2 scales. The validation assessments were conducted in two blocks, each with a fortnight's response from the participants. The modified PHQ-2 and ISI-2 were evaluated against the conventional scales for depression and insomnia. **Results:** According to the sensitivity and specificity analyses, an average score of 3.29 on the modified PHQ-2 was considered valid for screening for depressive symptoms. Likewise, the ISI-2 was evaluated with Insomnia Severity Index, and a mean score of 3.50 was determined as a valid threshold for insomnia symptoms when rated daily. The internal consistency and test-retest reliability for

both modified PHQ-2 and ISI-2 were satisfactory.

Conclusion: This study is one of the first to propose a daily digital screening measure for depression and insomnia delivered through a mobile application. The modified PHQ-2 and ISI-2 are predicted to be strong candidates for daily screening for depression and insomnia, respectively. This work was supported by Institute of Information & communications Technology Planning & Evaluation grant funded by the Korea government.

No. 15

Association of Baseline Plasma Inflammatory Markers With Follow-Up Depression Severity and Suicidal Ideation Symptoms: 6-Months Prospective Study

Poster Presenter: Aiste Lengvenyte, M.D.

Co-Author: Robertas Strumila

SUMMARY:

Background. Variations in inflammatory and plasticity markers have been associated with depression severity and suicidal ideation¹⁻³. However, the majority of extant studies are cross-sectional, entailing the lack of value in predicting the persistence, resurgence or emergence of depressive symptoms or suicidal ideation. The present study aimed to see whether baseline biomarkers are prospectively associated with depression severity, its subtypes, and suicidal ideation at a 6-month follow-up. **Methods.** This is a subanalysis of N = 149 treatment-seeking individuals with mood disorders that were followed-up for 6 months after a baseline evaluation for a larger cross-sectional study. Peripheral blood was drawn at baseline, and 39 biological markers covering immune, inflammatory, and plasticity were measured with the Multiplex analysis, analyte values were ln-transformed and standardized. Depressive symptoms and suicidal ideation were measured with the Inventory of Depressive Symptomatology, Clinician Rated (IDSC-30) and Columbia Suicide Severity Rating Scale (C-SSRS). 10-fold cross-validated Elastic Net was applied to select the markers most strongly associated with baseline and follow-up depression severity and suicidal ideation, followed by separate binary logistic or multivariate linear regression analyses for each outcome and pre-

selected marker. P-values (threshold Bonferroni-corrected $p < 0.05$, two-sided) were obtained with 1000-iteration bootstrapping. **Results.** In models adjusted for key covariates, low plasma serotonin level was associated with baseline depression severity and presence suicidal ideation. Baseline plasma IFN-alpha was associated with presence of suicidal ideation during the follow-up, while IFN-alpha, IL-1beta, and serotonin levels were associated with the presence of suicidal ideation at 6-month evaluation, but associations between serotonin and IFN-alpha lost significance after adjustment for baseline depression severity and treatment. Follow-up depression severity was associated with high baseline IFN-alpha and low baseline orexin-A, independently of anthropometric variables, baseline depression and suicidal ideation severity, with stronger specific associations between baseline IFN-alpha and follow-up anxious symptoms severity, and baseline orexin-A and follow-up atypical symptom severity. Neither of these markers was associated with melancholic symptoms severity. **Conclusion.** Baseline IFN-alpha and IL-1beta predicted 6-months follow-up suicidal ideation and anxious symptoms severity, whereas baseline IFN-alpha and orexin-A predicted depression severity, with specific effects on anxious and atypical, but not melancholic symptoms, in treatment-seeking individuals. The present findings, when replicated, could be used to predict patient outcomes and guide treatment. The study was supported by grants from the CHU Montpellier, Etablissement Français du Sang– EFS, and BioPsy Labex.

No. 16

'Work Is a Motivator in Life': Strategies in Managing Work Participation Among Highly Educated Employees With Depression

Poster Presenter: Cecilie Nørby Lyhne

SUMMARY:

BACKGROUND: Work participation among employees with depression is hampered due to cognitive impairments. Although studies show higher levels of work disability among people with a lower education, highly educated employees may encounter specific challenges in fulfilling their work role due to the cognitive impairments of depression,

as they often perform cognitively demanding jobs. There is little knowledge about their challenges and opportunities with regard to work participation. **OBJECTIVE:** To investigate how highly educated employees with depression manage work participation by focusing on their views on opportunities and challenges in fulfilling their work role. **METHODS:** Eight individual interviews with highly educated employees with depression were conducted. Transcripts were analyzed using qualitative content analysis. **RESULTS:** The analysis revealed four categories: struggling with acknowledging depression and disclosure; fear of being stigmatized at work; work is a motivator in life; and striving to fulfill the work role at the expense of private life activities. **CONCLUSIONS:** Highly educated employees with depression need guidance regarding the disclosure of information about health issues and work ability. To successfully manage their work role, they need a clear plan with outlined tasks, demands and goals. Healthcare professionals and workplaces may support them in setting limits with regard to work tasks and working hours. This study was supported by Aarhus University, Department of Public Health.

No. 17

The Impact of Dog Ownership on Depression and Loneliness Among Adults Residing in Central Illinois

Poster Presenter: Michelle Mao

Co-Authors: Vanessa Peters, Suzanna Kitten

SUMMARY:

Background: For centuries, dogs have been regarded as "man's best friend." However, while there is an established link between loneliness and depression, the role of pet ownership, specifically dogs, upon human mental health is not well-established. The multifactorial nature of depression renders such relationships difficult to delineate, and existing studies may be confounded by various factors, such as pet attachment, participant demographics, perceived loneliness and social support, in addition to type of pet owned. The aim of our ongoing case-controlled study is to survey a large sample of adult patients within the Carle Health system to help assess the relationship between depression, loneliness, and dog ownership. **Methods:** Based on

our inclusion criteria, a recruitment letter was sent to 4006 patients, inviting them to participate in a blinded case-controlled survey. Identified through the EPIC system, these patients ranged in age from 18-60. The case group was composed of participants with a diagnosis of depression; the control group had no such documented diagnosis. Data was gathered based on participants' demographics, pet ownership, and depression using the following methods: Quick Inventory of Depressive Symptomatology-Self Report (QIDS-SR); Lexington Attachment to Pets Scale; Ten-Item Personality Inventory; International Physical Activity Questionnaire; the De Jong Gierveld Loneliness Scale. Exclusion criteria were participants currently pregnant, actively suicidal, or with a history of substance use or symptoms of hallucination. Incomplete responses were also eliminated. Descriptive statistics, odds ratios, and t-test analyses were performed with R. **Results:** Total of 132/288 responses qualified for analysis (mean age = 40, 82.6% female, 86.4% white). Among the participants: 46 (34.8%) own dogs; 30 (22.7%) own cats; 26 (19.7%) own both; 15 (11.4%) own no pets; and 15 (11.4%) own other types of pets or an assorted combination. Pet ownership overall has a lower mean QIDS-SR score (9.5) compared to participants with no pets (11.6); however, this is not statistically significant ($p = .21$). No statistical difference in QIDS-SR score was found in dog ownership (mean QIDS-SR 10.07) compared to no dog ownership (mean QIDS-SR 9.85, $p = 0.81$). Similarly, there is no statistical difference in dog ownership versus no dog ownership in emotional (1.8, 2.0, $p = 0.67$) and social (1.48, 1.66, $p = 0.51$) loneliness scores. **Conclusion:** Our preliminary findings demonstrate no statistical relationship between dog ownership, and depression and loneliness. While this is consistent with the conflicting nature of existing studies, this finding may also reflect the complex nature of depression, which is difficult to capture with rating scales. Further statistical analyses are needed to control for confounding factors, such as pet attachment and participant demographics. Survey responses will continue to be collected per study protocol to increase sample size.

No. 18

Use of Medical Language Processing in Real-World Data to Understand Antidepressant Side-Effects and Improve Research in Mental Health

Poster Presenter: Carl D. Marci, M.D.

Lead Author: Costas Boussios, Ph.D.

Co-Authors: Michelle Leavy, M.P.H., Pedro Alves, B.S., Alison Spencer, Ph.D.

SUMMARY:

Background: Data from real-world care settings offers great potential for research aimed at improving diagnosis, treatment, and outcomes for patients with mental health conditions. Unlike data from controlled clinical trials, real-world data (RWD) reflects the realities of mental health care in a fragmented U.S. health system. RWD that includes electronic health records (EHRs) offer a more nuanced view of patient care and often includes broader, more representative patient populations. However, some critical data, such as common side effects related to treatment, are often recorded as narrative text in unstructured clinical notes (3), making extraction of this information essential for using these data for research. Objective: This study examined the feasibility of identifying and extracting common side effects related to selective serotonin reuptake inhibitors (SSRIs) from unstructured clinical notes in a real-world dataset. Methods: Data for this study were drawn from the OM1 Real World Data Cloud (OM1, Inc, Boston, MA, USA). All data were de-identified and tokenized, and the study was reviewed and IRB approved. The study cohort was restricted to patients with a diagnosis of major depressive disorder (MDD) who had at least one mention of a SSRI in a clinical note. An automated medical language processing-based approach was used to extract mentions of side effects. The approach identifies collections of linguistic patterns and phrases commonly used to record side effects in clinical notes. Language models were constructed and reviewed by clinical experts for validity and reliability. Results: Using these criteria, 2.6 million notes from 276,174 patients were identified for inclusion. Of these, 107,503 notes had at least one adverse effect mentioned in the same sentence or within seven words of a SSRI mention. A total of 36,844 adverse effects were extracted from 33,332 notes and 7,594 patients. Common adverse effects

mentioned in the clinical notes were weight gain, nausea, fatigue, sexual side effects, diarrhea, insomnia, headache, agitation, and suicidal thoughts. Conclusions: Common side effects related to SSRIs can be extracted at scale from clinical notes using a medical language processing-based approach. The approach used in this study is a scalable and reproducible model for efficiently extracting concepts related to mental health conditions from unstructured clinical notes. Application of this efficient approach to other very large data sources and to other concepts should improve the utility of RWD for mental health research

No. 19

A Survey of Bullying Experiences in a Child and Adolescent Psychiatric Clinic Population

Poster Presenter: Sultana Jahan, M.D.

SUMMARY:

Objectives The study hypothesis is that regardless of "zero-tolerance policies", bullying is still occurring in schools. The study objective is to assess the prevalence of bullying in a child and adolescent psychiatric clinic patient population and gather information from students about experiences with bullying, the response of school staff, and results of corrective actions taken. Methods A proposal was approved by the University of Missouri Internal Review Board to conduct this study. 101 randomly selected patients who are students in the mid-Missouri area were interviewed at the University of Missouri Child and Adolescent Psychiatry Clinic. All school districts in the surveyed area currently endorse a zero-tolerance bullying policy. After obtaining a guardian's consent, each participant was asked a standard series of questions. Results Of the 101 study participants, 80% reported having been bullied at some point in their lifetime and 49% in the past year. The most common form of bullying was emotional/verbal, which was reported by 77 participants. 43 participants reported they had been victims of physical bullying. 25 participants reported cyber bullying and 11 reported sexual bullying. Of the 81 patients who reported experiencing bullying, 52% were male and 48% were female. The study population was 75% Caucasian, 11% African American, 7% biracial, & 7% other. The bullied

population was 80% Caucasian, 11% African American, 4% biracial, & 5% other. When asked where at school bullying occurs the most responses were as follows: 23% playground, 21% classroom, 20% hallway, 13% lunchroom, 11% restroom, 13% somewhere else. 66.3% of participants reported never having bullied someone and 74% of participants responded that they would intervene if they saw someone getting bullied. 67 participants reported that they had previously acted against bullying, and 37% of these stated nothing happened as a result of their action. 22% of participants got the bully to stop & 13% got them to stop temporarily. 16% reported that their bully got in trouble, but 9% reported they themselves got in trouble after taking action. Conclusions Despite zero-tolerance policies in place, a significant number of students are still being bullied. Evidence-based methods, such as Positive Behavioral Interventions and Supports (PBIS), are recommended to prevent bullying victimization. Many of these methods focus on creating a safe, inclusive environment by positively reinforcing expected behavior. Programs aimed to educate students on social, emotional, and behavioral skills can also be successful in bullying reduction. As demonstrated by the results of this study, zero-tolerance policies alone are not sufficient bullying prevention. Revision to current bullying policy and use of evidence-based interventions may be necessary to protect students in schools.

No. 20

Covid-19-Induced Acute Psychosis in a 14-Year-Old Female Patient: A Case Report

Poster Presenter: Sultana Jahan, M.D.

SUMMARY:

Objectives To demonstrate that COVID-19-associated acute psychosis, though rare, can happen in the pediatric patient population and may present immediately or later after infection. Patients with new-onset psychosis should be tested for COVID-19 infection,

and other organic causes of psychosis should also be considered (e.g. delirium, medication-induced psychosis, and catatonia).

Method
Patient X, a 14-year-old female with no known past psychiatric history, presented to the local emergency room following odd behavior for 3 days and having tested positive for COVID-19 2 weeks prior. The patient's mother reported odd behaviors, including the patient claiming her fish was calling her name and her name was being repeated on TV. She had been moving slowly with occasional staring. The patient's mother reported episodes in which the patient was repeating phrases over and over and where she would require redirection to a task. A thorough psychiatric evaluation indicated she was experiencing visual hallucinations. Her vitals were within normal ranges, except for a mildly elevated heart rate. The patient was admitted for further testing, assessment, and management. She was started on chlorpromazine 10 mg daily as needed for psychosis.

Result
A complete blood count with differential (CBC), complete metabolic panel (CMP), and thyroid function results were all within the normal range. Urine drug screening was negative. EKG, CSF analysis, chest X-ray, and brain MRI showed no significant abnormalities. Mild background slowing was noted on EEG, with no interictal/epileptiform discharges or any delta brushes. Therefore, a tentative diagnosis of COVID-19-associated psychosis was made. Treated with chlorpromazine 10 mg daily, the patient gradually improved with no hallucinations or bizarre behavior. She was discharged after 5 days and was

not prescribed any medication at discharge. 9 days after discharge, the patient was seen by a pediatric neurologist. She did not report any hallucinations or delusions, but her mother reported that the patient moved slowly and had difficulty identifying common objects. The patient was able to recognize family members. An autoimmune panel, physical exam, and repeat EEG were all unremarkable. The neurologist concluded that her psychosis was most likely post-viral sequelae. The patient continued to improve and returned to school over the span of 2 months.

Conclusion
Acute psychosis after COVID-19 infection is a new and emerging diagnosis with no consensus on management strategies for pediatric or adult patient populations. This case highlights the need for clinicians to be vigilant of subtle, fluid psychotic symptoms, in addition to patients' general mental well-being. We do not have research regarding the long-term consequences of acute psychosis episodes. Further studies are needed to investigate the neuropsychiatric etiology of post-COVID-19 psychosis and the optimum treatment for this group of patients.

No. 21 Impact of Substance Use on Intestinal Permeability in Patients With Schizophrenia

Poster Presenter: Ainoa García Fernández

Co-Authors: Leticia Gonzalez-Blanco, Gonzalo Paniagua Calzon, Pilar Sáiz

SUMMARY:

Introduction. The existence of a bidirectional relationship between the gut microbiota and the brain is becoming increasingly evident (Salavakros et al., 2020). Therefore, in patients with severe mental

disorders, the presence of alterations in the gastrointestinal microbiome is frequent (Borkent et al., 2021). Substance use can also alter intestinal permeability and affect the inflammatory system, related to the Central Nervous System (Wiedlocha et al., 2020). However, the impact of tobacco, alcohol and cannabis use on the gut-brain axis in patients with schizophrenia has hardly been investigated.

Objectives To analyze the impact of tobacco, cannabis and alcohol consumption on intestinal permeability and inflammation in patients with schizophrenia. **Method** Cross-sectional study that includes outpatients with a diagnosis of schizophrenia (DSM-5). **Evaluations:** ad hoc questionnaires (demographic and clinical information) and CGI-S. **Indirect markers of bacterial translocation in plasma:** soluble CD14 (sCD14) and lipopolysaccharide binding protein (LBP). **Statistical analysis:** T Student, ANOVA, correlations, logistic regression. **Results** A total of 80 patients were evaluated [mean age (SD)= 42.88 (12.78) years; men: 59.4%]. 35% of the sample were smokers [(mean daily cigarette consumption (SD): 14.36 (SD= 6.389)], 18.5% consume alcohol weekly and 7.5% cannabis in the last month. Statistically significant differences were found between smokers and non-smokers in sCD14 (1.81, SD= 0.38 vs 2.04, SD= 0.42, F= 0.613, p= 0.020), but not in LBP (13.64, SD= 4.48 vs 14.08, SD= 5.30, F= 0.019, p= 0.713). Moreover, a negative relationship close to significance was found between the number of cigarettes and sCD14 ($r = -0.217$; $p = 0.053$). However, when groups are found based on the severity of tobacco use, non-smokers ($n = 23$), light smokers (1-9 cigarettes/day) ($n = 5$) and heavy smokers (≥ 10 cigarettes/day) ($n = 52$), no differences reach statistical significance were found among groups, neither in sCD14 ($F = 2.807$; $p = 0.067$) nor in LBP ($F = 0.069$; $p = 0.934$). A logistic regression was performed considering tobacco consumption (yes/no) as a dependent and independent variable of sex, and those variables in which statistically significant differences were found. It was found that sCD14 (OR= 0.229; 95% CI: 0.058-0.908) and length of illness (OR= 0.931; 95% CI: 0.881-0.984) were the only variables that entered in the model. That is, tobacco was associated with lower plasma levels of sCD14 after adjustment for covariates (age, sex and length of illness). Regarding alcohol and cannabis users, no statistically significant differences were

found between groups in either sCD14 or LBP. **Conclusions:** Smoking had an inverse impact on systemic immune activation of intestinal microbial translocation measured with plasma sCD14 levels. In contrast, alcohol and cannabis use were not associated with the degree of intestinal permeability in patients with schizophrenia.

No. 22

ATF6a - and p-eIF2a- Mediated UPR as Potential Cellular Pathways for the Detection of Differential Biomarkers of Schizophrenia and Bipolar Disorder

Poster Presenter: Leticia Gonzalez-Blanco

Lead Author: Yaiza Potes

Co-Authors: Cristina Cachán Vega, Ana Coto Montes, Claudia Garcia-Gonzalez

SUMMARY:

Schizophrenia (SCH) and bipolar disorder (BD) are severe and complex mental disorders characterized by psychosis and the progressive cognitive impairment that contribute to poor functional outcomes. Currently, the diagnosis of SCH and BD is based primarily on clinical interviews and patient self-report questionnaires. However, the available tools do not help the clinician build a differential diagnosis and, as a consequence, a notably high proportion of people with these disorders are misdiagnosed. Therefore, spotting SCH and BD early is critical for a better prognosis. The identification of differential biomarkers between SCH and BD would not only allow to accurately diagnose both disorders, but would also make it possible the determination of the type of disorder presented by patients experiencing a first episode of psychosis (FEP) and, thus, the introduction of specific treatments in an early stage of the disorder. Given that endoplasmic reticulum stress was found to lead to impairments in brain function and behavior progressively leading neurodegeneration, the major goal of this work was to characterize the unfolded protein response (UPR) in order to identify potential biomarkers which allow the differential diagnosis in an early stage. The study was carried out on human peripheral blood mononuclear cells (PBMCs) from 49 patients (14 women and 35 men), classified into four groups; a control group of 10 individuals, 17 patients with FEP, 12 patients with SCH and 10 patients with BD.

Western blot analyses of UPR-related proteins were performed. The data obtained showed that patients with SCH presented significantly higher protein expression levels of p-eIF2 α and ATF6 α in comparison to control individuals and BD patients, indicating that SCH activates two of the main UPR arms. Interestingly, BD did not activate the p-eIF2 α -mediated UPR arm and, the activation of the ATF6 α -mediated UPR pathway was less than that induced by SHC. The differential profile found between patients with SCH and BD allowed the evaluation of patients with FEP. Even though it was not possible to estimate the type of psychotic disorder of all individuals with FEP, the results showed that certain individuals presented a profile similar to that shown by patients with SCH, whereas other individuals exhibited a profile very similar to that observed in patients with BD. The present work contributes to deciphering the differential molecular basis of SCH and BD and identifies possible cellular pathways for the detection of potential biomarkers that allow the discriminatory diagnosis in an early stage of the disorder.

No. 23

Multimorbidity Patterns and Health Care Utilization Among Older Veterans With Schizophrenia

Poster Presenter: Alison R. Hwang, M.D., Ph.D.

SUMMARY:

Background: Older veterans with schizophrenia often have multiple chronic conditions, or multimorbidity, yet most prior research has focused on single medical conditions. This study characterized multimorbidity patterns and utilization among older veterans with schizophrenia to understand how multimorbidity affects this population and their clinical service needs. **Methods:** This retrospective cohort study included veterans aged 50 years and older with schizophrenia and followed their comorbid diagnoses and utilization (outpatient, inpatient, and emergency) from 2012 to 2019. Comorbid diagnoses included myocardial infarction, congestive heart failure, stroke, chronic obstructive pulmonary disease (COPD), cancer, dementia, traumatic brain injury, hepatitis C, osteoarthritis, renal disease, chronic pain, sleep disorder, depression, dysthymia, posttraumatic stress

disorder (PTSD), general anxiety disorder, alcohol use disorder, other substance use disorder, and tobacco use disorder. Latent class analysis was used to identify latent profiles of psychiatric and medical comorbidity. Chi-square and F-tests were used to assess differences in demographics, comorbidities, and utilization across the latent classes. **Results:** The cohort included 82,495 veterans with schizophrenia. Three distinct multimorbidity classes were identified: Minimal Comorbidity (67.0% of the cohort), High Comorbidity (17.6%) and Substance Use Disorders and Related Conditions (SUDRC) (15.4%). The Minimal Comorbidity class had <10% prevalence of all comorbid diagnoses. The High Comorbidity class had >20% prevalence of congestive heart failure, COPD, dementia, renal disease, sleep disorder, and depression. The SUDRC class had >70% prevalence of alcohol and drug use disorders and >20% prevalence of COPD, hepatitis C, depression, and PTSD. Although the High Comorbidity class had the highest rates of chronic medical conditions, the SUDRC class had the highest rates of emergency and inpatient medical care and emergency, inpatient, and outpatient mental health care utilization. Comparing across classes, all p-values were <.001 for utilization.

Conclusion: Older veterans with schizophrenia are a heterogeneous group with distinct multimorbidity classes and different patterns of utilization. Those with high prevalence of substance use disorders had the highest rates of emergency and inpatient medical and overall mental health care utilization. Tailoring integrated care services to target specific clinical needs could improve outcomes for this population.

No. 24

Do Antipsychotics Boost Clinical Insight? Head-to-Head Comparison of Amisulpride, Aripiprazole and Olanzapine: The Best Intro Trial

Poster Presenter: Lena Antonsen Stabell

Co-Authors: Erik Johnsen, Inge Joa, Solveig Klæbo Reitan, Rolf Gjestead

SUMMARY:

Background: During psychosis, the perception of reality is altered. In addition, the ability to recognize symptoms, their presence and the need for treatment, known as clinical insight, is often compromised (1). Antipsychotics are known to

improve insight through the reduction of other psychosis symptoms, but so far, a direct effect on insight has only been detected in first-episode samples (2). In a sample of both first-and multi-episode schizophrenia spectrum disorders with active psychosis symptoms, we aimed to investigate if antipsychotics have a direct effect on clinical insight. Furthermore, we aimed to investigate if there are differential effects among amisulpride, aripiprazole and olanzapine. **Methods:** Data was derived from the Bergen-Stavanger-Innsbruck-Trondheim study (BeSt InTro). This is a semi-randomized, rater-blinded, naturalistic study comparing the three antipsychotic drugs mentioned. Patients were assessed 8 times during 12 months. We used the Positive and Negative Syndrome Scale (PANSS) for assessing psychosis symptoms. Level and change in insight (PANSS item G12) and total psychosis symptoms (PANSS Total excluding item G12) were estimated in latent growth curve models with randomized study drugs as predictors. **Results:** The sample consisted of 144 adult patients, of these 35% were female. A total of 61% had previously used antipsychotic drugs. Mean G12 represented mild to medium impairment in insight (observed range 1-6 of 7) at baseline. After six weeks of use, amisulpride and olanzapine seemed to have a direct effect on insight. In addition, the effect on insight was related to overall improvement in psychosis symptoms for all study drugs throughout the period. We detected no differences in drug-naïve or previously treated patients. **Conclusion:** Our findings suggests that choice of antipsychotics matter, especially in light of the known relationship between clinical insight and treatment adherence (3). The study was conducted independently of the pharmaceutical industry.

No. 25

Examination of Abnormalities in Self-Experience and Its Relationship With Cannabis Use

Poster Presenter: Shubham Kamal, M.B.B.S.

Co-Author: Rajiv Radhakrishnan, M.D.

SUMMARY:

Background: Abnormalities in self-experience is a core feature of schizophrenia and is occasionally seen in the general population in the form of disturbances in consciousness, self-

awareness, and existentialism. These disturbances in self-experience may be influenced by cannabis use. While scales such as Examination of Anomalous Self-Experience (EASE) and Self-Experience Lifetime Frequency scale (SELF) are interview-based assessments, the Self-Experience Questionnaire is a self-administered tool which can be used to screen individuals at risk for developing psychosis. This study aimed to find a correlation between these disturbances in self-experiences and cannabis use. **Methods:** We developed the Self-Experience Questionnaire (SEQ), a 30-item self-administered questionnaire, that taps into 5 different sub-scales i.e. Cognition and Stream of Consciousness; Self-awareness and presence; Bodily experiences; Demarcation and Existential reorientation.. Frequency and Severity was calculated for each item and rated on a scale from 0-4. The Cannabis-Experience Questionnaire (CEQ) is a 19-item self-administered questionnaire of response to cannabis. Pearson Correlation was calculated between total CEQ scores and total SEQ scores; total CEQ scores and sub-scale scores from SEQ. **Results:** This analysis includes results from 21 subjects [mean age= 44.2 (SD=11.09), 43% females]. The mean CEQ score was 17.52 and the mean SEQ score was 26.62. Total CEQ scores correlated positively with total SEQ scores ($r=0.99$, $p<0.001$) Total CEQ scores correlated positively with all sub-scale scores of SEQ: Cognition and Stream of Consciousness ($r=0.86$, $p<0.001$); Self-awareness and presence ($r=0.79$, $p<0.001$); Bodily experiences ($r=0.91$, $p<0.001$); Demarcation ($r=0.83$, $p<0.001$) and Existential reorientation ($r=0.93$, $p<0.001$). CEQ and SEQ scores did not correlate with lifetime cannabis use or age of first use of cannabis. **Conclusion:** In this pilot study we examined the feasibility of developing a self-report measure of self-experience. The findings of the current study suggest that while abnormalities in self-experience are significantly associated with cannabis experience, there was no relationship with the frequency of lifetime use or the age of first use of cannabis. This suggests that an underlying biological vulnerability may predispose individuals to abnormalities in self-experience and exaggerated experiences in response to cannabis. Screening for self-disturbances is important as these symptoms may exaggerate and transition into psychosis. </p>

No. 26

The Effect of Pregnancy on the Risk of Admission Due to Psychosis in Women With Schizophrenia: A Nationwide, Register-Based Within-Individual Study

Poster Presenter: Sunghyuk Kang

Co-Author: Sun Jae Jung

SUMMARY:

Objectives: This study aimed to investigate the within-individual effect of pregnancy on aggravation in women who with schizophrenia. **Methods:** From the Korea National Health Insurance Service data, women aged 18-49 years who had a live birth delivery more than two years after the first diagnosis of schizophrenia (ICD-10; F20, F25) from 2007 to 2018 were selected. Only the first live birth delivery within the cohort period of each woman was included in the analyses. The outcome was admission due to psychosis, which was defined as admission with the main diagnosis of psychosis (ICD-10; F20-F29). Conditional Poisson regressions were conducted to compare the risk of admission at different time periods around delivery within the same individual. With the period from two years to one year before delivery as the reference, incidence rates of admission due to psychosis within the divided periods from one year before delivery to two years after delivery were compared. Subgroup analyses were conducted to determine whether the effects of pregnancy on the aggravation of schizophrenia were affected by sociodemographic factors, mode of delivery, previous psychiatric history, and previous medication history. **Results:** Among 4,730 women included in analyses (median age at delivery= 33 years old), 260 women (5.5%) had at least one admission due to psychosis within 6 months of delivery. With the period from two years to one year before delivery as her own reference, incidence rate ratios (IRR) (95% CI) for admission due to psychosis were 0.42 (0.28-0.64) for the period from one year to 39 weeks before delivery, 0.88 (0.65-1.20) for the period from 39 weeks to 26 weeks before delivery, 1.33 (1.02-1.72) for the period from 26 weeks to 13 weeks before delivery, 1.24 (0.95-1.62) for the period from 13 weeks to one day before delivery, 5.63 (3.94-8.03) for the period from one day to 10 days after delivery, 4.34 (3.23-5.84) for the period from 10 days to 30 days after delivery, 2.38 (1.86-3.05) for the period from 30 days to 90 days

after delivery, 1.73 (1.36-2.21) for the period from 90 days to 180 days after delivery, 1.13 (0.91-1.41) for the period from 180 days to one year after delivery, and 0.94 (0.77-1.15) from one year to two years after delivery. IRR in 6 months post-partum period (from one day to 180 days after delivery) was 2.46 (2.06-2.93). In subgroup analyses, IRR in 6 months post-partum period remained significant in all strata when stratified according to age, insurance premium, region of residence, previous history of live birth delivery or stillbirth, mode of delivery, the number of prenatal cares, previous history of admission due to psychosis, diagnosis of schizoaffective disorder, antidepressants use, mood stabilizers use, and antipsychotics use. **Conclusions:** The risk of aggravation of schizophrenia due to pregnancy was greatest immediately after delivery, and then gradually decreased and maintained until 6 months post-partum period.

No. 27

Psychopathology, Cognitive Functioning, and Disability in Homeless Women With Schizophrenia and Those Living With Family Support

Poster Presenter: Suvarna Jyothi Kantipudi

SUMMARY:

Background: Schizophrenia is a major mental illness known to impact severely multiple domains of an individual's life. Female patients with Schizophrenia though known to have better outcomes are more prone to poor family support and homelessness in developing countries. Wandering mentally ill patients are also known to have more severe psychopathology, owing to poor treatment adherence. However, rescued destitute female patients who are recovering from illness have not been studied adequately in India, and not much is known about the severity of illness, response to treatment, and functional deficits, which by itself could be reasons for poor outcomes. Our study aims to compare the psychopathology, cognitive functioning, and disability in homeless mentally ill women with schizophrenia and those with family support. **Methods:** Females with an ICD-10 diagnosis of Schizophrenia aged between 20- 60 years and on supervised medication for at least six months were included. Those with severe physical

illnesses, hearing loss, visual impairment, epilepsy, other neurological diseases, or intellectual impairment were excluded. The trained interviewers collected data after obtaining ethics approval. Socio-demographic profiling was done using a semi-structured proforma. The severity of psychosis will be assessed using SAPS and SANS. MOCA or RUDAS was used for screening cognitive functions. WHODAS scale was used to examine the extent of disability in both patient populations. Data were analyzed using SPSS 27. **Results:** The mean(sd) SAPS score of homeless women is 29.92(19.89) and that of women living with family is 3.66(11.19). The mean(sd) SANS score of homeless women is 46.11(26.92) and that of women living with family is 6.66(11.43). The mean(sd) MOCA score of homeless women is 16.79(7.01) and that of women living with family is 25.32(3.38). The mean(sd) WHODAS score of homeless women is 25.73(8.83) and that of women living with family is 65.2(14.84). A logistic regression was carried out to assess the effect of illness severity, cognition, and disability on the likelihood of homelessness and the model was statistically significant when compared to the null model(chi-square value= 55.518, p-value <0.001), explained 93.6% of the variation in homelessness status(Nagelkerke R²) and correctly predicted 97.9% of the observations. **Discussion:** There are significant differences in the severity of schizophrenia and cognitive functioning between homeless mentally ill women and women living with families despite optimal treatment. This points out that these homeless women with Schizophrenia may be a distinct subtype of schizophrenia with a much poorer outcome and need further exploration of etiology and putative mechanisms. </p>

No. 28

Agranulocytosis After Re-Initiation of Olanzapine

Poster Presenter: Jeffrey Lee

Co-Authors: Paul Riordan, Christie Kahlon

SUMMARY:

Mr. A is a 78-year-old Black male with a past psychiatric history of schizophrenia who was evaluated by the Consult-Liaison Psychiatry team for new-onset agranulocytosis. The patient was diagnosed with schizophrenia in the 1980s and had

four inpatient psychiatric hospitalizations for psychosis. He was trialed on fluphenazine in 1998 but was started on olanzapine in 2002, which he had been taking until hospitalization. During his hospital course, his home olanzapine dosage of 10 mg daily was initially held on admission, and it was restarted on day 30 of his hospitalization at 2.5 mg three times a day. The absolute neutrophil count (ANC) acutely decreased after initiation of olanzapine: ANC 3.63 (day 31) -> 3.09 (day 32) -> 2.67 (day 33) -> 2.87 (day 34) -> 1.70 (day 35) -> 0.84 (day 36) -> 0.06 (day 37). On day 33, the patient began to have a diffuse morbilliform rash, which slowly improved over the following weeks. Olanzapine was subsequently held on day 37 due to concern for olanzapine-induced agranulocytosis with rapid recovery of neutrophil counts: 0.00 (day 38) -> 0.00 (day 39) -> 0.06 (day 40) -> 0.17 (day 41) -> 0.47 (day 42) -> 2.11 (day 43) -> 2.82 (day 44). The patient was assessed by hematology, who believed that olanzapine was the most likely culprit for these hematological and dermatological abnormalities. In addition, the patient scored a 5 on the Naranjo adverse drug reaction probability scale, indicating a probable level of adverse drug reaction due to olanzapine. During his hospitalization, due to recurrent psychosis while off olanzapine, the patient was transitioned and up-titrated to risperidone 3 mg twice daily as his new antipsychotic treatment. Neutrophil counts remained stable with this new treatment, and his psychosis improved by time of discharge. Although clozapine is the most well-known antipsychotic associated with the development of agranulocytosis, other antipsychotics, such as olanzapine, are also associated with this phenomenon (Mijovic 2020; Woon 2018). In this poster, we discuss potential mechanisms of olanzapine-induced agranulocytosis, the unique timing of agranulocytosis in the setting of re-initiation, additional risk factors for developing agranulocytosis in this patient, and treatment strategies for olanzapine-induced agranulocytosis (Wicinski 2018). Finally, we review the current literature regarding cases of olanzapine-induced agranulocytosis. Ultimately, this information is intended to make clinicians more aware of a rare but serious side effect of a commonly used psychiatric medication.

No. 29**Introduction of Pharmacogenomic Testing in a Behavioral Health Outpatient Military Population: Initial Findings**

Poster Presenter: Joseph A. Mansfield, M.D.

Co-Author: Argelio Lopez-Roca

SUMMARY:

Background: The operational demands of active duty military service require unique considerations in the treatment of psychiatric disorders. Within the Military Health System (MHS), efficient and accurate diagnosis paired with effective treatments affects more than just individual mental health outcomes. Current guidance requires that service members be placed in a non-deployable status during periods of illness instability, placing extra burden on both the unit and the individual. The faster remission is achieved, the faster the military member can be returned to duty in support of the mission, an omnipresent consideration in military psychiatry. This project was designed to evaluate the possible benefits from using pharmacogenomic testing to assist with pharmacological treatment in a active-duty military behavioral health outpatient population. Objective: To evaluate the change in patient symptomatology after implementation of pharmacological treatment over a 6 month period using standardized patient-report screeners in an active duty military outpatient population. Methods: Over a three month period, patients of a military outpatient behavioral health clinic assigned to and treated by the study provider were offered the opportunity to receive pharmacogenomic testing. Patients were treated with treatment as usual (TAU) by the study provider until results were received. At the subsequent visit with the provider, the results were reviewed with the patient and treatment changes were made, as clinically appropriate, taking into consideration the results of the pharmacogenomic testing. Patients were then followed for at least 6 months. Five separate tools were used to evaluate the progress of the patients: Patient Health Questionnaire (PHQ-9), General Anxiety Disorder-7 (GAD-7), PTSD Checklist for DSM-5 (PCL-5), Insomnia Severity Index (ISI) and Behavior and Symptom Identification Scale 24 (BASIS-24). Inclusion criteria included all patients assigned to study provider during the collection period that

continued care for at least two sessions from beginning study and were not actively engaged in a mental health Medical Evaluation Board (MEB). Results: Of the 58 total patients, of which 44 met full criteria for inclusion, a notable improvement across all five tested fields were obtained. PHQ-9 scores reduced from an average of 15.4 to 10.2 (-5.2, -34%), GAD-7 scores reduced from an average of 12.7 to 7.6 (-5.1, -40%), PCL-5 scores reduced from an average of 40.8 to 29.2 (-11.6, -28%), ISI scores reduced from an average of 18.2 to 12.6 (-5.5, -30%) and BASIS-24 scores reduced from an average of 1.93 to 1.38 (-0.55, -28%). Conclusion: This study demonstrates the potential of pharmacogenomic testing to assist in improving treatment efficacy of selected psychopharmacologic treatments in an active duty military population. More evaluation is needed to determine the full scope of benefit from this testing modality.

No. 30**Behavioral, Gene Expression and Immunohistochemical Alterations Induced by an Animal Model of FASD Are Modulated by Cannabidiol Administration**

Poster Presenter: Jorge Manzanares

Co-Authors: Daniela Navarro, Francisco Navarrete Rueda, Ani Gasparyan

SUMMARY:

Fetal alcohol spectrum disorder (FASD) has emerged as the most prevalent and devastating preventable consequence of perinatal alcohol exposure. Children exposed to ethanol during their gestational or lactational periods develop several neuropsychiatric complications with challenging therapeutic management (1, 2). This fact points to the need to develop more effective therapeutic agents. Developing animal models simulating FASD could be essential for understanding the underlying brain alterations and searching for efficient therapeutic approaches. Cannabidiol (CBD), a non-addictive component of the *Cannabis sativa* plant, has demonstrated anxiolytic, antidepressant, and neuroprotective effects, pointing out its potential usefulness in FASD (3). Therefore, the main goal of this study was i) to develop a new animal model of FASD with associated long-lasting emotional,

cognitive, cellular, and molecular changes in males and females exposed to ethanol during gestation and lactation, and ii) to evaluate early and chronic cannabidiol (CBD) administration effects on these model-induced disturbances in males and females. For this purpose, C57BL/6J female mice were exposed to an ethanol voluntary consumption paradigm (28 days), selecting only those with higher ethanol consumption and preference to cross them with males. After gestation confirmation, oral ethanol gavage administration at a dose of 3 g/kg/12h (p.o.) started at gestational day 7 until the pup's weaning at postnatal day 21. On the weaning day, pups were separated by sex and CBD administration began (30 mg/kg/day, i.p.). After 4-6 weeks of treatment, behavioral, relative gene expression and immunohistochemical protein changes were analyzed. Rodents exposed to the animal model of FASD showed higher anxiety and depressive-like behaviors in the light-dark box, novelty-suppressed feeding and tail suspension tests, and a higher emotional reactivity in the acoustic startle response evaluation. In addition, cognitive impairment was observed in the novel object recognition and step-down inhibitory avoidance tests. These behaviors were accompanied by alterations on the stress axis and cannabinoid receptor gene expressions. In addition, an essential reduction of different neuronal markers in the hippocampus was observed by immunohistochemical analyses. The administration of CBD normalized the number of neurons, BDNF-positive cells, neurofilaments and glutamatergic terminals in the hippocampus. Interestingly, CBD normalized FASD model-induced emotional and cognitive disturbances and gene expression changes with sex-dependent differences. These results suggest that the repeated administration of CBD modulated the long-lasting behavioral, gene and protein alterations induced by the FASD model. These results stimulate the possibility of performing clinical trials to evaluate CBD's effects in children with alcohol spectrum disorders.

No. 31

Dronabinol Administration During Gestation and Lactation Produces Behavioral and Neurobiological Alterations in the Offspring

Poster Presenter: Daniela Navarro

Lead Author: Jorge Manzanares

Co-Authors: Francisco Navarrete Rueda, Ani Gasparyan

SUMMARY:

Background: There has been a worrying increase in cannabis use during pregnancy and lactation. It is known that the amount of THC in recreational cannabis has increased by more than 10% in recent years (1). In addition, the studies conducted on the impact of fetal or newborn exposure to THC suggest significant physiological brain and psychobehavioral alterations (2). However, many aspects related to perinatal cannabis exposure are still unknown (3). This study aimed to evaluate the alterations produced in the offspring in an animal model of perinatal exposure to dronabinol. **Methods:** Male and female C57BL/6J mice were crossed, and after confirming gestation in the females, the administration of dronabinol (10 mg/kg/12 h, from gestational day 5 to postnatal day 21) was started. In the offspring exposed to dronabinol, traits of anxiety, depression, and cognition, as well as alcohol consumption and motivation, were evaluated. Relative gene expression of corticotropin-releasing factor (CRF) in the paraventricular nucleus (PVN) was analyzed by real-time PCR. On the other hand, NeuN and GFAP protein expression in the cortex was studied by immunohistochemistry. **Results:** THC-exposed offspring were characterized by increased traits of anxiety, depression, and cognitive problems, as well as an increased vulnerability to alcohol consumption and motivation in males and females. Notably, these behavioral alterations were accompanied by a significant reduction of CRF gene expression in PVN. Likewise, exposed offspring showed alterations in cortical lamination in the hippocampus, suggesting that the normal process of brain maturation is affected, resulting in physiological alterations. **Conclusions:** These results provide relevant information about the severe consequences of perinatal THC exposure on different behavioral and neurobiological aspects. This may partly explain the psychiatric disorders children of cannabis-consuming mothers may experience, possibly due to alterations in the mechanisms of cortical development and the regulation of the stress axis.

No. 32**The Efficacy of Mood Stabilizers as Treatments for Adults With Rapid Cycling Bipolar Disorder: A Systematic Review**

Poster Presenter: Grace Herzog

SUMMARY:

Background: Bipolar disorder (BD) is a mood disorder that is defined by its intense mood cycles of depression and mania. BD affects 46 million individuals globally and can result in suicide, drug abuse, and worsened quality of life. Rapid cycling bipolar disorder (RCBD) is a condition where BD individuals experience faster mood cycle changes. There is an ongoing controversy about RCBD treatment, as anti-depressants may worsen the condition. This systematic review assessed treatments for RCBD in adults, focusing on lithium as a monotherapy and in combination with mood stabilizers. Methods: PubMed was searched using search phrase "bipolar disorder medication." Studies published from 2002 – 2022 were included in this current systematic review. Books and documents, meta-analyses, reviews, and systematic reviews were excluded. Additionally, studies assessing adolescents were excluded from this current review. Of the 428 studies initially found, 6 met the final inclusion criteria and were included in this present study. Results: Amongst the included studies, lithium in combination with mood stabilizers was found to be not significantly more effective than lithium as a monotherapy in reducing frequency and severity of mood phases in RCBD. Additionally, antidepressants studied did not significantly improve the rate of remission and amount of mood episodes. Mood stabilizers tested were not significantly effective in changing the rate, severity, and duration of relapse in comparison to standard treatments. Conclusion: This systematic review focuses on how medications affect depressive mood states in RCBD since most treatment plans for BD target mania, regardless of the longer time BD individuals spend in depressive mood states. Furthermore, this study assesses the efficacy of anti-depressants as a treatment for RCBD, as it is widely disputed if anti-depressants worsen the course of RCBD since they may induce mania and long-term mood phase acceleration.

No. 33**Response and Remission Rates of Bipolar Depression Patients Treated With TMS at Community-Based Outpatient Clinics in a Large Healthcare System**

Poster Presenter: Yazeed Ibrahim, D.O., M.S.

Co-Authors: Rajshree Bongale, Bob Han, Belia Roybal

SUMMARY:

Background Bipolar disorders are estimated to have a prevalence of 2% and significantly contribute to low quality of life and burden of disease. Depression is the primary abnormal mood state for bipolar disorder patients. While psychoactive medications are the first-line treatment for bipolar disorders, they present challenges due to extensive side effect profiles and multiple trials needed. Moreover, standard antidepressants are not associated with increased efficacy when used with mood stabilizers to treat bipolar depression. TMS is a non-invasive and safe FDA-cleared treatment for treatment-resistant Major Depressive Disorder (MDD). More research is needed to determine the efficacy of TMS, including newer protocols such as Left-sided Intermittent Theta Burst (iTBS), in treatment of bipolar depression. Objective Identify and compare the response (>50% decrease in PHQ 9/MADRS score) and remission (PHQ9<5 or MADRS<10 post treatment score) rates for Kaiser Permanente Northern California patients treated for bipolar depression with the standard Left sided 10 Hz frequency Dash and iTBS TMS protocols. Methods We identified all adults diagnosed with bipolar disorders treated for depressive episode with TMS at Kaiser Permanente Northern California between March 2018 and February 2022 who underwent at least 20 treatment sessions with recorded PHQ9/MADRS scores within 1 week of first session and 2 weeks of last session. Treatment dates and PHQ9/MADRS scores were extracted from electronic medical records. Chart review was conducted to identify TMS protocols used and PHQ9/MADRS scores not populated through data extraction. Response and remission rates were calculated and chi-square test was performed to compare response and remission rates for patients who underwent iTBS and DASH protocols. Results One hundred patients met inclusion criteria. Of those, 51 patients underwent treatment with DASH protocol, 31 with

iTBS protocol, and 18 with other/unknown protocols. Response rates were 56% for all TMS protocols, 58.82% for DASH, 51.61% for iTBS, and 55.56% for other/unknown. Remission rates were 31% for all protocols, 33.33% for DASH, 25.81% for iTBS, and 33.33% for other/unknown. Chi-square test did not demonstrate a significant difference between the proportion of patients achieving response and remission treated with DASH vs iTBS protocols (Response $\chi^2(1, N=82)=.407, p>.05$, remission $\chi^2(1, N=82)=.5154, p>.05$). Conclusions Response and remission rates of bipolar depression patients treated with TMS at Kaiser Northern California are comparable to published literature, supporting TMS as an effective treatment for bipolar depression. Patients treated with DASH protocol had slightly higher rates of response and remission compared to iTBS protocol, but a larger sample size is required for sufficient power analysis due to the small effect size. Further research is needed to determine if new TMS protocols including iTBS are non-inferior to traditional protocols.

No. 34
WITHDRAWN

No. 35
Toward a More Culturally Sensitive Suicide Risk Assessment

Poster Presenter: Rahul Tharoor

Co-Authors: William David Rumbaugh, M.D., Thomas Vu Nguyen

SUMMARY:

Suicide is a significant public health problem. It is the 10th leading cause of death in the United States overall, accounting for 47,511 deaths in 2019. Indigenous people are disproportionately affected, with an age-adjusted rate of suicide per 100,000 people of 22.5% (compared to Asian Americans at 6.5%, African Americans at 7.5%, Native Hawaiian/Other Pacific Islanders at 14.4%, Caucasians at 17.7%, and Multiracial individuals at 8.8%)¹. The suicide risk assessment is one way that mental health clinicians have worked to reduce suicide rates. It identifies and weighs patient information to determine the extent to which an individual is vulnerable to suicidal behavior and may

require further treatment or care². The problem is that numerous studies have shown weak evidence for the use of risk prediction scales (that classify individuals as “high” vs. “low” risk). One meta-analysis of prospective cohort studies found that five risk prediction scales significantly varied in their levels of sensitivity (0.15-0.97) and specificity (0.17-0.97) for accurately identifying individuals who will go on to engage in suicidal behavior and those who will not. Another study found that more than 90% of those who were classified as “high risk” for future suicide did not subsequently engage in suicidal behavior⁴. One reason for the ineffectiveness of current suicide risk assessment scales is that culture is often not addressed in a meaningful way. There is striking cross-cultural variability in the prevalence of suicidal behavior. In native populations, young indigenous men are at greatest risk, which stands in marked contrast to nonindigenous people in the United States, in which older men are at highest risk—and in other countries like China, where suicide disproportionately affects young rural women⁵. This suggests that there are diverse motivations and meanings for suicidal behavior that span cultural and demographic divides⁶. In native communities, understanding how people conceptualize personhood, one’s place in the world, one’s belonging—and in turn, making our suicide risk assessments more culturally sensitive to reflect that—is one way that we can reduce suicide risk and promote resilience to suicide.

No. 36
White Matter Structural Connectivity in Abstinent Patients With History of Alcohol Dependence

Poster Presenter: Lee Hyunjung

SUMMARY:

Background Chronic alcohol use damages the brain and is associated with various dysfunctions. This study aimed to compare the structural connectivity of the brain in abstinent patients with history of alcohol dependence and general population by using graph theory. Methods The alcohol group (N=24) included patients who had been hospitalized and abstained from alcohol at least 3 months, and the control group (N=22) was recruited. All participants had been evaluated T1-weighted magnetization-

prepared rapid gradient echo images(MPRAGE) and Diffusion tensor imaging(DTI) scanned by 3 Tesla Philips Achieva MRI. Tractography was performed on DTI images with DSI studio(repeated 1000 times with random parameters). 400 cortical region of interests(ROIs) were parcellated with Freesurfer using T1-MPRAGE. ROIs were overlaid on the tractography results to generate 1000 structural connectivity matrices per person, and 1000 matrices were averaged. Graph analysis was performed through igraph R package, and group comparison was performed by t-test. Results Graph density($t=2.220$, $p=0.032$), node degree($t=2.060$, $p=0.045$), and hub score($t=2.178$, $p=0.035$) showed differences between the two groups in the dorsal attention network(less in the alcohol group). Betweenness centrality(reflects the importance of nodes) was greater in the dorsal attention network($t=-2.218$, $p=0.032$) and limbic network($t=-2.113$, $p=0.041$) of the alcohol group. Conclusions Chronic alcohol use reduces the structural robustness of areas of the brain involved in attention. However, as a result of this study, it seems possible to compensate for these structural defects by increasing the importance of each node. Further studies need to confirm whether these changes in structural connectivity are related to clinical changes.

No. 37

Brain Structural Connectivity Associated With Serum Vitamin B12

Poster Presenter: Junhyuck Kim

SUMMARY:

Brain Structural connectivity associated with serum vitamin B12 **Background** : Vitamin B12 play a role in preventing brain atrophy, which is the loss of neurons in the brain and often associated with memory loss or dementia. This study was conducted to assess the structural connectivity associated with vitamin B12 in old adults using graph theory.

Methods : In a cross-sectional design, we assessed 102 participants (67 women; age range: 60–90y). All participants had been evaluated T1-weighted magnetization-prepared rapid gradient echo images(MPRAGE) and Diffusion tensor imaging(DTI) scanned by 3 Tesla Philips Achieva MRI. Tractography was performed on DTI images using DSI

studio(repeated 1000 times with random parameters). 400 cortical region of interests(ROIs) were parcellated with Freesurfer using T1-MPRAGE. ROIs were overlaid on the tractography results to generate 1000 structural connectivity matrices per person, and 1000 matrices were averaged. Graph analysis was performed through igraph R package.

Serum vitamin B12 was measured by Chemiluminescence ImmunoAssay (CLIA) test.

Results : The results of our study showed a connections between serum vitamin B12 and structural connectivity in several brain regions. In whole network, assortativity($r=0.35$, $p=0.0017$), degree centrality($r=0.37$, $p=0.00072$) showed positive correlation with serum vitamin B12. . Edge density($r=-0.37$, $p=0.00074$), transitivity ($r=-0.36$, $p=0.0011$), in whole network, showed negative correlation with serum vitamin B12. There is no interaction between structural connectivity and age or sex. **Conclusions** : Structural connectivity was found to be associated with serum vitamin B12 in old adults.

No. 38

Screen Time and Externalizing Problems Among Youth During the Pandemic

Poster Presenter: Soyeon Kim

Co-Authors: Stephanie Munten, Nathan Kolla

SUMMARY:

Background: Current literature indicates that safety measures, including lockdowns during the COVID-19 pandemic, severely disrupted our lifestyle, marked by increased screen time 1. Excessive screen time exacerbated during the pandemic poses a serious mental health concern among youth during their critical developmental period 2,3. However, the studies that examine the relationship between specific types of screen time and externalizing problems, such as conduct problems and hyperactivity among youth during the pandemic, are limited. Method: This study examined the association between the frequency of four types of screen time (passive, social media, video games, educational) and externalizing problems (i.e., conduct problems and hyperactivity measured with the Youth Self-Report Strength and Difficulties Questionnaire) during the pandemic. The data were

collected at the 5-time points (Early-Spring 2021, Late-Spring 2021, Fall 2021, Winter 2022, and Spring 2022) among youth in Southern Ontario, Canada (N=117, mean age=16.82, male=22%, non-White=21%). Structural equation modelling was used to examine the associations. Result: Average score for conduct problems was classified within the normal range (2.58), while the average score for hyperactivity was considered borderline (6.15). Controlling for age, sex, and other types of screen time, time spent playing video games was significantly associated with increased externalizing problems among youth ($\beta = 0.272$, $p < .05$). Younger age was significantly associated with increased externalizing problems ($\beta = -0.294$, $p < .05$). Other types of screen time and sex were not significantly associated with externalizing problems. Conclusion: This evidence identifies unique adverse effects associated with video games on externalizing problems in the strength of these associations. Further research is needed to understand better the underlying processes contributing to differential effects associated with video games vs other types of screen-based activities and externalizing problems (i.e., conduct problems and hyperactivity).

No. 39

Polycystic Ovarian Syndrome and Psychiatric Illness

Poster Presenter: Kristen Kim, M.D.

Co-Authors: Kaitlyn McDowell, Joshua Feriante, Michelle Wu

SUMMARY:

Polycystic ovarian syndrome is associated with an increased risk for psychiatric illness including depression and psychosis. In this poster, we describe two cases that highlight the importance of diagnosing and treating polycystic ovarian syndrome in the inpatient psychiatry setting. The first case involves a 17-year-old female with known history of polycystic ovarian syndrome who was admitted for suicidal ideation. On evaluation, patient endorsed worsening depressive symptoms in the context of discontinuing her oral contraceptive for polycystic ovarian syndrome one week prior to admission. She was restarted on her oral contraceptive in conjunction with an antidepressant. The second case involves a 17-year-old previously healthy female who

was admitted for first-episode psychosis. Patient was noted with irregular menses, acne, obesity, acanthosis nigricans, and elevated free testosterone. She was diagnosed with polycystic ovarian syndrome and started on an oral contraceptive in conjunction with an antipsychotic. In both cases, though polycystic ovarian syndrome likely did not fully explain the patients' psychiatric illnesses, it may have contributed to their symptomatology and thus was important to treat. Furthermore, both females endorsed being sexually active; therefore, the relatively low-risk intervention of starting an oral contraceptive served the dual purpose of treating polycystic ovarian syndrome and providing contraception. These cases highlight the importance of considering polycystic ovarian syndrome in adolescent females admitted to the inpatient psychiatric unit in the comprehensive evaluation, diagnosis, and treatment of psychiatric illness.

No. 40

WITHDRAWN

No. 41

Factors Associated With Adequate Depression Treatment Utilization Among Adolescents: A Nationally Representative Analysis of the Medical Expenditures

Poster Presenter: Chuan-Mei Lee, M.D., M.A.

Co-Authors: Christina Mangurian, M.D., M.A.S., Pengxiao Wei

SUMMARY:

Background Major depressive disorder (MDD) is a serious and common condition among youth, affecting ~11% of the United States (US) population by age 18. Unfortunately, depression is underrecognized and undertreated, especially among low-income and racial/ethnic minoritized adolescents, predominantly served in safety-net settings. Untreated depression leaves youth at higher risk for lifelong poor outcomes, including suicide, substance use, low educational attainment, and poor physical health. According to previous studies, being Caucasian, having insurance, and having more severe symptoms/impairment (e.g., history of suicide attempt) are associated with greater likelihood of treatment utilization among children and

adolescents with depression. However, to our knowledge, there has not been an examination of factors associated with *adequate* treatment utilization among adolescents with depression. Therefore, we determined key factors associated with adequate depression treatment utilization among adolescents using nationally representative data from the Medical Expenditures Panel Survey (MEPS). **Methods** Using MEPS data pooled from 2008-2019, we examined individuals aged 12-17 years, identified with a depression diagnosis (ICD-9 coded 296.2x, 296.3x, 300.4, or 311.xx; or ICD-10 coded F32.x, F33.x, F34.1, and F39.x). We used Andersen's behavioral model of health services utilization to guide our selection of predictor variables: age, sex, race/ethnicity, caregiver marital status, language spoken at home, household income, insurance status, caregiver perceived physical health, caregiver perceived mental health. We included these predictor variables in a series of multivariable logistic regression models to determine which factors were associated with adequate depression treatment utilization, defined as receipt of 1) 4+ outpatient/office-based visits with at least one active antidepressant prescription; and/or 2) 8+ outpatient/office-based psychotherapy visits over the course of 12 months. Factors that have $p < 0.05$ in the minimally adjusted models were included in a multivariate model. Independent predictor variables were identified using stepwise backwards logistic regression analysis. These excluded variables exhibiting poor predictive performance or collinearity. **Results** Preliminary results showed that adolescents with married parents were more likely like those with unmarried parents to have adequate depression treatment (OR: 12.0). Adolescents with worse caregiver perceived mental health status were more likely to have adequate depression treatment (OR: 3.71). Uninsured adolescents were less likely than commercially insured adolescents to have adequate depression treatment (OR: 3.53). **Conclusions** This study suggested that 1) caregiver marital status, 2) caregiver perceived mental health status, and 3) insurance status were key variables associated with adequate depression treatment utilization.

No. 42

A 16-Year-Old Female With Homicidal Ideation: Risk Factors for Potential School Shooters

Poster Presenter: Cristina Mancini

Co-Authors: Kelly Rios, Thomas Caravetta, Mahreen Raza, M.D.

SUMMARY:

Patient J, a 16-year-old Hispanic female with past psychiatric history of depression, anxiety, PTSD, and OCD, presents to the child and adolescent psychiatry unit for homicidal ideation and suicidal ideation. The patient was reported to her school after she sent a friend an email containing material about serial killers and possible intent to commit a mass shooting at her school. She kept a journal of 2-3 months' worth of research on mass shootings, was fascinated with media involving mass/serial killers, and identified with a particular school shooter. She described herself as an outcast and exhibited feelings of anger, jealousy, and desire to kill her classmates to solve her problems. While Patient J does not fit the 'typical' demographics of school shooters (Caucasian, adolescent male, rural/suburban area), she does meet many of the psychosocial risk factors previously identified in school shooters. Social rejection is a major risk factor that can lead to poor self-image, suicidal ideation, aggressive behavior, emotional dysregulation, and depression. Mental illness, most commonly depression, anxiety, and behavioral or developmental disorders, are other important risk factors, though many school shooters had no prior psychiatric history. Weisbrot et. al found that 52.2% of school shooters experienced traumatic family events and Dowdell et. al estimates up to 72% report at least one adverse childhood experience. Fascination with guns, death, or violence, especially identification with a previous shooter, is a common risk factor. Such topics may be evident in social media posts, internet searches, writings, and drawings. Many use these outlets to leak their ideas or intent, as findings from Eleni et. al demonstrate that 93% of school shooters plan their attacks in advance. Additionally, Patient J lacked protective factors such as active participation in sports, pro-social groups at school or in her community, and professional goals post-high school, the absence of which is characteristic of school shooters.

Unfortunately, identification of and management for patients like Patient J in community-based settings continues to be challenging. In this poster, we further discuss the characteristics of school shooters, including demographics, typical presentation, precipitating factors, protective factors, and management options for patients with potential to be school shooters.

No. 43

Do Medical Students Learn How to Document a Mental Status Exam? Preliminary Results From a Psychiatry Clerkship Documentation QI Initiative

Poster Presenter: Connie Scoggins, B.S.

Co-Authors: Gregg Robbins-Welty, M.D., M.S., Dakota May, M.D., M.S., Andrew Tuck, M.D., Kathy Niu, M.D.

SUMMARY:

Introduction: Documentation is an important aspect of the practice of clinical medicine and is an essential skill for medical students to learn. One difficulty for students is that specialties may utilize different documentation conventions. Psychiatric notes, for example, typically include a psychiatric review of systems (ROS) and mental status exam (MSE). Data is sparse describing how students learn to document encounters, resulting in limited guidance for clerkship curricula. The investigators aimed to create and test the efficacy of a clinical documentation curriculum for psychiatry clerkship students rotating on a consultation-liaison psychiatry service. As part of the study, participating clinical educators and learners were surveyed to explore and address deficits in the learning protocol. **Methods:** Surveys were administered to all rotating medical students and supervising resident or attending physicians on the consultation-liaison psychiatry service at Duke University Hospital from February 2022 to August 2023. Surveys assessed attitudes, preparedness, educational value, and clinical burden of student documentation. The intervention consisted of guided, example-based didactic sessions on proper psychiatric documentation, provided at the start of the student clerkship. Student notes were collected before and after initiating didactic sessions, then evaluated for quality improvement and intervention effectiveness. **Results:** Results are preliminary as the study is ongoing. To date, surveys have been

collected from 16 medical students and 33 supervising physicians. Students ranked aspects of the psychiatric note from 1-very uncomfortable to 5-very comfortable, on average reporting being less comfortable with the treatment plan (3.83) and MSE (3.50) than the psychiatric ROS (3.60), assessment (3.63), or HPI (4.19). Students reported particular discomfort with the MSE, citing unfamiliarity with terminology and formatting. Supervising physicians nearly unanimously reported that deficits in student documentation were a clinical burden, resulting in extra time spent revising or rewriting notes. Clinicians cited student A&P (60%) and MSE (40%) as major targets for improvement. When asked about student strengths, physicians mentioned the A&P (0%) and MSE (2%) far less than the HPI (21%). **Conclusion:** Documentation is an essential skill for all clinicians, especially those working in mental health, yet little has been published about how medical students learn documentation skills during their psychiatry clerkship. Our preliminary results demonstrate an expected student difficulty with documentation of the A&P, but also identified a less considered difficulty with the MSE. While it may be challenging to separate comfort with documentation from skill of performing an MSE, documentation may represent a proxy to assess this skill. In the future, further development of teaching protocols that address documentation of the MSE should be targeted.

No. 44

Evaluation of U.S. Medical Student Bias Towards Mental Health Before and After First-Year Pre-Clinical Psychiatry Education

Poster Presenter: Alyssa C. Smith, M.D.

Co-Authors: Michael J. Opperman, M.D., Ph.D., Joseph P. McCann, M.D., Martin H. Plawecki, M.D., Ph.D.

SUMMARY:

Background: Due to mental health provider shortages, almost 60% of mental health care is provided by primary care providers[1]. Unfortunately, provider bias against mental health and affected patients increases negative outcome risk[2, 3]. While much is known about medical student biases towards mental health and the effect

of clinical exposure in the psychiatry clerkship, less is known about the impact of pre-clinical education on these biases[4, 5]. In this study, we aimed to improve our understanding of if pre-clinical psychiatric education influences these perceptions. **Methods:** First year Indiana University School of Medicine (IUSoM) students take a 6-week course titled "Neuroscience and Behavior", which includes psychiatry and neurology content in addition to basic science. All 366 students were invited to participate in our survey pre and post course, which consisted of the Mental Illness: Clinician's Attitudes version 2 (MICA-2; 16 Likert-scale questions, with lower scores indicating less bias)[6], and supplemental questions. A small gift card was offered to completers of both surveys. This study was IRB approved. **Results:** 117 respondents completed both surveys. 65 only completed the pre-survey but were not found to be statistically different from completers. Subsequent analyses proceeded with the N=117 individuals. The pre- and post-course means were 36.6 and 33.6, a change of -2.9 (paired t-test p-value <0.001), indicating less bias. Some individual post-survey question results were notable: 43% endorsed discomfort communicating with those with mental illness; 36% believed the public needed to be protected from patients with severe mental illness; and 5% did not consider psychiatrists to be "real" doctors. One supplemental question asked respondents to comment on what they believe may change these perceptions; over half of responses focused on patient exposure. **Conclusions:** Following the course, pre-clinical medical students had a lesser degree of bias towards mental health and patients with mental health conditions, suggesting that pre-clinical education can lead to a measurable decrease in bias in medical students early in training. Unfortunately, this study continues to highlight significant bias in U.S. medical students against mental illness and the field of psychiatry. As much of mental health care is provided by primary care providers, these perceptions may worsen healthcare outcomes for many patients. Over half of respondents indicated they believed patient exposure may change their perceptions, and future work will be focused on measuring the change this exposure may cause.

No. 45

Social Media: An Innovative Tool to Educate, Inspire, and Unite in Mental Health

Poster Presenter: Alisha M. Subervi, M.D., M.P.H., M.Sc.

Co-Author: Karen G. Martinez, M.D., M.Sc.

SUMMARY:

Introduction: Over the past decades, social networking sites have become an everyday tool used for human interaction, networking, and most recently, for professional communication. Social media (SM) is any website or application that allows users to create or share content with their audience. SM has even been integrated into the residency curriculum in medical training. During the COVID-19 pandemic, SM became essential to increase residency interactions between residents and the community. Currently, it is unknown how many Psychiatry Residency Training Programs utilize SM and to what extent. **Methodology:** A cross-sectional study of the University of Puerto Rico Psychiatry Residency Program's Instagram (IG) and Facebook (FB) accounts was conducted in January 2023. SM sites and activity were assessed. We counted the amount of educational, collaborative, motivational, and social posts, and recognitions. We also evaluated the demographic factors of followers. **Results:** @UprPsych IG had 188 posts as of Jan 11, 2023. Of these, 54 were educational, 28 were collaborative, 49 were motivational, 37 were social activities between residents or the faculty, and 35 were recognitions of awards or publications. The mission of the SM accounts was to educate the general community about mental health, raise awareness of existing disorders, inform about available treatments, collaborate with current service providers in Puerto Rico, and have a space to share activities as well as personal or educational achievements of the residents, fellows, and faculty. UprPsych IG had 1,520 followers of which 10% were aged 18-24, 58% were 25-34, and 19% were 35-44. 70.8% were women. Followers were most commonly from San Juan (14.4%), 46.9% from Puerto Rico, and 44.1% from the United States. The FB page was linked with the IG account, therefore shared the same posts and had 97 other educational posts. FB had 922 followers, of which 78.70% were women, and most followers were aged 25-44. Followers were

most commonly from San Juan (80.90%) out of the 759 from Puerto Rico. 138 (16.59%) were from the United States. According to the Department's resident candidate interview team, all interviewees mentioned the SM pages as a source where they seek information about the program and some were even motivated to create their own professional educational pages. According to comments by different residents during monthly Wellness committee reunions, various patients have also found useful information and enjoyed @UprPsych's SM posts. **Conclusions:** The SM pages of the University of Puerto Rico's Psychiatry Residency Program appear to be an innovative tool that has fulfilled its mission of educating, collaborating, and sharing mental health information and services in Puerto Rico and a social outreach tool for future candidates who seek a program that celebrates the department. Additionally, SM seems to be a viable medium to improve community outreach and chart the future of mental health.

No. 46

Cinema Education: An Innovative Way to Teach Cultural Competence in Psychiatry

Poster Presenter: Thashi M. Uppalapati

Co-Authors: Dale Peebles, Sameera Azeem, Sandra Sexson, Sruti Patel

SUMMARY:

Background: Cultural awareness is now a core requirement for mental health professionals working with patients of different social and ethnic backgrounds. Complex interventions to increase the quality of mental health care for these patients are essential and should be established. Although cultural competency training is important, the form it should take and the framework to assess impacts are underdeveloped. **Objective:** To improve cultural awareness, we proposed the use of cinema as an educational resource for culture competency training. This approach brings to the fore cultural norms that may shape the assessment and clinical management recommendations. **Design:** Single-center; explorative and inferential analysis using feed-back surveys. **Methods:** Child and adolescent Psychiatry department at the Medical College of Georgia-Augusta University established a movie club

to bring forth the idea of cinema education. Movies that portrayed the dynamics between cultures and mental health were chosen. Anywhere from 10-15 participants, consisting of residents, fellows, and attendings, gathered once a month to watch a movie and discuss it. Each participant completed a Likert scale survey after every movie to rate their overall experience. We specifically selected the 'culture' component for this analysis that explored Latino, Indian, Native American, African American, Military, LGBTQ, Internet, and counterculture themes from the year 2016 to 2019. **Results:** In general, the feedback surveys were positive, and indicated increased satisfaction from both educator and learner perspectives. The majority of viewers strongly agreed that the movies accurately portrayed the identified culture well enough to increase the understanding of important concepts. The survey included positive comments such as - "very relevant to a significant portion of our patient population", and "effective portrayal of culture as well as the stories we create about ourselves". This methodology offered an effective way to use the audience point-of-view as a tool to improve further educational sessions. **Discussion:** Cinema education can represent culture in a way which enables the portrayal of many perspectives, demonstrates non-verbal communication, and raises awareness of the interplay of mental health issues and culture variations. Our analysis proved that cinema education can effectively convey important concepts of cultural awareness to both Child and Adolescent Psychiatry trainees and attendings. In conclusion, cinema education has a great potential for success in teaching cultural competency and could further take on a new meaning in the future of Psychiatry.

No. 47

Understanding Barriers to Mental Healthcare in BIPOC College Students

Poster Presenter: Melissa Vázquez

Lead Author: Natalia Van Doren

Co-Authors: Yiqin Zhu, Denise E. Wilfley, Michelle G. Newman

SUMMARY:

Background: Building a more equitable future in terms of mental health requires understanding

disparities in treatment access in underserved populations. College students suffer from increasingly high rates of mental disorders (Lipson et al., 2022) and students of color report lower rates of mental health treatment utilization compared to their White peers despite similar or greater disorder prevalence (Lipson et al., 2018; Lipson et al., 2022). Disparities in treatment access result in poor outcomes, particularly for Black and Latinx individuals and produce a large financial cost (Wile & Goodwin, 2018). While both attitudinal and structural barriers have been shown to play roles in disparate treatment access, less is known about how these factors differ across racial/ethnic groups. Understanding unique and common barriers could aid in targeted intervention approaches to promote health equity. **Objectives:** In a nationally representative sample of college students, this study aimed to 1) Examine the prevalence of mental health disorders by race and ethnicity; 2) Evaluate whether attitudinal and structural barriers vary by race and ethnicity within the context of relative disease burden by racial/ethnic groups. **Methods:** The present study draws on a large survey ($N = 32,000$) conducted across 26 US colleges and universities to examine barriers to treatment among students. Chi-square tests and one-way ANOVAs with post hoc comparisons were used to examine structural barriers (e.g., financial reasons, not enough time, not sure where to go, difficulty finding an available appointment), attitudinal barriers (e.g., perceived need and importance of treatment; willingness, intention, and readiness to seek help), and personal preferences (e.g., dealing with mental health problems with social support) by race and ethnicity (White, Asian, Black or African American, Multiracial, and Hispanic/Latinx). **Results:** Black individuals perceived a high need for treatment, endorsed a strong readiness to seek help, and had higher help-seeking intentions compared to White individuals; yet they faced significantly greater financial barriers to treatment. A similar pattern of results was found for Hispanic/Latinx individuals, but a unique barrier that emerged was a lower perceived importance of mental health, despite perceiving need for treatment. Asian American individuals endorsed a stronger preference for dealing with issues on their own or with support from family/friends, and lower readiness and intentions to seek help, in addition to

endorsing greater financial barriers compared to their White peers. **Conclusions:** Disparities in unmet treatment need may arise from both distinct and common barriers and point to the potential benefits of tailored intervention approaches to address unique needs of students of color from varying racial/ethnic backgrounds. Addressing barriers to treatment may require interventions that cater to the unique needs of different racial/ethnic groups.

No. 48

The Relationship of Vicarious Racism on Immigration Enforcement Stress and Mental Health Among US-Born Children of Chinese Immigrants in Brooklyn

Poster Presenter: Natan Vega Potler

Co-Authors: John Wang, M.D., Rita Barajas-Gonzalez, Simona Kwon

SUMMARY:

<p style="border:medium none; margin:0in">**Background:** Anti-Asian violence has increased since the COVID pandemic began. Such acts, when highlighted in the news and social media, become forms of vicarious racism. Expanding the focus beyond interpersonal racism, recent studies have begun to demonstrate adverse mental health effects of vicarious racism among Asian American adults. However, limited studies have focused on psychiatric sequelae of vicarious racism experienced by youth or its potential relationship to immigration-related stress. We hypothesized that among US-citizen children of Chinese-born parents in immigrant enclaves, increased vicarious racism exposure would be associated with increased immigration enforcement stress and psychiatric symptoms. **Methods:** We conducted a cross-sectional study of US-born (14-18 years) children of Chinese immigrants. Participants were recruited from a neighborhood with high rates of immigrants and mixed-status households. Exclusion criteria: youth who were not US-born; did not have at least one parent born in China; did not live in Brooklyn; or did not meet age criteria. All participants completed a self-administered scale of vicarious racism, Perceived Immigration Policy Effects Scale (PIPES) and Strengths and Difficulties Questionnaire (SDQ). Bivariate linear regressions were performed to

explore associations of vicarious racism on PIPES and three SDQ subscales (total difficulties, internalizing, and externalizing scales). **Results:** This analysis included 36 US-born Chinese American youth (mean age: 15.9, SD: 1.34). Among participants 44% were male, 50% were female and 6% were either gender non-binary or agender. One-hundred percent of youth reported exposure to vicarious racism. The mean frequency of vicarious racism exposure was 1.50 (SD: 0.90) corresponding to exposure between “a few times a month” and “once a month”. Bivariate linear regression analyses demonstrated associations of vicarious racism on PIPES, SDQ total difficulties scale and the SDQ internalizing scale. Vicarious racism was positively associated with PIPES ($\beta=0.497$; 95%CI=.034-.960, $p=.036$), SDQ total difficulties ($\beta=0.738$; 95%CI=.015-1.461, $p=.046$) and SDQ internalizing ($\beta=0.446$; 95%CI=.046-.845, $p=.030$). Vicarious discrimination and SDQ externalizing were not significantly associated ($\beta=.492$; 95%CI .048-.200, $p=.002$).

Conclusions/Implications: Consistent with emerging literature, our findings highlight the salience of vicarious racism in the lives of Chinese American youth. The association between vicarious racism and psychiatric symptomatology emphasizes a need for interventions targeting effects of racism. Moreover, findings indicate a potential relationship between exposure to vicarious racism and immigration enforcement stress, including fear of deportation and family separation. Thus, further investigations on the role of immigration-specific stressors among US-born children of Chinese immigrants are needed.

No. 49

Influence of Implicit Racial Biases on Mental Health Outcomes Reported by the Boston Emergency Services Team (BEST)

Poster Presenter: Nida Z. Virani, M.D., M.P.H., M.S.

Lead Author: German E. Velez, M.D.

Co-Author: Anisha T. Chava, M.D.

SUMMARY:

BACKGROUND: Recently, visibility of existing inequities and injustices, perpetrated by centuries-old policies and structures rooted in colorism and racism, are increasing. Racial/ethnic minorities often

suffer from poor mental health (MH) outcomes due to inaccessibility of high-quality MH services, limited cultural competency, and discrimination. Implicit racial biases are unconscious, often uncontrollable, thought processes that can influence a provider’s willingness to engage in patient-centered care, provide referrals to specialized treatment, or adhere to evidence-based guidelines. We aim to identify and understand impact of biases on communication and decision-making between patients and providers. **METHODS:** The proposed study will use data from the Boston Emergency Services Team ([BEST] includes psychiatrists, master’s level clinicians, RNs, NPs, family partners, certified peer specialists, and MH workers), who provide crisis intervention to ~75,000 public insured individuals. For quantitative analysis (Phase 1), we will administer a single instrument with three components 1) Demographic survey, 2) the Race IAT (Implicit Association Test), and 3) the skin color-IAT, to examine the implicit bias of providers. In Phase 2, using aggregate BEST data from the past 2 years, we will perform a multilevel analysis to assess any relationships between quantitative information gathered in phase 1 (IAT results and demographic data) to their BEST data (including patient demographics, provider demographics, and mental health outcomes). The goal is to compare clinician IAT results with quantitative data obtained by BEST on racial and ethnic disparities in psychiatric diagnosis, evaluation location, referral source, and disposition discharge. In Phase 3, we will render a conceptual understanding of the implicit biases in clinical interactions drawing on modified grounded theory through in-depth interviews. We will purposefully sample (to represent different races, gender, and age) a subset of 20 participants from our initial group. The interviews will center on perceptions of implicit bias training, as well as opinions, interpretations, and potential areas of intervention of the results of Phase 1. **ANTICIPATED RESULTS:** Preliminary analyses demonstrate that POC were more likely to be diagnosed with schizophrenia/psychosis and childhood onset disorders but less likely substance use disorders, anxiety disorders, and mood disorders. Additionally, POC are less likely to be discharged to inpatient psychiatric care, and more likely to be discharged to outpatient treatment or returned to the community.

We anticipate that 1) demographic variables and education about racial/ethnic disparities will influence the scores of implicit bias testing, and 2) items identified in qualitative interviews and scores from BEST providers will correlate with the magnitude of disparities in psychiatric diagnosis, evaluation location, referral source, and discharge disposition.

No. 50

Association Between Types of Stress and Adolescent Suicides

Poster Presenter: Soo Young Kim

Co-Authors: Seung Hoon Kim, Kyungduk Hurh, Jinhyun Kim

SUMMARY:

Objective: This study aims to explore the association between types of stress and suicidal behaviors—ideation and attempts—among Korean adolescents in two distinct years: 2015 and 2020. **Methods:** Data were acquired from the Korea Youth Risk Behavior Web-based Survey conducted in 2015 and 2020. Participants' desire for suicide was evaluated by asking questions about suicidal ideation and attempts during the past year. Types of stress were divided into five categories: none, home, school, academic achievement, and appearance. Multiple logistic regression was used to investigate the association between variables of interest and dependent variables. **Results:** Among the 77,363 adolescents included in this study, 8.8% male and 13.2% female participants had seriously thought about committing suicide, and the rate of male and female participants who tried committing suicide was 1.6% and 2.5%, respectively. While every type of stress was highly associated with suicidal ideation, family and home types of stress had the highest odds ratio (OR), that was statistically significant for both sexes (Male: OR 3.81, 95% Confidence Interval [CI] 2.81 to 5.15; Female: OR 3.64, 95% CI 2.42 to 5.50). Moreover, the OR increased in order of: appearance; academic achievement; school and friends; and family and home, compared to the group that perceived no stress. Suicidal attempts were statistically significant and higher in likelihood, only amongst the female group that experienced stress from family and home (OR 2.48, 95% CI 1.08 to 5.67).

In comparison to year 2015, suicidal ideation and attempts decreased in year 2020, but participants experiencing stress from family and home had higher tendency of attempting suicide, though not statistically significant, regardless of their sex (Male: OR 1.03, 95% CI 0.74 to 1.44; Female: OR 1.06, 95% CI 0.81 to 1.4). **Conclusion:** Adolescents who experience stress from family and home are more likely to think about suicide, or carry it out, as compared to those having different causes of stress. Compared to the adolescents in year 2015, in 2020, suicidal ideation and attempts decreased overall.

No. 51

Changes in Clinical Resource Utilization After Participation in the IOP for Patients With PTSD Within Kaiser Permanente Northern California

Poster Presenter: Kathryn H. Bennett

Co-Author: Julia Wei

SUMMARY:

Abstract Objective: Most of the research on the efficacy of Intensive Outpatient Program (IOP) programs in reducing PTSD symptoms has been conducted in veteran populations. Evidence from these studies suggests IOP programs can be helpful in reducing symptom severity, but less is known about the impact of IOP on acute psychiatric care use patterns. The aim of this study was to examine the association between IOP participation and inpatient psychiatric as well as mental health related ED encounters among patients with PTSD in a large integrated community-based population. **Study Design:** This is a cross-sectional, retrospective study of patients 18 years or older with PTSD who participated in Kaiser Permanente (KP) Oakland's IOP one or more times between January 1, 2017 and December 31, 2018. **Methods:** Using electronic health record data, we compared changes in inpatient psychiatric hospitalizations and mental health-related ED encounters, from the year prior to the index date to the year following the index date, with each patient acting as their own control. Bivariate analyses for variables such as ED and inpatient utilization, sex, Medi-Cal/Medicare enrollment, race/ethnicity, and median neighborhood income level were conducted using the chi-squared test or Fisher's exact test with

bootstrap or Bonferroni correction for multiple comparisons. **Results:** In the 12 months before IOP, participants were more likely to have ≥ 1 inpatient psychiatric encounter, compared to the 12 months following IOP (28.7% vs 15.9%; $p < 0.01$). Similarly, in the 12 months before IOP, participants were more likely to have ≥ 1 mental health-related ED encounter, compared to the 12 months following IOP (24.8% vs 18.2%; $p = 0.04$). The mean number of inpatient psychiatric encounters per patient decreased significantly after IOP intervention (0.3 vs 0.2; $p < 0.01$). Finally, the mean number of ED visits also decreased significantly after IOP intervention (0.5 vs 0.3; $p = 0.03$). Our multivariate analysis demonstrated that patients post-IOP had 0.44 (95% CI: 0.28-0.69) times the odds of inpatient psychiatric encounter compared to patients pre-IOP. Additionally, patients post-IOP had 0.65 (95% CI: 0.43-0.99) times the odds of emergency room psychiatric encounter compared to patients pre-IOP. **Discussion:** This study, which leveraged a large, diverse patient sample generalizable to the Northern California population, demonstrated a significant reduction in inpatient psychiatric hospitalizations and mental health-related ED visits among patients with PTSD who participated in Kaiser Permanente Oakland's IOP program. **Conclusion:** These findings suggest a meaningful opportunity to engage patients with PTSD in intensive outpatient programs, which may in turn prevent future hospitalizations or emergency room visits.

No. 52

Role of Comorbid Psychiatric Disorders in Patients With Addiction

Poster Presenter: Felipe Castillo

SUMMARY:

Background: Opioid use disorder (OUD) among populations in treatment for mental health conditions is both understudied and difficult to treat. We report the prevalence and correlates of OUD and risk of opioid overdose from a large state-wide Medicaid claims database of patients treated for mental health conditions. **Methods:** Our study population (N=523,885) included individuals 18 years and older with a mental health diagnosis recorded in the first position on at least 1 inpatient or 2

outpatient records from a clinical setting, and continuously enrolled in New York State Medicaid during 2020. The claim-reported diagnosis excluded substance use disorders, neurodevelopmental (other than ADHD) and neurocognitive diagnoses alone. Demographic, diagnostic, and eligibility characteristics, along with service utilization histories during 2020 were obtained. Logistic regression models were generated to examine the correlates of both OUD and opioid overdose. **Results:** The prevalence of co-occurring OUD was 8.1% (N=42,648) among the population examined. OUD prevalence was significantly higher among adults aged 25 and older, American Indian and Hispanic individuals, male gender, community residence and rural domicile, and a diagnosis of anxiety, bipolar, and/or PTSD. Among those with OUD, 7.7% (N=3,295) had an opioid overdose in the prior year. Overdose was associated with younger age, schizophrenia, and receiving services in settings that typically serve individuals with more severe mental illness. Lastly, individuals with OUD were associated with higher rates of suicide attempts, suicidal ideation, and housing instability. **Conclusions:** Our results highlight the risk factors associated with the prevalence of OUD and overdose in the mental health population. The overlap between mental health and substance use, and high rates of suicide among individuals with mental illness and OUD demonstrate the critical need for screening and treatment of OUD and the importance of providing substance use disorder interventions in mental health settings and improve treatment outcomes.

No. 53

Buprenorphine Initiation: Is Opioid Withdrawal Necessary?

Poster Presenter: Amanda Sanna Eloma, Pharm.D.

Co-Authors: Susan D. Whitley, M.D., Jennifer Mark, M.D.

SUMMARY:

Background: Fatal overdoses in the United States have reached an all-time high during the COVID-19 pandemic while access to opioid use disorder (OUD) treatment has become more difficult.¹⁻³ Buprenorphine is an approved pharmacologic treatment option for OUD with a safe side effect

profile and lifestyle advantages, however, it remains underutilized.⁴ Its underutilization is driven, in part, by traditional initiation methods that require patients to tolerate a period of opioid withdrawal. Low dose buprenorphine initiation (LDBI) introduces buprenorphine at smaller doses with simultaneous overlap with full opioid agonist treatment including methadone. This emerging strategy eliminates the withdrawal period and offers an opportunity to increase access to OUD care.⁵⁻²⁰ Methods: This single center retrospective chart review examined patients at an urban public hospital from April 2021 to December 2021. Inclusion criteria was an Addiction Medicine Consult for OUD during hospitalization or Emergency Department (ED) visits. The following were collected: age, consult date, consult origin, primary/secondary substance use disorder, OUD pharmacotherapy already received, narcotic pain management, and medical comorbidities. Two independent reviewers identified individuals with OUD who would have strongly benefited from LDBI and included ≥ 1 of the following: patient preference for LDBI, hospitalization requiring narcotic pain management for patient preferring buprenorphine, QTc ≥ 500 while on methadone, or illicit opioid use while on methadone. Patients treated with methadone who did not meet the above criteria but who had medical comorbidities (including age >60 , respiratory compromise, chronic renal insufficiency, and/or concurrent heavy alcohol use) that might make treatment with buprenorphine preferable to treatment with methadone were identified as a secondary group.²¹ These patients might also have benefited from the option of LDBI. Results: There were 129 Addiction Medicine Consults for OUD. Of these consults, 98 (75.96%) were for patients on inpatient services and 31 (24.03%) were for patients in the ED. 70 (54.26%) were maintained or initiated onto methadone, 30 (23.25%) were maintained or initiated onto buprenorphine, and 29 (22.48%) received no medication. 14 (10.85%) patients with OUD were identified who would have strongly benefited from LDBI. Also, 6 (4.65%) patients with OUD treated with methadone had ≥ 1 medical comorbidities that might have made treatment with buprenorphine (and initiation via LDBI) preferable. Conclusions: Our review revealed a substantial proportion of patients who would have benefitted from the opportunity to use LDBI. Although no tool

existed in 2021, a multidisciplinary team at our institution has since developed a LDBI protocol with the potential to provide comfortable transitions to buprenorphine and, overall, increase access to buprenorphine treatment for OUD.

No. 54
Cannabis and Amphetamine Use Among Adolescents in Post-Conflict Liberia: Evidence From the 2017 Global School-Based Health Survey

Poster Presenter: Somto Valentine Enemu, M.D., M.P.H.

Co-Author: Henry Kosorochi Onyeaka, M.D., M.P.H.

SUMMARY:

Background:

Substance use is prevalent among displaced and post-conflict populations and constitutes a significant cause of morbidity and mortality. Despite the burden of substance misuse in post-conflict environments, there is a significant paucity of data regarding substance misuse among adolescents in post-conflict sub-Saharan settings such as Liberia. In order to adapt interventions for illicit drug use among adolescents in Liberia, national population-based prevalence data on cannabis and amphetamine use are critically needed.

family:"Arial",sans-serif">Objective:
</p>

<p style="margin:0in 0in 8pt">To estimate the prevalence of cannabis and amphetamine use and its associated factors among school-going adolescents in Liberia using a nationally representative school-based survey</p>

<p style="margin:0in 0in 8pt">Methods:</p>

<p style="margin:0in 0in 8pt">The 2017 Liberian Global School-based Student Health Survey on 2744 adolescents aged 11–18 years was used. Participants for this study were sampled from selected secondary schools in Liberia. A two-stage cluster sample design was used to produce data representative of all students in grades 7-12 in Liberia. Information was collected with a self-administered structured questionnaire that contained information on demographics, personal factors, school factors, family factors and a range of other health-related behaviors. We performed bivariate and multivariable analyses to assess the correlates of cannabis, and amphetamine use.</p>

<p style="margin:0in 0in 8pt">Results</p>

style="font-size:12.0pt">Results</p>

<p style="margin:0in 0in 8pt">A total of 2,744 adolescents participated in the survey of which 47.5% were females. The result showed that the overall prevalence of self-reported ever-used cannabis was 7.7% (8.4% among males and 6.9% among females) and lifetime amphetamine use was 7.2% (7.7% among males and 6.7% among females). In multivariate analysis, the factors associated with cannabis and amphetamine use were similar and multi-layered. Whereas no demographic factor was associated with amphetamine and cannabis use, school and environmental factors including truancy, being physically attacked and being bullied were associated with increased odds for both cannabis and amphetamine use. At the personal level, health risk behaviors such as alcohol use was significantly associated with both cannabis and amphetamine use. Within the family context, food insecurity (hunger) was associated with increased odds of both cannabis and amphetamine use</p>

<p style="margin:0in 0in 8pt">Conclusions</p>

<p style="margin:0in 0in 8pt">The use of cannabis and amphetamine is

prevalent among school going adolescents in Liberia. Study findings highlight several risk factors for both past-month cannabis and lifetime amphetamine use. The multi-contextual and multi-layered nature of the associated factors warrant the need for the design and implementation of multi-disciplinary and collaborative interventions that accounts for interpersonal, family, environmental and school-based attributes towards the prevention and control of cannabis and amphetamine abuse among adolescents in

Liberia

No. 55

Toxic Leukoencephalopathy After “Chasing the Dragon” With a Non-Heroin Opioid

Poster Presenter: Megan Evans

Lead Author: Aayushi Agarwal

Co-Authors: Raja Mogallapu, Michael Ang-Rabanes, Nycole Kothe

SUMMARY:

Background: Every year, the rate of opioid use increases. With this, users are engaging in more non-traditional methods of usage. “Chasing the dragon” is a term used to describe opioid inhalation, where the user heats the opioid and then inhales the smoke. While this method of usage is typically associated with a quicker high and fewer adverse effects, it can also lead to toxic leukoencephalopathy (TLE). TLE is defined as a structural alteration of the brain’s white matter due to a toxic exposure, such as heroin. **Case Presentation** A 57-year-old woman with a history of polysubstance abuse was admitted to the hospital after weeks of erratic behavior. At presentation, her urine drug screen was found to be positive for oxycodone (which was prescribed to her) and fentanyl. A brain MRI was eventually done, which showed a periventricular leukoencephalopathy characteristic for opioid inhalation. Throughout her hospitalization, she had

only a mildly ataxic gait, which improved prior to discharge. Her cognition and delirium mildly improved with quietapine. **Discussion** Traditionally, opioid related TLE is due to heroin, and patients are found to have very dramatic motor issues. As this patient did not have a history of heroin use and did not present with significant motor deficits, this report highlights the need to maintain a level of suspicion for TLE. As levels of opioid use continue to rise, it is likely that many presentations like that of the patient outlined in this report will be seen.

No. 56

Artificial Intelligence Interventions for Opioid Use Disorder: A Systematic Review

Poster Presenter: Raghu Gandhi, M.D.

Co-Authors: Charu Charu, Ph.D., Rahul Kashyap, Taru Dutt

SUMMARY:

Background: The United States is experiencing an opioid epidemic. The number of overdose deaths has increased by nearly 30% from 2019 to 2020 and quintupled since 1999. Newer Artificial Intelligence (AI) approaches have been developed to predict opioid use disorder before it occurs, permitting early interventions, encouraging behavior modification, curbing opioid cravings, predicting opioid overdose risk in people with opioid use disorder, and assisting in naloxone administration training in the event of opioid overdose. We aimed to identify the current evidence of the role of artificial intelligence in opioid use disorder (OUD). **Methods:** We conducted an extensive literature search on the PubMed database for published articles that evaluated the role of AI in opioid use disorder (OUD) care, in the identification of overdose risk, and in the reversal of overdose. The following search terms were used: ‘artificial intelligence’, ‘AI’, ‘machine learning’, ‘deep learning’, ‘opioid use disorder’, and ‘opioid overdose’. The search was limited from Jan 2000 till Dec. 2022. The study was IRB exempt. **Results:** Total 78 articles were identified using the search criteria. Most of the studies were recently published after the year 2018. Ten articles were excluded as they did not meet the inclusion criteria. AI has been employed in 1. Identifying patients at risk for OUD in emergency departments, 2. Identifying patients with opioid

misuse in the inpatient setting, 3. Assessing disparities in accessing opioid use disorder treatment, 4. Predicting the risk of early dropouts from recovery programs. AI can assist in 1. Detecting suicidality among opiate users based on their engagement on social media, 2. Estimating weekly national opioid overdose deaths in real-time, and 3. Predicting mortality risk after a hospital or emergency department visit for nonfatal opioid overdose. The details of study, their types and AI tools used in the results will be presented at APA annual congress. **Conclusions:** In literature review from past 20 years, the AI may have a high potential in identifying patients at risk of opioid use disorder and opioid overdose and wider use for outcome predictions. This technology may raise some ethical concerns which need to be mitigated.

No. 57

Collaborative Care in a Federally Qualified Health Center in Brooklyn: A Visual Approach to Program Assessment

Poster Presenter: Elizabeth Allan, M.D.

SUMMARY:

Over twenty years ago, the IMPACT study demonstrated the strength of an integrated, stepped approach to the treatment of depression in older adults in a primary care setting. These findings have informed the development of Collaborative Care Psychiatry, a coherent approach to the delivery of behavioral health in primary care. Collaborative Care Psychiatry has been shown to be clinically effective for the treatment of mood, anxiety, and other psychiatric illnesses to a diverse range of patients, across varied treatment settings. It is thought that, by centering care in the home clinic, this model reduces barriers to treatment. Today, New York State is a strong proponent of the Collaborative Care approach, with robust support for these services to individuals with Medicaid insurance. The evidence base for Collaborative Care and state support for its implementation has led the Family Health Centers (FHC) at NYU Langone to adopt this model for its primary care behavioral health program. The FHC is a large, multi-site Federally Qualified Health Center (FQHC) centered in the Sunset Park neighborhood of Brooklyn. It is one of the largest community FQHCs in

New York, and one of the oldest in the nation, and it serves Brooklynites of diverse ethnic, cultural, and linguistic backgrounds. The FHC furthermore benefits from a strong academic affiliation as a training site for clinicians affiliated with NYU Grossman School of Medicine. Over the past two years, we have built and implemented a Collaborative Care psychiatry program across six of the FHC's primary care clinics. This program exists within a larger behavioral health ecosystem that includes Healthy Steps programming, family support services, and a standalone behavioral health clinic for high acuity referrals. While the structure of care is universal across the six clinical sites, we have found that each clinic presents unique challenges and opportunities to fine-tune and advance the Collaborative Care model. Over the course of program implementation, we have tracked trends in Collaborative Care referrals (diagnosis, primary care provider type, demographic information about the patient) and matched this information against similar information about general behavioral health referrals. Our goal has been to better understand who uses Collaborative Care, which patients successfully connect to care through this pathway, and where gaps persist in linking individuals to necessary behavioral health resources. This project takes that information and presents it visually, as a map of our Brooklyn service area and clinics, to illuminate how geography, neighborhood, and clinic characteristics influence connections to care. We further assess whether Collaborative Care provides equitable access to care, particularly in areas of language of preference.

No. 58

Innovative Educational Strategies for Primary Mental Health Training of Collaborative Care Teams: A Brazilian Experience

Poster Presenter: Andre Luis Bezerra Tavares

SUMMARY:

INTRODUCTION: Mental Health disorders reach up to 20% of Brazilians. The National Health System (SUS) in Brazil is universal, publicly funded, and based on Primary Care but these teams do not have good training in Mental Health and the development of collaborative care with specialized providers is still incipient. **OBJECTIVE:** to evaluate innovative

strategies of education in mental health and psychosocial care for primary and mental health care providers together in Brazilian northeast region, improving assessment, access, adequate management, follow-up and quality of longitudinal care of people with mental, neurological and substance use disorders. The Mental Health Gap Program Intervention Guide (mhGAP-IG/WHO) was used, been adapted to different types of training. It also aimed to strengthen mental health networks by increasing collaborative and stepped care.

INTERVENTIONS: The state of Ceará includes several interior areas with low IDH levels. The SUS Primary Care is the most important source of health care and since 2017 educational actions with the mhGAP-IG/WHO have been used to qualify its teams. During COVID-19 pandemic, an educational project (Care in mental health and psychosocial care: evaluation, management and follow-up in the territories - SMAPS-CE) began to amplify mental health and psychosocial care by primary care. Educational resources were adapted to different e-learning formats: actualization courses (238 providers trained); part of the curriculum of family medicine, psychiatry and multidisciplinary residencies, and as short self-instructional online courses (3000 enrolled and 1488 trained). They enabled the development of telehealth care skills, using mainly role play activities, and support from telehealth teams. It also offered face-to-face workshops (129 trained), qualifying and strengthening integrated care in Ceará. A total of 1914 providers were trained developing resolute clinical management and reducing health expenses with collaborative and stepped care models.

RESULTS: A survey evaluated the educational strategies and the effect of training, using access, quality indicators and the guarantee of longitudinal care among trained providers integrated network. In 2022, 1151 evaluation forms from WHO were filled in (41.5% came for Fortaleza (the capital) and 58.5% from interior regions. The least well-evaluated criterion was the high workload of the trainings . The majority assigned an excellent grade to the didactic material and stated that they felt fully confident in applying the knowledge acquired in the course ($p < 0.0001$). It also helped reducing stigma with the use of active motivating educational methodologies.

CONCLUSION: The project will continue in 2023. Universalizing access to primary mental health care

training in the state through e-learning courses and motivating providers to work within collaborative care trainings helped integrate primary and mental health providers to work together.

No. 59

The Importance of a Culturally Sensitive Trauma-Informed Interpreter and Human Trafficking Protocol for Victims of Trafficking: A Case Report

Poster Presenter: Ganeya Gajaram

Co-Author: Aizhan Tyndybekova Repchak, M.D.

SUMMARY:

Introduction: Despite the abolishment of slavery in the United States, the modern-day enslavement of women, men, and children who are trafficked for forced labor or sexual exploitation still exists. Due to the abuse, exploitation, low levels of social support, violence and fear-mongering that victims experience, studies have shown that such victims experience lasting physical and psychiatric side effects, with being at-risk of developing various mental disorders. Though the emerging literature converges on best practices in identifying and managing these victims, these have yet to be widely adopted into clinical practice. **Case:** Our patient is a 47 year old female who was admitted for restoration following an arrest. During hospitalization, she exhibited aggressive behavior, reported having multiple pregnancies and being locked up in jail, and was diagnosed with Schizoaffective disorder. She was stabilized and transferred to our hospital as unrestorable. She denied all hallucinations, appeared to have limited insight into her psychiatric condition with limited responses to questions—even with a phone interpreter—and a language barrier. Very little was known of her until she encountered a medical student who spoke her language. The student, who was culturally sensitive and trauma-informed, began building rapport and was able to collect information that indicated the patient had been a victim of trafficking. The patient was re-evaluated with a culturally sensitive and trauma-informed approach and was diagnosed with complex-PTSD and her medications were adjusted. **Discussion:** The literature on identifying and managing victims of human trafficking has peaked in the last decade, however, its implementation into clinical practice has

not shared the same momentum. Several important tenets that underpin effective management of these victims are outlined and examined as to how they relate to our case, how its implementation could've helped to identify her at various points in time, and serve to adequately diagnose and manage her mental and physical health. We emphasize the importance of a trauma-informed culturally sensitive in-person interpreter with an understanding of mental health who is trained to identify the signs of a potential victim. We also advocate for hospitals and clinics to adopt an existing Human Trafficking Protocol or develop their own so that all the members of the treatment team and staff are well equipped to identify and manage these victims in a trauma-informed and culturally appropriate manner. **Conclusion:** Human trafficking remains a problem in the United States and the victims suffer long-term physical and psychiatric illnesses. Through our case report, we highlight how implementing effective strategies could've helped identify her as a victim of trafficking during one of her outpatient clinic visits or during her inpatient hospitalizations where she should've been treated in a trauma-informed and culturally-sensitive manner.

No. 60
Tattooing and Piercing Are Associated With Symptoms of ADHD: A Cross-Sectional Study of Non-Clinical Adults

Poster Presenter: Martin Ragnar Glans, M.D., Ph.D.

SUMMARY:

Introduction: Previous research suggests that individuals with body modifications exhibit impulsive personality traits and are at risk of stigmatization due to digressing from the behavioural norm^{1,2,3}. ADHD is associated with risk-taking behaviours but it is unknown whether there is an association between body modifications and ADHD symptoms.

Objectives: The aim of this study was to evaluate if tattoos and piercing were associated with subclinical ADHD symptoms in non-clinical adults. **Methods:** 781 adults without ADHD completed the Adult ADHD self-report scale (ASRS-v1.1) and answered questions concerning body modification. ADHD diagnosis served as exclusion criterion. Three grouping variables were analysed separately; tattoo status,

piercing status and a combination of having both tattoo and piercing. Linear regression compared mean ASRS total- and subscale scores between individuals with and without body modification according to each grouping variable, while adjusting for candidate covariates age and sex. **Results:** In our cohort, 30% had a tattoo, 18% had a piercing other than earlobe and 12% had a combination of tattoo and piercing. Any combination of body modification was associated with significantly higher ASRS total- and subscale scores compared to no body modification. The most pronounced differences between groups were seen in the tattoo and piercing combined group, and on the hyperactivity/impulsivity (HI) subscale; revealing adjusted mean differences of 4.3 points (range 0-72) on the ASRS-total score ($p < 0.001$) and 2.6 points (range 0-36) on the ASRS HI subscale ($p < 0.001$). **Conclusions:** Body modification was associated with more pronounced ADHD core symptoms amongst non-clinical adults. The prevalence rates of body modifications in our cohort indicate that they are becoming cultural normal.

No. 61
Transcranial Direct Current Stimulation in Attention-Deficit/Hyperactivity Disorder: An Updated Meta-Analysis of Randomized Trials

Poster Presenter: Marina Maria Gonzaga Moreira
Co-Authors: Alvaro Teixeira, Amauri Vargas Junior, Edmi Cortes Torres, M.D., Giuliana Perrotte

SUMMARY:

Background: Transcranial direct current stimulation (tDCS) is a promising nonpharmacological alternative for treatment of attention-deficit/hyperactivity disorder (ADHD). This study aimed to evaluate the efficacy of tDCS compared with sham in patients with ADHD. **Methods:** Two independent investigators searched PubMed, Embase, and Cochrane up to September 2022. We systematically reviewed, according to PRISMA guidelines, randomized clinical trials (RCTs) and included 15 articles, of which 6 were parallel trials and 9 were crossover studies. Mean difference (MD) applying 95% confidence intervals (CI) was computed for the primary outcomes of cardinal symptoms of ADHD of inattention, hyperactivity, and impulsivity. Secondary outcomes

included the overall ADHD symptoms. Additionally, outcomes analysis was performed separately for data on the immediate effect and follow-up (1 day to 4 months) after the intervention. The symptom scale scores were normalized according to their maximum scores, allowing greater comparability. **Results:** This analysis included 441 patients with ADHD with prominent inattention or combined symptoms (mean age=19.73, 66% male). The meta-analysis of follow-up data suggested improvement in overall ADHD symptoms (MD: -0.09; 95% CI -0.13 to -0.04; $I^2=0\%$, $p < 0.001$), impulsivity (MD: -0.59; 95% CI -0.89 to -0.30; $I^2=58\%$, $p < 0.0001$) and hyperactivity (MD: -0.11; 95% CI -0.19 to -0.04; $I^2=48\%$, $p = 0.002$), but no significant effect in inattention (MD: -0.04; 95% CI -0.11 to 0.03; $I^2=65\%$, $p=0.241$). Analysis of data immediately after the intervention showed no significant effect in measurements of hyperactivity (MD: 0.00; 95% CI -0.08 to 0.08 $I^2 = 49\%$, $p = 0.934$), impulsivity (MD: 0.01; 95% CI -0.01 to 0.02; $I^2 = 13\%$, $p = 0.508$), inattention (MD: -0.02; 95% CI -0.09 to 0.05; $I^2 = 77\%$, $p = 0.627$) and overall ADHD symptoms (MD: -0.06; 95% CI -0.23 to 0.12, $I^2=35\%$, $p=0.530$). Furthermore, group analysis in adults demonstrated improvement in the inattention domain immediately following intervention (MD: -0.46; 95% CI -0.78 to -0.14; $I^2=60\%$, $p=0.005$).

Conclusion: Despite limited evidence, tDCS is a safe intervention with the potential to offer a nonpharmacological line of treatment for ADHD. Our study suggests improvement in follow-up impulsivity, hyperactivity, and overall symptoms of ADHD. Nonetheless, considerable heterogeneity and risk of bias among studies call for more research in this novel field, including protocol optimization.

No. 62

An Experimental Initiative to Elucidate the Potential Effects of Viloxazine on Serotonin Neurotransmission at Doses Relevant for ADHD Treatment

Poster Presenter: Jennie Garcia, Ph.D.

Lead Author: Chungping Yu, Ph.D.

Co-Authors: Brittney Yegla, Ph.D., Jami Earnest, Pharm.D.

SUMMARY:

Introduction: Most ADHD treatments are thought to be effective due to augmentation of dopamine (DA) and norepinephrine (NE).¹ Our prior preclinical studies found that the ADHD treatment, viloxazine, may augment serotonin (5-HT) in addition to NE and DA; however, it was unclear if these effects occurred at clinically relevant concentrations.² To further understand these potential 5-HT effects, we conducted a series of experiments with two objectives: 1) Can we confirm and better elucidate the previously observed serotonergic effects of viloxazine and determine if they occur at clinically relevant concentrations? 2) Are these effects observed in species with close physiology to humans? **Methods:** Objective 1: The affinity of viloxazine for human isoforms of 5-HT_{2A}, 5-HT_{2B}, 5-HT_{2C}, and 5-HT₇ receptors and NE and 5-HT transporters (NET and SERT) was assessed via cell-based binding assays. A microdialysis study was conducted in rats to determine the relationship between viloxazine concentrations in the interstitial fluid (ISF) and changes in NE, 5-HT, and their metabolite concentrations in the prefrontal cortex (PFC). Objective 2: A PET imaging study using a 5-HT_{2A/2C} radioligand agonist, [¹¹C]CIMBI-36, was conducted in non-human primates (NHPs) to evaluate if viloxazine binds these receptors and/or increases 5-HT release.³ **Results:** Objective 1: Cell-based assays to measure viloxazine affinity for NET, 5-HT_{2B}, 5-HT_{2C}, and 5-HT₇ found K_i values of 0.14, 0.65, 0.84, 1.90 μ M respectively. These values were lower than unbound plasma concentrations of pediatric ADHD patients given 400 mg of viloxazine (2.1-3.3 μ M), indicating possible receptor recruitment. Viloxazine k_i values for 5-HT_{2A} and SERT (16.3 and 14.4 μ M respectively) were higher than pediatric unbound plasma concentrations, indicating negligible activity. The microdialysis study found 30 mg/kg to be therapeutically relevant as at this dose the calculated free viloxazine plasma concentration was \sim 2.4 μ M similar to the unbound plasma concentration in pediatric ADHD patients. At this clinically relevant concentration, viloxazine increased 5-HT levels 213% over baseline; no changes were seen in the 5-HIAA metabolite, indicating 5-HT increase was not due to 5-HT reuptake inhibition. Objective 2: Administration of 3 mg/kg of viloxazine to NHPs produced an unbound plasma concentration

of 3.9 μM (C_{max}), aligning with that of pediatric ADHD patients. At this concentration, changes in binding potential of [^{11}C]CIMBI-36 in the choroid plexus and the cortex were 60% and 25-36% respectively, indicating viloxazine may directly bind to 5-HT_{2c} receptors in choroid plexus and elevate endogenous 5-HT levels in the cortex. **Conclusions:** To date, our experiments have shown that the serotonergic effects of viloxazine occur at clinically relevant concentrations and that these effects are also seen in animals with close physiology to humans.

No. 63

Interdisciplinary Pain Rehabilitation Treatment Outcomes for Oncological Patients With Chronic Pain

Poster Presenter: Laura Duque, M.D.

Co-Authors: Teresa Rummins, Melanie T. Gentry, Andrea Reynolds, Eleshia Morrison

SUMMARY:

Background: Interdisciplinary pain rehabilitation programs (IPRPs) restore function through physical and psychological rehabilitation, with a focus on individuals with chronic “non-cancer pain” [1]. Treatment concepts include reducing health care utilization and symptom monitoring, decreased use of analgesic medication, and increased self-management of chronic pain, which may not be appropriate for all cancer patients with pain. Thus, research is limited regarding the functional benefits of this treatment for oncological patients. Upwards of 40% of cancer survivors report chronic pain, associated with increased psychological distress and diminished quality of life [2, 3]. U.S. national guidelines support multimodal treatment for cancer-related pain [3], in line with IPRP treatment concepts. The present study examined the clinical outcomes of patients with a history of cancer plus chronic pain who completed IPRP at Mayo Clinic’s Pain Rehabilitation Center. We hypothesized that the data would yield statistically significant improvements in pain-related outcomes following treatment completion. **Methods:** Participants with a history of cancer and chronic pain that completed an intensive outpatient 3-week IPRP were included. Patient-reported outcomes were pain severity and interference, pain catastrophizing, pain self-efficacy,

depressive symptoms, and quality of life (QOL). Physical therapist-rated measures of physical function were also examined. Paired-sample t-tests were performed with Bonferroni correction to examine differences between treatment admission and discharge outcomes. **Results:** Seventy-seven patients completed the 3-week IPRP. They had a mean age of 57.81 years and were 67.5% female. Upon admission, 13% were taking opioids (mean morphine equivalence (MME)=98.85). The most common types of pain were fibromyalgia (16.8%) and low back pain (15.6%), while skin cancer (27.3%) and breast cancer (15.6%) were the most prevalent types of cancer. Admission-to-discharge reductions in pain severity ($t(69)=7.66$), pain interference ($t(69)=8.11$), pain catastrophizing ($t(69)=7.51$), and depressive symptoms ($t(69)=8.44$) were significant ($p<.001$). Improvements in pain self-efficacy ($t(69)=-10.34$), and mental ($t(69)=-11.34$) and physical ($t(69)=-10.63$) QOL were also significant ($p<.001$). Improvements across functional physical domains were all significant ($p<.001$), except for the 50-foot walk test ($p=0.6$). All participants on opioid medication at admission underwent complete taper, per program expectation. **Conclusion:** Our study demonstrates improvements in physical and psychological function across several pain-related measures among patients with a cancer history. IPRP treatment presents an additional patient care option for cancer survivors for whom chronic pain is functionally disruptive, stable, and not an indication of disease progression.

No. 64

A Scoping Review of Psychiatric Barriers to Spinal Cord Stimulation Implantation and Their Management

Poster Presenter: Kristy A. Fisher, M.D.

Co-Author: Shivani Kaushal

SUMMARY:

Background: Patients with severe chronic pain refractory to more conservative treatment may be considered for spinal cord stimulation (SCS) as an advanced interventional therapy. Studies have shown that psychiatric disorders are associated with worse outcomes following SCS implantation. However, the nature of psychiatric disorders exist in

a spectrum-like fashion, with varying levels of chronicity, remittance with age, responses to treatment, and severity as indicated with specifiers (level of remission and number of episodes) in the Diagnostic and Statistical Manual of Mental Health Disorders, Fifth Edition (DSM-V). Furthermore, newer treatment options available for psychiatric disorders better ensure compliance with more effective and longer lasting stability, significantly enhancing prognosis. Therefore, whether and to what extent an “active” psychiatric disorder poses a clear barrier to safe and successful SCS therapy is often not well understood by non-psychiatrists. Despite psychological clearance and correct indication for SCS, pain medicine physicians often find themselves questioning the appropriateness of some candidates. The authors aim to conduct a scoping review to identify assessments utilized to identify patients with pronounced psychiatric symptom burden that may complicate optimal response to SCS therapy despite passing a psychiatric evaluation; clearly define accepted strict psychiatric contraindications to SCS implantation; and review how psychiatric comorbidities may be addressed or managed to improve a patient’s candidacy for SCS treatment in patients who do not pose strict contraindications to proceeding with SCS implant but may be at risk for suboptimal long-term response. **Methods:** A scoping review was conducted at Mayo Clinic using the resources of the Center for The Science of Health Care Delivery and the Plummer Library. Of all the studies reporting clinical data related to psychiatric conditions and how they are used in the assessment of candidates for SCS trial and implantation, 62 studies were deemed relevant. An extensive qualitative analysis was conducted on the extracted data. **Results / Conclusion:** Results of this review indicate the need for a standardized, evidence-based protocol for the psychological clearance process of SCS implantation in eligible candidates. Results support the use of specific and multiple psychological assessments targeted at establishing true contraindications and identifying present psychiatric and psychosocial barriers requiring further intervention to optimize outcomes. Furthermore, results reveal a necessity of this protocol to take on an algorithmic approach to accommodate for each individual’s unique needs and

to provide the proper recommendations of support based on these separable needs.

No. 65

Low Academic Performance (GPA) Associated With Digital Device Use in Children and Adolescents (CAD)

Poster Presenter: Maria Alejandra Canas

Co-Authors: Bernardo Ng, M.D., Javier Avendano, Liliana Gonzalez

SUMMARY:

Background: There is an increased concern about addiction to digital devices in Children and Adolescents (CAD) and the possible consequences on mental health¹. Teenagers are looking for new ways to engage with one another and are spending more time online using digital technologies as the prevalence of mental health disorders continue to rise². Nevertheless, little study has been done about the long term consequences of Digital Device Use, moreover how children perceive mental health stigma or how the guardians are able to identify risk factors³. **Objective:** We aimed to identify the possible association between Digital Device Use and its correlation between academic performance.

Methods: This was a cross-sectional analytical study with collected data from 101 patients with confirmed diagnoses of mental health disorders. Patient data was analyzed through SPSS Version 28. Correlations of scalar variables were done with non-parametric Spearman’s coefficient. Since age and school grade are correlated just one of them was used [0.94,p<0.01]. As a result, we determined there is a strong negative correlation between the digital addiction scale (DSCAi) and Academic Point Average (GPA) [-0,33,p<0.01]. To compare the DSCAi between categorical variables we used the Kruskal-Wallis test. Only one predictor was a determinant factor for DSAC: hours of device use on weekdays [statistical 8.2, sig 0.04,p<0.05]. Nevertheless, time usage variables shouldn’t be in regression because they are endogenous to the dependent variable (meaning, as more time is spent using the device, you will score higher on the addiction scale). We proposed an empirical model to explain digital addiction in children, measured by DASC, as a function of the use of electronic devices and demographic and academic

control variables. **Results:** The GPA proved to be the most important predictor of digital addiction; a good academic performance is expected to be negatively correlated with it [-7.786, sig 2.370, $p < 0.01$]. In addition, school grade proved to be another significant factor: advancing up the academic ladder would be expected to reduce digital addiction in CAD [-1.637, sig 0.776, $p < 0.05$]. Ethnicity and exercise frequency appear to be non-significant predictors. **Conclusion:** CAD are spending more time using digital devices. The type of device used (smartphone, tablet, computers or videogame consoles) has no strong correlation with the time spent using it. There was no difference between Hispanic patients and non-Hispanics. We determined a strong negative correlation between DSCA and the GPA, inferring, the more time the young spends using devices, the lower academic performance is expected. We can not determine causality in this study but only correlation. Although there is evidence supporting possible mental health problems related to digital use, a long term study is urgently needed, Moreover, there remains a significant amount of possibilities for potential solutions to this growing issue.

No. 66

A Medical Student's Guide to Wellness: How Coping Strategies Can Help Prevent Burnout in Our Future Workforce

Poster Presenter: Edicer Ramirez-Rivera, M.D.

Co-Authors: Natalia Raimundi Santos, Camila Fernandez Lockwood, Nathalie Rivera-Morales, Gian Ramos

SUMMARY:

Background: The medical curriculum is stressful as it includes an increase in academic workload, new responsibilities, and rigorous standardized testing. Some students have effective coping strategies to manage these stressors, while others may engage in maladaptive responses that can lead to burnout syndrome. This study explores factors which may influence the development of burnout in future physicians. **Methods:** Data was collected from self-report questionnaires of 131 medical students at the University of Puerto Rico-School of Medicine. Questionnaires were administered through REDCap

and included the Maslach Burnout Inventory as a measure of burnout and Coping Strategies Survey. The study was approved by the UPR Institutional Review Board as protocol B1750121. Descriptive analyses were used to determine prevalence of burnout and coping strategies. Spearman's Rho correlations were calculated to evaluate relationship between the variables. All analysis were performed using SPSS. **Results:** Family support was negatively correlated to burnout ($\rho = -0.269$, $p = 0.002$) and to having a cynical behavior or attitude ($\rho = -0.270$, $p = 0.002$). Participating in religious or spiritual groups was negatively correlated with cynicism ($\rho = -0.174$, $p = 0.047$). A negative correlation was found between exercise and exhaustion ($\rho = -0.187$, $p = 0.032$). Among maladaptive coping mechanisms, social withdrawal was positively correlated to burnout ($\rho = 0.372$, $p < 0.001$), exhaustion ($\rho = 0.330$, $p < 0.001$), and cynicism ($\rho = 0.301$, $p < 0.001$). Eating less than usual was positively correlated to burnout ($\rho = 0.259$, $p = 0.003$) and exhaustion ($\rho = 0.619$, $p = 0.003$). Buying things compulsively was related to higher levels of burnout ($\rho = 0.338$, $p < 0.001$), exhaustion ($\rho = 0.271$, $p = 0.002$), and cynicism ($\rho = 0.234$, $p = 0.007$). The use of energy drinks was positively correlated to exhaustion ($\rho = 0.227$, $p = 0.009$) and burnout ($\rho = 0.202$, $p = 0.020$). Higher burnout ($\rho = 0.185$, $p = 0.35$) and exhaustion ($\rho = 0.269$, $p = 0.002$) levels were seen among students stating to have sought help from mental health professionals. **Conclusion:** Dysfunctional coping strategies were correlated to increased mean burnout scores. Medical student social isolation and the lack of promptly seeking aid from institutional resources may lead to the manifestation of cynicism due to burnout. In contrast, a moderate-strong correlation was observed between functional coping strategies and lower exhaustion levels. A negative correlation between family support and burnout/cynicism is indicative of how healthy family nuclei may aid within high stress academic environments. The practice of religion and exercise presented as effective tools to counter cynicism and exhaustion, respectively. These findings should facilitate identification and promotion of adequate strategies to improve resilient behavior among students within their academic and clinical duties.

No. 67

Treatment of Perinatal Conditions in the Maternal Outreach Mood Services (MOMS) Program: An Analysis of Epds Scores in PHP/Iop Levels of Care

Poster Presenter: Nicole Tarui, M.D., M.P.H.

Co-Authors: Nirmaljit Kaur Dhami, M.D., Brienne Baker

SUMMARY:

Background: The perinatal period is a vulnerable time that is associated with an increased risk for psychiatric disorders. The prevalence of depression during the perinatal period is 19%, any anxiety disorder is 13%, and PTSD is 8%. Treatment of psychiatric conditions during pregnancy and postpartum is critical to the wellbeing of both parent and child. This study aims to analyze the change in *Edinburgh Postnatal Depression Scale* (<em style="font-variant-ligatures:normal; font-variant-caps:normal; orphans:2; widows:2; -webkit-text-stroke-width:0px; text-decoration-thickness:initial; text-decoration-style:initial; text-decoration-color:initial; word-spacing:0px">EPDS) scores during treatment in a multidisciplinary mother baby-based partial hospitalization program (PHP) and intensive outpatient program (IOP). **Methods:** Patients who met criteria for moderate to severe perinatal conditions were enrolled in the MOMS PHP/IOP program between July of 2020 through June of 2022. Patients ranged from 22 weeks of gestation to 2 years postpartum. Treatment included daily group therapy for up to 6 hours/day, weekly individual therapy, and bi-weekly or weekly medication management visits with a perinatal psychiatrist. On average, patients were engaged in treatment for 8-10 weeks duration. Patients enrolled in PHP/IOP completed the EPDS at the time of admission then weekly until discharge. These results were reviewed on a quarterly basis with an emphasis on percent change from admission to discharge. **Results:** 88 patients were enrolled in the MOMS PHP/IOP program from July of 2020 through June of 2022. For all diagnoses, the mean EPDS score at the time of admission was 15 and at the time of discharge was 6. The mean percentage decrease in EPDS scores from the time of admission to discharge was 60%. The most common diagnoses included bipolar I disorder manic with psychosis, Major Depressive Disorder, and Generalized Anxiety Disorder. There were 5

patients who met criteria for Bipolar I disorder manic with psychosis, the mean EPDS score upon admission was 15 and at the time of discharge was 3. The mean percentage decrease in EPDS score was 71%. There were 57 patients who met criteria for Major Depressive Disorder, the mean EPDS score upon admission was 17 and at the time of discharge was 7. The mean percentage decrease in EPDS score was 61%. There were 4 patients who met criteria for Generalized Anxiety Disorder, the mean EPDS score upon admission was 13 and at the time of discharge was 6. The mean percentage decrease in EPDS score was 62%. **Conclusion:** Engagement in a multi-disciplinary mother baby-based PHP/IOP program resulted in a significant reduction in symptoms for patients experiencing perinatal psychiatric conditions. This is evidenced by a 60% mean decrease in EPDS scores following treatment. Currently, there is limited data investigating the impact of multidisciplinary treatment at PHP/IOP levels of care on perinatal psychiatric conditions. These results are critical to our understanding of the diagnoses, interventions, and levels of care needed to successfully treat individuals experiencing perinatal psychiatric conditions.

No. 68

Antecedent Symptoms Associated With Onset of Major Depressive Episode in Pregnancy

Poster Presenter: Bennett Wechsler, M.D.

Co-Authors: Anthony Joseph Rothschild, M.D., Kimberly Ann Yonkers, M.D., Kate Gilstad-Hayden

SUMMARY:

Background: About 20% of women may develop depression during pregnancy.¹ Due to this elevated incidence and the increased morbidity and mortality associated with the disorder², early detection and treatment of major depression in pregnant women is critical. Our analysis examined a pregnant population and retrospectively assessed the symptoms of depression associated with subsequent major depressive episode (MDE). **Methods:** This is a secondary analysis from a prospective cohort study on the relationship between an MDE, antidepressant treatment and birth outcomes. Pregnant individuals were eligible to participate if they were at least 18 years of age, less than 17 weeks gestation, and were

willing to provide informed consent. The original cohort included 2,654 participants; the current analysis included 2,594 participants who were at risk of an MDE because they did not have an MDE in the first month of pregnancy. We used The World Mental Health Composite International Diagnostic Interview v2.1³ to determine a likely diagnosis of, and symptoms of depression for each month of pregnancy. We applied generalized linear mixed models with a random intercept to examine the association of MDE at each month of pregnancy with individual symptoms from the previous month, adjusted for month of pregnancy, age, race/ethnicity, education, history of MDE prior to pregnancy, and prior MDE at any previous month during pregnancy. Symptoms that were statically significantly associated ($p < 0.05$) with MDE were then entered into a single, multivariable model concurrently.

Results: Roughly 6% ($N=162$) of participants likely had an onset of an MDE during pregnancy after the first month of pregnancy. In bivariate models, MDE was not associated with confused thoughts, increased energy, and increased appetite in the previous month, independent of demographic variables and history of MDE. Results from the multivariable model that included the remaining ten symptoms showed that the odds of MDE were greater among participants who endorsed trouble concentrating [OR (95% CI) = 2.6 (1.5-4.6)], feeling guilty [OR (95% CI) = 3.4 (1.7-7.1)], feeling jittery [OR (95% CI) = 4.8 (2.1-10.7)], low appetite [OR (95% CI) = 2.3 (1.5-3.5)], and low energy [OR (95% CI) = 2.9 (1.8-4.7)] (all $p < 0.002$) compared to those without these symptoms in the previous month, independent of other symptoms and other adjusting variables. Inability to decide, racing thoughts, trouble sleeping, sleeping more than usual, and moving/talking slowly were not associated with subsequent MDE in the multivariable model.

Conclusions: Our results indicate that the likelihood of developing MDE was increased in pregnant individuals reporting difficulties concentrating, guilt, feeling jittery, low appetite, or low energy, during the prior month. These findings may lead to the development of tools to identify individuals at risk for subsequent MDE, and targeted interventions that strengthen resilience against depression.

No. 69

Treatment of Perinatal Mood and Anxiety Disorders and Attachment Insecurity in a Dyadically-Informed Perinatal Partial Hospitalization Program (PHP)

Poster Presenter: Naomi Weiss-Goldman, M.D.

Co-Authors: Jeana DeMairo, Ph.D., Annie R. Hart, M.D., Catherine Birndorf, M.D.

SUMMARY:

Background: Maternal attachment insecurity is a well-documented risk factor for Perinatal Mood and Anxiety Disorders (PMADs) and functional impairments of PMADs can, in turn, contribute to insecure attachment in the infant due to suboptimal caregiving experiences. Perinatal Partial Hospital Programs (PHPs) offer a model of care for severe PMADs that provides rapid symptom relief while addressing maternal attachment insecurity through dyadically-informed psychotherapy. The aim of this study was to assess the efficacy of the perinatal PHP in treating primary mood symptoms, maternal bonding and attachment security. Methods: Participants included 302 peripartum women with PMAD symptoms referred for PHP treatment at The Motherhood Center in New York. Participants received medication management, individual and group psychotherapy incorporating dyadic interventions and infant-care support. Treatment was available either in-person or remotely from 2020 to present, with both brick-and-mortar and virtual programming offered as an accommodation to the COVID-19 pandemic. Mood symptoms were measured with the Edinburgh Postnatal Depression Survey (EPDS), attachment with the Adult Attachment Questionnaire (AAQ), and bonding with the Postpartum Bonding Questionnaire (PBQ). Results: Between admission and discharge from the PHP, mean scores of the EPDS, AAQ and PBQ showed statistically significant improvement among our population, suggesting efficacy of this intervention in improving depressive symptoms, attachment security, and mother-infant bonding, respectively. Conclusions: The Perinatal PHP offers an innovative model for improved treatment of severe peripartum illness in the United States by incorporating the infant into treatment. This study provides evidence that a short-term intervention can facilitate bonding and offer meaningful improvements in attachment in

addition to effectively treating symptoms of perinatal mood and anxiety disorders.

No. 70

Antipsychotic-Induced Hypothermia in Jail Patients: A Rare Adverse Effect Meets Structural Vulnerability

Poster Presenter: Chengxi Li

Co-Authors: Mallory Cash, Diana Robinson, Abhisek Khandaj, Theresa Larsen

SUMMARY:

Introduction Antipsychotic-induced hypothermia (AIH) is a very rare phenomenon linked to typical and atypical antipsychotics (APs), typically occurring within one week of AP initiation or titration,¹ often in context of predisposing risk factors (e.g. older age, exposure, malnutrition, hypothyroidism, benzodiazepine use).^{2,3} Since July 2021, consultant psychiatrists at the authors' hospital have received an unusual volume of consults for suspected AIH in patients admitted from the county jail. Concern arose that the jail setting increased hypothermia risk for inmates taking APs. **Methods** Records from July 2021 to December 2022 were reviewed for AIH consults. Epic's SlicerDicer tool was used to query the number of inpatient admissions with hypothermia from jail and non-jail sources in that period. **Results** There were 13 AIH consults for eight unique patients from jail and no AIH consults for patients not from jail. APs taken by these patients were Risperidone (10 of 13 consults), Haloperidol (2), Olanzapine (2), Quetiapine (1), and Ziprasidone (1). In all cases, other hypothermia etiologies were deemed likelier, most often sepsis/infection (7 of 13 consults) and cold exposure (6); no APs were initiated or titrated within one week of consult; and resuming APs was not associated with further hypothermia except in one patient with post-discharge cold exposure and sepsis. Per SlicerDicer, 573 of 72622 inpatient admissions (0.8%) were from jail, whereas 10 of 54 admissions with hypothermia (18.5%) were from jail. Viewed another way, 10 of 573 jail admissions (1.7%) versus 44 of 72049 non-jail admissions (0.06%) carried hypothermia diagnoses. Given 13 AIH consults during this period, at least three such hypothermia admissions from jail were undercounted by SlicerDicer. Rates of AP use and other hypothermia risk factors in either group

were not determinable with SlicerDicer. **Discussion** Hypothermia patients have disproportionately come from jail, and most, if not all, of these jail patients with hypothermia were taking APs. Non-AP etiologies of hypothermia were consistently deemed likelier, but quantifying the contribution of APs is difficult given confounding factors and the rarity of AIH. These preliminary findings will spur further chart review to compare rates of AP use and other hypothermia risk factors in jail and non-jail groups. As it stands, consultant psychiatrists should know that correctional settings may increase AIH risk through structural vulnerabilities such as poor temperature control, limited clothing, and high rates of AP use.^{4,5,6} Additionally, care should be taken to distinguish hypothermic symptoms (e.g. confusion, apathy) from psychiatric illness.⁷ Finally, the authors aim to motivate advocacy of awareness of AIH as a potential contributor to hypothermia in incarcerated populations. Collaborating with jail medical staff regarding environmental exposure and psychiatric treatment may prevent patient harm from phenomena such as AIH.

No. 71

A Journey Through the Emotional and Personal Response and Resiliency for Unmatched Medical Students

Poster Presenter: Kevin Long, M.D., M.P.H.

Co-Authors: Theresa Reno, M.D., Ph.D., Judy Chang, M.D., M.P.H.

SUMMARY:

Background: One of the most traumatic experiences a medical student can face is going through the National Resident Matching Program (NRMP) process and not matching to any position. Stigma related to being an unmatched medical student has been described in reflections from unmatched individuals and calls for action (Nallani, 2020; Vogel, 2018). However, there are few studies empirically describing the experiences of unmatched medical students from their perspectives and in their own voices. Additionally, resilience in the medical community has been a recent focus given the high rates of burnout in medicine (O'Dowd et al., 2018) making resiliency in this population of even higher importance. Insights regarding perceived needs and

strategies used for resilience among unmatched students is important in developing supports and resources. The purpose of this qualitative, exploratory study is to gain a deeper understanding of the impacts, challenges, needs, and suggestions related to going unmatched through analysis of personal narratives of individuals who did not match in the NRMP. **Methods:** We conducted semi-structured qualitative interviews with medical professionals or students who did not match through the NRMP or equivalent subspecialty match cycle in the United States. We recruited participants by posting the study in the Reddit online community for unmatched medical students. All interviews were conducted via Zoom and recorded and transcribed verbatim. All transcripts were then coded using an open coding approach by two independent coders. Codes were then examined for relationships, patterns, categories, and themes. **Results:** A total of 20 individuals participated in the study; 10 of the participants were U.S. graduates and 10 graduated from medical schools outside of the U.S.. Six participants had entered a residency program at the time of interview. Key themes identified were that participants described 1) stigma and significant mental health impacts, including suicidality, when being unmatched; 2) reapplying required a dramatic shift in mindset and a change in personal narrative; 3) mental health resources are necessary after individuals go unmatched; 4) coping through family, social supports, religion, and advocacy provided healing for many students; 5) multiple sources and manifestations of resilience, unmatched students continued to advocate and fight for their place in medicine despite many systemic barriers. **Conclusion:** Our study shows that going unmatched is an emotionally and psychologically difficult journey. Our participants provided insight into mental health concerns, including suicidality, that is highly prevalent along with a large need for mental healthcare for this population. Finally, this population described many coping skills and suggestions to advocate for future students.

No. 72

Mental Health Issues During 2021 Colombia Protests: A Cross Sectional Survey

Poster Presenter: Miguel Lopez, M.D.

Co-Authors: Carolina Zamora, M.D., Daniela Velez, Juan F. Cano, M.D., M.Sc.

SUMMARY:

Background: Historically Colombia has been a country exposed to several types of violence, poverty and social inequity. The social and economic crisis we are dealing with has led some society sectors to call for a national strike in this scenario there have been acts of violence, vandalism and excesses of the public force that directly or indirectly affect the mental health of the population. Other studies have shown that large-scale social movements and politic violence, increases the psychiatric morbidity into the affected population. **Objective:** To describe the mental health problems of the Colombian population during the weeks of protests and establish possible factors involved in a worse outcome. **Methods:** A cross-sectional, self-administered web-based survey of a convenience sample of 586 adults who were living in Colombia, administered between April 28, 2021 – July 28, 2021. It was built a questionnaire following a Delphy methodology evaluating several exposition factors related to violence and protests, indicating which factors may have the greatest relevance in the context of the unrest period. The evaluation of mental health issues was performed through GAD-7 and PHQ-9 scales. Descriptive analyses were conducted on socioeconomic characteristics, as well as mean scores in GAD-7 and PHQ-9, a cutoff point of 10 was employed in both instruments. Associations between the scores and sociodemographic factors as well as exposition factors were assessed using a chi-square test. Logistic regression models were built taking into account confounding and potential modifiers, missing data (1 item nonresponse) was omitted from the analysis. **Results:** 171 of respondents (29.2%) reported depression and 183 (31.2%) reported anxiety issues during the times of unrest in Colombia. Regarding depression, we found differences by age, occupation, gender, marital status, economic level, religiosity, and previous history of mental disorders. Regarding anxiety, we found differences by age, occupation, marital status, and previous history of mental disorders. Taking into account the exposition factors, those clearly involved with the outcomes depression and anxiety were: To have been assaulted during the unrest period,

sharing the ideals of people involved in the protests, to experience and increase in misunderstandings with relatives and friends because of political opinions. And particularly with anxiety to participate in the strike directly and to have missed work. We present the proposed models and its validation. Discussion: During 2021 Colombia protests the prevalence of probable depression and anxiety were higher than would expect, and clearly surpassed the findings of the National Mental Health Survey (11.6% for depression and 15% for anxiety). Mental health issues may be a consequence of massive social movements, particularly in people with previous history of mental disorders, or in high risk because of socioeconomic factors.

Poster Session 12

No. 1

Increases in Weight Reduce Time to Antipsychotic Discontinuation/Switch

Poster Presenter: Rezaul Khandker

Lead Author: Henry Glick

Co-Author: Farid Chekani

SUMMARY:

Background: The relationship between schizophrenics' weight changes and their adherence to antipsychotic medications is unclear. **Methods:** We used limited-access data from the Clinical Antipsychotic Trials of Intervention Effectiveness Project Schizophrenia Trial (CATIE Sz) to estimate survival models predicting time to first and repeated discontinuation/switch (TD/S) of antipsychotics during the first 48 weeks of follow-up in CATIE SZ. Explanatory variables included lagged percentage weight changes, lagged changes in PANSS scores, a weight x PANSS score change interaction term, and other covariables that have been found to be associated with TD/S. **Results:** Data from 1148 participants were included in the analysis. 692 (60.3%) had a first discontinuation/switch during the 48 weeks and average TD/S was 206 days. For both first and repeated events, PANSS change (first event HR 1.37 per 10-point change, $p < 0.001$) was and percentage weight change (first event HR 1.51, $p = 0.41$; repeated event HR 0.74, $p = 0.52$) was not a significant predictor of longer time to TD/S. The Wald

test for interaction was significant ($p = 0.0001$) and the interaction's hazard ratio was 3.23 (2.51 for repeated events), $p = 0 < 0.001$. Age (HR 0.99, $p = 0.002$), baseline PANSS score (HR 1.23 per 10-point change, $p < 0.001$), previous antipsychotic use (HR 1.30, $p = 0.003$), and previous hospitalization (HR 1.09, $p = 0.02$) were also significant predictors. Discussion: Weight change had a mixed effect on TD/S through its interaction with PANSS score change, significantly increasing TD/S for some and decreasing it for others. Participants with the best responses – decreases in both PANSS scores and weight – to antipsychotics were among those for whom TD/S was increased.

No. 2

The Pharmacodynamic Effects of Taar1 Agonist Ulotaront on Metabolic Biomarkers of Glucose, C-Peptide and Insulin in Patients With Schizophrenia

Poster Presenter: Kenneth S. Koblan

Co-Authors: Snezana Milanovic, Yu-Luan Chen, Kuangnan Xiong

SUMMARY:

Background: Obesity, dyslipidemia, hypertension, and hyperglycemia are highly prevalent in schizophrenia and the current class of antipsychotic drugs may contribute to additional adverse metabolic effects. While each antipsychotic drug has its own benefit/risk profile, the adverse metabolic effects associated with many drugs in the current class have been shown to be associated with increased morbidity and mortality risks, and increased public health costs, that inform treatment decisions. Ulotaront is a trace amine-associated receptor 1 (TAAR1) and serotonin 5-HT_{1A} agonist currently in Phase 3 clinical trials for the treatment of schizophrenia [1-3]. Recent preclinical evidence has identified TAAR1 as a novel regulator of metabolic control and a promising target for the potential treatment of obesity and type 2 diabetes. Here we evaluated the effects of ulotaront on liquid metabolic biomarkers which were collected in Phase 1 clinical pharmacology studies. **Methods:** Metabolic effects of ulotaront were examined in response to a meal following a 8-12 hour fast. In a study to determine the effect of ulotaront on QTc interval, subjects with a diagnosis of schizophrenia (N=60)

were randomized, in a 3-way crossover design with a 5-day washout period between drugs, to receive single doses of ulotaront (150 mg), moxifloxacin (400 mg), and placebo. Separately, in a standard drug-drug interaction study, utilizing metformin-HCL (850 mg) as a substrate for the organic cation transporter (OCT)-2, subjects with a diagnosis of schizophrenia (N=25) were randomized in a single-blind, 2-way crossover design to receive metformin and single doses of either ulotaront (100 mg) or placebo. In both studies plasma samples were analyzed for C-peptide, insulin, and glucose; and for plasma concentrations of ulotaront. **Results:** Following administration of a meal, ulotaront lowered insulin and C-peptide levels compared to placebo, indicating an effect of ulotaront on glycemic control in response to feeding, with large effect sizes (0.8–1.0) on insulin and C-peptide levels. An integrated population PK/PD model jointly described insulin, C-peptide, and glucose change, in response to a meal, as a function of ulotaront plasma concentrations.

Discussion: The effects of ulotaront on metabolic markers, derived from plasma samples collected in the course of clinical pharmacology studies, suggest that the beneficial effects observed in animal models may translate to humans. Phase 1 clinical studies are currently ongoing to test the direct effects of ulotaront on metabolic parameters in patients with schizophrenia. The healthcare burden of diabetes, dyslipidemia, and weight gain associated with the treatment of schizophrenia utilizing the currently available antipsychotic drugs would be reduced if a novel pharmacological class of compounds were available that demonstrated benefit on these metabolic parameters.

No. 3

Maximizing Recovery From Schizophrenia Spectrum Disorders in a Hospital/Residential Setting: Clozapine, Oxytocin, Psychosocial and Family Programs

Poster Presenter: Rocco F. Marotta, M.D.

Co-Authors: Katharine Dougherty, Ph.D., M. Brown, Wallace Stacy

SUMMARY:

Limited rates of recovery from Schizophrenia Spectrum Disorders constitute a major problem in

psychiatric medicine. For cases showing treatment resistance, clozapine has been the single-most efficacious agent of care. However, even using clozapine, a high percentage of cases do not reach full functional recovery leading to a degree of therapeutic nihilism and low expectations. Therefore, developing programs to improve long term outcomes has become critical. Over the last ten years, we have worked on developing protocols for intervening with patients who have failed conventional antipsychotics. Whenever possible, these patients were moved to treatment with clozapine. Among those treated with clozapine, another 50% still did not show full recovery. Consequently, we explored several other possible interventions while implementing an enriched residential therapeutic treatment program on a hospital campus with easy access to full in-patient care as necessary. Over time, we found that in our hands, the use of oxytocin, administered sublingually, began to solidify as the most efficacious intervention combined with clozapine and sustained psychosocial and family interventions. Patients were maintained in this program for at least four months and were followed closely for up to four years. Success was demonstrated, not only by improvements in PANSS scores and sobriety, but also by family reports, the ability of patients to return to work and school, and more fulfilling social relationships. Interestingly, clinical staff and families - even when unaware of medication changes - would report improvement in patient social behavior shortly after sublingual oxytocin treatment had been initiated. Of this group of 30 middle and upper-middle class patients diagnosed with schizophrenia or schizo affective disorder, aged between 18 and 30 years, 83% returned or started work, 87% reintegrated to family life, 50% finished college, and 20% began or returned to a graduate program. Among the factors that seem most important are continued family support, sobriety, compliance with medications, and a long-term trusting relationship with a stable treatment team dedicated to their success. It seems to us that no single therapeutic intervention is sufficient to guarantee long term success in patients with schizophrenia spectrum disorders, especially in groups of patients with high penetration of substance exposure. Nonetheless, sustained multi modal interventions over a long time

hold great promise in this group of young people who have historically had high rates of relapse, readmission, and social isolation. Hopefully our work may help with the development of programs focused on the care of less privileged populations such as inner city youth and forensic patients.

No. 4

Using an Implementation Science Framework to Characterize Adaptations to Coordinated Specialty Care for Early Psychosis During the Covid-19 Pandemic

Poster Presenter: Elaina Montague, Ph.D.

Co-Authors: Sapana Patel, Ph.D., Reanne Rahim, M.A., Ana Stefancic, Ph.D., Iruma Bello, Ph.D.

SUMMARY:

Background: Coordinated Specialty Care (CSC) is an evidence-based treatment model for youth and young adults diagnosed with early psychosis. OnTrackNY is a nationally recognized CSC program that includes a network of 22 teams located in licensed outpatient clinics across New York state. OnTrackNY teams have served over 2,500 individuals and receive on-going training through an intermediary organization called OnTrack Central (Bello et al., 2017). During the COVID-19 pandemic, OnTrackNY teams adapted how they provided CSC services and this poster describes these adaptations using an implementation science framework. **Methods:** OnTrackNY providers representing different team roles [e.g., Team Leader, Outreach and Recruitment Coordinator (ORC), Peer Specialist, Supported Employment and Education Specialist (SEES), Registered Nurse (RN), Primary Clinician, and Psychiatric Care Provider (PCP)] completed in-depth qualitative interviews held remotely between December of 2020 and July of 2021. The Framework for Reporting Adaptations and Modifications for Evidence-Based Interventions (FRAME; Wiltsey Stirman, Baumann, & Miller, 2019) was used to characterize adaptations to CSC services. A content analysis approach was used to code interviews. Coded excerpts were then entered in a descriptive matrix that summarized key aspects of each adaptation, clustered adaptations by role area, and categorized along FRAME dimensions. **Results:** OnTrackNY team leaders (n=20) and providers (n=23)

discussed challenges and adaptations of providing CSC services during the pandemic. Challenges in delivering CSC included shifting services to primarily using telehealth with little experience or guidance, workforce redeployment to medical units, and the inability to provide community-based interventions. ORC adaptations included narrowing outreach to inpatient and emergency settings and increasing communication with newly referred participants and families. Peer Specialist adaptations included conducting socially-distanced groups in the community, discussing current events and creating online resources for engagement. SEES adaptations included monitoring evolving employment opportunities, conducting mock job interviews remotely, and supporting online learning. Adaptations to PCP/RN roles included sending equipment home for monitoring health, changing methods and frequency of administering medication (e.g., injection to pills), and providing education about COVID-19. Adaptations to the Primary Clinician role included increasing informal telehealth “check-ins,” using screen sharing to complete routine cognitive and clinical assessments and addressing increased stress in safety plans. **Significance:** Adaptations to CSC were common with providers most frequently making changes to format and setting of care delivery. Future work will examine the impact of adaptations on care outcomes. **Funding:** NIMH R01MH120597 and R01MH120597-02S1. No conflicts of interest to report.

No. 5

Successes and Shortcomings: Applying the Recovery-Oriented Model of Care to Wearable Technology That Serves People With Severe Mental Illness

Poster Presenter: Victoria Jean Moors, B.A.

Co-Author: Victor Buwalda, M.D., Ph.D.

SUMMARY:

The recovery-oriented model of care (ROMC) supports a process of patient-directed care that focuses on treating the whole person based on the patient’s individual goals and thriving in the community. ROMC is not wholly antagonistic to medical and pharmaceutical care (Deegan, 2020). However, there is evidence that this model of care is

more effective than the “maintenance model of care,” where patients are identified by their diagnosis and encouraged to focus on minimizing symptoms of psychiatric illnesses. While iterations of ROMC have existed since the 1930’s, a more recently growing development in psychiatric care is the advancement of wearable technology (WT), which is purported to help patients better manage their mental health. We aim to answer the questions: How do WT and ROMC intersect? To what extent does WT promote self-directed recovery? In this poster, we apply a recovery-oriented model lens to current WT that serve patients with severe and persistent mental illness (SPMI), with “current” being defined as studies within the past seven years. Principle guidelines are adapted from experts in ROMC and include (1) using data to embrace “multiple dimensions of health” and (2) people with lived experience of SPMI should be actively engaged in the research, development, and assessment processes (Fortuna et al., 2019). We also incorporate principles outlined by Dr. Pat Deegan’s account of ROMC and principles of disability bioethics. By analyzing studies showcasing WT that serve patients with SPMI and measuring their alignment with recovery-oriented principles, we argue that many WT in development or on the market provide limited support for ROMC. To a certain extent, some WT actively work against ROMC by supporting a maintenance or surveillance model of care. Examples include numerous WT that violate patient privacy concerns (Huckvale et al., 2019) or focus solely on medication compliance (Lee et al., 2021). To conclude our ROMC-based analysis of current WT serving patients with SPMI, we suggest further considerations regarding WT development that more actively support ROMC.

No. 6

How to Approach Inadequate Response to Major Depressive Disorder Treatment: Social Media–Based Education to Help Patients Find Their Voice

Poster Presenter: Genevieve Olucha, Ph.D.

Co-Author: Donna Gabriel

SUMMARY:

Background: Major depressive disorder (MDD) is a severe, highly prevalent illness that can be more disabling than many chronic physical diseases.

Despite effective treatments, a substantial percentage of patients continue to experience residual mood disruption, physical symptoms, sleep problems, and cognitive dysfunction several months after starting treatment.¹ Residual symptoms, when left unaddressed, can seriously impair patient functioning and quality of life.² Therefore, it is important to educate patients about the importance of addressing residual symptoms with providers and available treatment options. Given that more than 300 million people in the US have a social media (SM) account, it is unsurprising that SM has become a key source of health-related information for patients.³ Although the use of SM can have negative consequences on mental health, there are also benefits.^{4,5} Patients look to SM for online interaction and social connection, get support, and access expert insights. Acknowledging that those with mental health challenges will continue to use SM, it is important to leverage this medium to deliver effective education.⁴ **Methods:** In April-May 2022, Med-IQ launched a multi-component SM campaign with the goal of educating those diagnosed with depression about residual MDD symptoms, importance of communicating with their provider(s), and treatment options. We also explored signs and symptoms of MDD to arm those with suspected depression with information and strategies to advocate for their health. Guided by expert faculty, 4 diverse SM influencers shared relevant content with their followers via SM and requested learner feedback via online survey. Influencers also participated in an Instagram Live series with an MDD expert, where listeners could ask questions and give feedback. **Results:** The SM campaign reached more than 508,000 followers and garnered 9,800 engagements, 193,000 total views, and 517 survey completions. Analysis of survey feedback showed that rates of unwanted side effects remain high, but most respondents were not shy about discussing challenges with their providers. However, the number of participants with suspected depression who have not spoken with a provider about their symptoms was higher than expected. There were also notable race-related disparities among all respondents, suggesting a critical need for MDD education in underserved populations. **Conclusion:** The high engagement and learner feedback achieved with this initiative highlights the need for continued

education on residual symptoms of MDD. The varying backgrounds of the SM influencers allowed us to reach a diverse population and uncover potential disparities related to MDD and race. These responses will help guide future projects targeting underserved populations. Additionally, although the use of SM can negatively affect mental health, this initiative is an example of how SM can be used in a positive way to help patients and their loved ones.

No. 7

Comparison of Ketamine and Esketamine in Patients With Depressed Mood: Statistical Equivalence in Outcomes, Superiority of Ketamine in Practice

Poster Presenter: Blake Gilbert-Bono, B.A.

Lead Author: Thomas H. Scott, M.D.

Co-Author: Eric M. Eisenstein, Ph.D.

SUMMARY:

Background: Ketamine and esketamine have been shown to rapidly and transiently alleviate decreased mood and suicidal ideation in patients with treatment resistant depression [1, 2, 3]. This observational study compared the efficacy of ketamine versus esketamine treatment for patients with treatment resistant depression in a real world setting. **Methods:** Patient-level data was collected from 89 individuals (50 F, 39 M) who were diagnosed with treatment resistant depression and received either ketamine or esketamine treatment at a single clinic. Patients treated with esketamine received a starting dose of 56 mg, up to a max dose of 84 mg. Patients treated with ketamine were treated intravenously with a starting dose of 0.5 mg/kg adjusted for body weight and up to 1 mg/kg. All patients also received an oral antidepressant with ketamine or esketamine. Patient mood was evaluated at each treatment using the Quick Inventory of Depressive Symptomatology - Self Reported (QIDS-SR) assessment [4]. Suicidality was also assessed at each treatment on a binary scale. **Results:** Our analysis revealed equivalence of ketamine and esketamine across comparisons for all endpoints, although see discussion for areas of practical non-equivalence. This analysis was modeled using a linear mixed model to account for the intercorrelation among repeated measurements

within subjects, and to account for nonlinear response over time, polynomial terms through cubic were included. As expected, results of this and followup analyses revealed significant non-linear effects of treatment over time, up to cubic terms ($F(1, 204) = -2.14, p = .03$). No reliable or statistically significant differences between nasal esketamine and intravenous ketamine were found. Our model predicts that patients should expect a relatively fast reduction of 5.57 points on the QIDS scale in the first 6 treatments (3 weeks) of using either drug. The polynomial effect shows that the rate of improvement slows as the number of treatments continues. A total of 44 patients initially presented with suicidal ideation. No differences were found between drugs in response to suicidality $\chi^2(1, n = 44) = .37, p = .54$. **Conclusion:** Ketamine and esketamine are statistically equivalent in terms of aiding those with treatment-resistant depression as measured by response across multiple relevant endpoints. This remained true when separately analyzing the most urgent sub-population: those presenting with suicidal ideation. Two factors, however, argue in favor of ketamine treatment in clinical practice: speed and cost. Due to insurance restrictions for esketamine, time to begin treatment can be several weeks longer than ketamine. Cost to achieve the same clinical outcomes is approximately 6x higher for esketamine (\$951.58 for 56mg and \$1,353.25 for 84 mg Spravato \approx \$1,140 average vs. \approx \$187/treatment for Ketamine) [5].

No. 8

The Role of Unhealthy Lifestyle in the Prevalence and Risk of Depression: Cross-Sectional Results From the Spanish National Health Survey

Poster Presenter: Margalida Gili

Lead Author: Guillem Navarra-Ventura, Ph.D.

Co-Authors: Mauro Garcia-Toro, Pau Riera-Serra, M.Sc., Adoracion Castro Gracia

SUMMARY:

Background: Depression usually worsens lifestyle habits, but previous evidence also suggests that an Unhealthy Lifestyle (UL) increases the risk of depression. Many studies have analyzed the association between lifestyle and depression in several nationally representative samples, but none

have done so in the Spanish adult population. Our aim was to examine the association between an index of UL factors and the prevalence and risk of depression in Spain. **Methods:** This is an analysis of cross-sectional data from the latest National Health Survey (N = 23,089). Data on depression (presence vs absence) and 4 lifestyle factors (i.e., diet, physical exercise, smoking, and alcohol consumption) were used. Lifestyle factors were dichotomized into healthy (0 points) vs unhealthy (1 point) and combined into an UL index ranging from 0 (healthiest lifestyle) to 4 (unhealthiest lifestyle). Chi-square tests were used to compare the prevalence of depression at different levels of the UL index (range 0 – 4). Multivariate logistic regression models were used to examine the association between depression and the cumulative UL index (range 0 – 4) and between depression and the 4 UL factors (i.e., unhealthy diet, physical inactivity, smoking and risky alcohol consumption). A sub-analysis was performed differentiating the type of alcoholic beverage (i.e., beer, wine, vermouth, distilled drinks, and cider). **Results:** Data on depression and the 4 lifestyle factors was available for 23,066 (99.90%) participants. The prevalence of depression was 4.48% (n=1,034), and 5,134 (22.26%) participants had an unhealthy diet, 10,997 (47.68%) were physically inactive, 5,397 (23.40%) were smokers, and 3,056 (13.25%) were risky drinkers. Having ≥ 1 UL factors was associated with a higher prevalence of depression compared to having 0 UL factors (2.45% vs 5.37% to 6.21%, $p \leq 0.011$). A positive trend in the risk of depression was also observed with increasing number of UL factors (OR = 1.37 to 2.68, $p \leq 0.032$). Being physically inactive (OR = 1.63, $p < 0.001$) and a smoker (OR = 1.28, $p = 0.015$) was associated with a higher risk of depression. Being a risky alcohol drinker (OR = 0.66, $p = 0.001$) was associated with a lower risk of depression. When different types of alcoholic beverages were analyzed, only wine was significant (OR = 0.58, $p = 0.003$). **Conclusion:** Similar to previous studies in other nationally representative samples, our results show that unhealthy habits are prevalent in the Spanish adult population, especially a sedentary lifestyle. Our results also show that the prevalence of depression changes depending on several modifiable lifestyle-related factors. Therefore, policy makers should spare no resources in promoting strategies aimed at preventing the

acquisition of unhealthy habits, as this could contribute to reducing the risk of depression in the general population.

No. 9

A New Methodological Approach to Improve the "Real World" Effectiveness of Ketamine Infusion Therapy for Treatment-Resistant Depression

Poster Presenter: Gerald Grass, M.D.

SUMMARY:

Objective: Ketamine is recognized as a rapidly acting antidepressant; however, discrepancies exist between the "Efficacy" reported in research studies (70-85%) versus significantly lower "Effectiveness" (18.3-45.5%) reported in community-based settings. To offset the "Efficacy-Effectiveness" gap a novel, clinically applicable methodology (RESTORE) was developed to improve both effectiveness and durability. Here we report the results of a 60-month, retrospective study of 87 patients who received RESTORE for TRD and compare outcomes to community based-studies utilizing the "standard" ketamine infusion. **Methods:** Patient eligibility was determined by a three-step patient evaluation and suitability protocol. Patients received 3 infusions over 3 days and were dosed with the amount of ketamine, based on pharmacokinetic modeling, to achieve optimal blood concentrations. The medication was administered intravenously via a multimodal, variable rate infusion over 30 minutes. Following induction, patients received two additional infusions within 3-6 months before entering the maintenance phase. Symptom severity was determined utilizing the Beck Depression Index-II (BDI-II). **Results:** 78 of 87 (89.4%) patients completed the 2-phase infusion protocol, of which 88.4% responded and 56.3% remitted by the fifth infusion. This compares favorably to the 18.3-45.5% response and 27.3% remission rate reported in other studies. Most notably, the average period between protocol completion and the need for maintenance infusion was 245 days compared to 26 days with ketamine infusion. **Conclusions:** The novel RESTORE infusion protocol represents a clinically applicable methodological approach to ketamine infusion therapy that results in significantly improved

effectiveness by 3-fold and response durability by 9-fold compared to the standard ketamine infusion.

No. 10

Prevalence of Major Depressive Disorder and Access to Psychotherapy Services Among Major Depressive Disorder Patients in the United States

Poster Presenter: Xue Han

Co-Authors: Lisa Abramovitz, Minyi Lu, Miran Foster, Sandipan Bhattacharjee

SUMMARY:

Background: Major depressive disorder (MDD) is one of the most prevalent psychiatric disorders in the United States (US). Despite being a treatment modality for MDD, access to psychotherapy services among individuals with MDD is a concern. This study measured the annual state-level trends of MDD prevalence and access to psychotherapy among MDD patients in the US. **Methods:** This study used all-payer claims data (APCD) from January 1, 2014 to October 31, 2021. Patients ≥ 18 years old with an MDD diagnosis (ICD-9/10-CM) during the identification period (July 1, 2014 to October 31, 2020) were included. MDD patients with a diagnosis of bipolar disorder, schizophrenia, schizoaffective disorder, brief psychotic disorder, or pregnancy during the study period were excluded. MDD patients with psychotherapy had a claim for psychotherapy after their initial MDD diagnosis. County-level population estimates were obtained from the US Census Bureau to determine the annual number of residents in each state. Provider densities were calculated as the number of providers per 100,000 residents, while MDD prevalence was calculated as the number of MDD patients per 100,000 residents. Annual state-level heat maps were created as a visual representation of the national prevalence of MDD and distribution of psychotherapy providers among MDD patients. **Results:** A total of 9,776,974 MDD patients and 332,706 MDD patients with psychotherapy met the study inclusion/exclusion criteria. The prevalence of MDD in the US nearly doubled between 2015 and 2020, rising from 548 to 1,055 per 100,000. However, there was only a slight increase in the number of psychotherapy providers among MDD patients from 2015 to 2020 (14.5 to 16.1 per

100,000). In 2020, Maine had the highest prevalence of MDD (2,943 per 100,000) while Hawaii (364 per 100,000) had the lowest. States in the Northeast, such as Vermont and Maine (21.9 and 16.1 per 100,000 in 2020), had the highest density of psychotherapy providers across all years whereas Texas (2.4 per 100,000 in 2020) had the lowest. Some states with a higher prevalence of MDD, such as Ohio and Michigan (2,261 and 1,959 per 100,000 in 2020), also had a much lower concentration of psychotherapy providers (8.4 and 8.0 per 100,000 in 2020) compared to, for example, Vermont and Maine (21.9 and 16.1 per 100,000 in 2020). While the number of psychotherapy providers and prevalence of MDD increased over time, the proportion of patients with MDD availing psychotherapy services remained relatively low (<5% in 2020). **Conclusions:** The number of psychotherapy providers and prevalence of MDD varied by state and year. Although the number of psychotherapy providers and prevalence of MDD increased annually, states with the highest prevalence of MDD did not always have the highest number of psychotherapy providers. Appropriate future interventions are warranted to address the lack of access to psychotherapy services among adults with MDD in the US.

No. 11

Non-Steroidal Anti-Inflammatory Drug Target Gene Associations With Major Depressive Disorders: A Mendelian Randomisation Study Integrating GWAS, eQTL

Poster Presenter: Qian He

SUMMARY:

Background: From the literature, associations between cell inflammation and depression are highly credible. Patients with major depressive disorder (MDD) exhibit increased inflammatory factor levels that are typically related to chronic inflammation, including inflammatory cytokines such as TNF, interleukin-1 β (IL-1 β) and IL-6 and acute phase proteins such as C-reactive protein (CRP). Increased inflammatory markers have also been associated with several depression symptoms and suicidal MDD. Over the past 20 years, studies have proposed the notion that inflammation and brain-immune

interactions are involved in MDD pathogenesis¹. Based on this evidence, recent studies examined the effects of modulating the immune system during MDD². They used NSAIDs as add-ons to conventional antidepressant therapy, however, data also exists for NSAID monotherapy as antidepressants³. However, due to a lack of data consistency in terms of add-ons to conventional anti-depression drugs and high treatment resistance rates, other mechanisms such as genetics are proposed to affect NSAID efficacy toward depression. Thus, while many studies have explored the effects of NSAIDs on MDD, the biological mechanisms underpinning NSAID function in depressed patients remain poorly understood.

Methods: We conducted a two-sample Mendelian randomisation (MR) study to examine relationships between genetic variants and NSAID target gene expression or DNA methylation (DNAm) using publicly available expression, methylation quantitative trait loci (eQTL or mQTL) data and genetic variant-disease associations from genome-wide association studies (GWAS of MDD). We also assessed drug exposure using gene expression and DNAm levels of NSAID targets as proxies. Genetic variants were robustly adjusted for multiple comparisons related to gene expression, DNAm was used as MR instrumental variables and GWAS statistics of MDD as the outcome. **Results:** A 1-standard deviation (SD) lower expression of *NEU1* in blood was related to lower C-reactive protein (CRP) levels of -0.215 mg/L (95% confidence interval (CI): 0.128–0.426) and a decreased risk of MDD (odds ratio [OR] = 0.806; 95% CI: 0.735–0.885; $P = 5.36 \times 10^{-6}$). A concordant direction of association was also observed for *NEU1* DNAm levels in blood and a risk of MDD (OR = 0.886; 95% CI: 0.836–0.939; $P = 4.71 \times 10^{-5}$). Further, the genetic variants associated with MDD were mediated by *NEU1* expression via DNAm ($\beta = -0.519$; 95% CI: -0.717 to -0.320256; $P = 3.16 \times 10^{-7}$). We did not observe causal relationships between inflammatory genetic marker estimations and MDD risk. Yet, we identified a concordant association of *NEU1* messenger RNA and an adverse direction of association of higher *NEU1* DNAm with MDD risk.

No. 12

A Virtual Therapeutic Garden: Using Nature-Based Virtual Reality for Mood Disorders in the Aging Population in Nursing Homes. a Qualitative Study

Poster Presenter: Jennings Hernandez

SUMMARY:

Background: Depression, anxiety, and other mood disorders can affect anyone, but the aging population is more susceptible and at a higher risk especially those in long-term care facilities (LTCF). Transitioning from a familiar home environment to an unfamiliar LTCF can have many stressors that can precipitate depression. Research shows that there is a reduction in cognitive decline in individuals who immerse themselves in natural environments. Research indicates the mental health benefits of being surrounded by nature, especially in correlation with improved mood, reduction of loneliness, and positive affect. Studies demonstrate that the use of virtual reality therapy (VRT) in a therapeutic garden can improve positive emotionality and cognitive abilities in the aging population. This poster explores how nature-based VR therapy can be beneficial for the aging population. **Methods:** 52 participants with an age range of 67 were recruited from LTCFs in Tompkins County, NY via fliers posted at senior centers, e-mail lists, and direct calls to facilities. 74% of the participants were females. These participants had been diagnosed with mood disorders and were under treatment. Informed consent was collected from all participants. Participants were asked to answer a questionnaire to assess current mood states. Using a VR headset, 52 participants engaged in VR therapy. Two researchers were present at each session. The researchers were involved in technological assistance, conducting questions, and recording observations. Participants passively observed nature gardens for a period of 5 minutes, removed the headset and followed a series of questions, and then would use the headsets again for 10 minutes intervals while harvesting a section of the garden. A third questionnaire was conducted at the end of the session and a semi-structured exit interview was conducted to gather qualitative feedback from each of the participants. All the information was then transcribed for thematic analysis. **Results:** The standard score on the Center for Epidemiologic Studies Depression Scale indicated

a 12.36 (SD=6.88). 13 out of the 52 participants surpassed the threshold for clinical depression. The hypothesis in the study estimated that short-term exposure to a VR therapeutic garden would be correlated with improvements in mood states. The Mood State Questionnaire was calculated and compared. A t-test was used to compare the changes and indicated that the participants experienced meaningful positive improvements in mood after being immersed in the therapeutic gardens using VR. **Conclusion:** It is evident that depression is associated with increased stress levels related to place attachment and relocation. Using exposure therapy through VR for the aging population living in LTCFs was demonstrated to have a positive affect on mood. The study indicated that exposing elders to nature has a positive impact on the mental well-being of these individuals.

No. 13 Increased Retention in Treatment With Higher Doses of Buprenorphine

Poster Presenter: Andrew R. Gilbert

Co-Authors: Courtney A. Oxandale, B.S.N., R.N., Neil M. Flynn, M.D., M.P.H., Phillip J. Summers, M.D., M.P.H., Jose Puglisi, Ph.D.

SUMMARY:

Introduction: Opioid use disorder (OUD) is a chronic relapsing disorder that, initially creates reinforcing patterns through brain reward neurocircuits, but overtime negative consequences of compulsive use develop that contribute to physical and psychological harm (1). Buprenorphine became available as a medication assisted treatment (MAT) for OUD in 2000 (2). Higher buprenorphine doses ($\geq 25\text{mg}$) have been recently explored in the emergency department setting (3); however, the effect of office-based prescribing practices that utilize higher buprenorphine maintenance doses has not been fully investigated, and optimal dosing strategies are contested. **Methods:** This is an observational retrospective study consisting of a randomly selected sample of 328 out of 1572 patients at a single outpatient buprenorphine clinic in Sacramento, CA. Randomly selected patient charts were rigorously reviewed, and preselected clinical variables were extracted at each recorded timepoint. Patients were

stratified into two groups according to mode buprenorphine dose during treatment: A) higher-dose group ($\geq 25\text{mg}$, $n=132$) and B) lower-dose group ($\leq 24\text{mg}$, $n=196$). A survival curve was generated based on duration of retention in treatment, and both groups were compared with the Gehan-Breslow-Wilcoxon test. One-year retention for patients receiving various mode buprenorphine doses were calculated. Multiple patient characteristics were compared between the higher- and lower-dose groups using the two-tail t-test to identify any potential confounding factors. Data were analyzed with Graph Pad Software v. 9.4.1. $p < 0.05$ was considered significant for both tests. **Results:** The patients in the lower-dose group demonstrated a median retention in treatment of 65 days, while the patients in the higher-dose group demonstrated a median retention in treatment of 380 days ($p < 0.001$). The proportion remaining in treatment at one year are as follows: 25% at 4mg, 47% at 8mg, 20% at 12mg, 22% at 16mg, 28% at 20mg, 45% at 24mg, 86% at 28mg, and 85% at 32mg. When comparing demographic characteristics, opioid use behavior, other substance use, and psychiatric comorbidities between the higher- and lower-dose groups, only alcohol consumption in the 30 days prior to intake was statistically different, and the lower-dose group demonstrated higher rates of alcohol consumption. **Conclusion:** In order to optimize retention in treatment, we highly recommend providers have a low threshold in increasing buprenorphine dosages to as high as 32mg per day, especially in the early stages of their recovery. Our data suggest that the highest rate of patient dropout is at the beginning of treatment, and the higher-dose group demonstrated a 5.8-fold increase in retention. A typical time course we recommend for patients undergoing buprenorphine MAT is as follows: a rapid increase in dose early in treatment, a stabilization period where the dose remains constant, and finally a patient-initiated taper, when feasible.

No. 14 A Qualitative Study of How Transgender and Nonbinary Individuals Perceive Alcohol Use Disorder Psychotherapies: Opportunities for Cultural Adaptation

Poster Presenter: Jeremy Douglas Kidd, M.D., M.P.H.

Co-Authors: Roma Kaczmarkiewicz, Ed.M., M.A., Noah T. Kreski, M.P.H., Kasey Jackman, Ph.D., R.N., Walter O. Bockting, Ph.D.

SUMMARY:

Introduction: Research suggests that transgender and nonbinary (TNB) populations experience high rates of hazardous drinking and alcohol use disorder (AUD) as well as unique treatment barriers. This is due, in-part, to discrimination and stigma within and outside of the healthcare system. Culturally adapted treatments can improve outcomes for marginalized populations, but no such treatments exist for TNB individuals with AUD. This study sought to understand how hazardous-drinking TNB individuals perceive three evidence-based AUD treatments: cognitive-behavioral therapy (CBT), motivational enhancement therapy (MET), and twelve-step facilitation (TSF). **Methods:** This study utilized qualitative descriptive methods and stratified sampling (by age and sex assigned at birth) to conduct semi-structured interviews with hazardous-drinking TNB individuals ($N = 27$). As part the interview, participants were asked to imagine that they were clients in AUD psychotherapy vignettes corresponding to CBT, MET, and TSF. Interviews were audio-recorded and professionally transcribed. We reviewed responses to identify themes in participants' perceptions of these psychotherapies and to identify potential targets for cultural adaptation. **Results:** Across all three psychotherapies, themes emerged that suggested a preference for expressive exercises (e.g., journaling, open discussion) that allow for self-reflection, avoidance of binary conceptualizations (e.g., pros and cons of behavior change), and attention to trauma-informed care. Participants also expressed a desire for therapists to openly disclose their own gender identity, directly inquire about the gender identity of clients, and explicitly acknowledge unique alcohol risk factors for TNB populations (e.g., discrimination, family rejection). Participants also disliked using the word "homework" to describe out-of-session CBT exercises, citing upsetting experiences in school. Nearly all participants objected to the TSF concept of *powerlessness* and felt it conflicted with their self-image, particularly with the multiple ways they had demonstrated agency in their lives despite transphobic discrimination and stigma. **Conclusions:**

This study identified adaptations that may improve the acceptability and cultural relevance of CBT, MET, and TSF for TNB individuals with or at-risk for developing AUD. Most suggested modifications transcended any particular modality and focused on establishing a gender-affirming therapeutic alliance and incorporating prior research about unique alcohol risk factors for TNB individuals. These findings highlight the need for AUD treatment studies to evaluate cultural adapted psychotherapies for TNB populations and the importance of engaging the TNB community in the research process.

No. 15

Effects of the Glp-1 Receptor Agonist Exenatide for Alcohol Use Disorder Investigated in a Randomized, Placebo-Controlled Clinical Trial

Poster Presenter: Mette Kruse Klausen, M.D., Ph.D.

Co-Authors: Mathias Ebbesen Jensen, M.D., Anders Fink-Jensen

SUMMARY:

Background: Alcohol use disorder (AUD) is a chronic, relapsing brain disorder that accounts for 5% of deaths annually,¹ and there is an urgent need to develop new targets for therapeutic intervention.² The glucagon-like peptide-1 (GLP-1) receptor agonist exenatide reduces alcohol consumption in rodents and nonhuman primates, but its efficacy in patients with AUD has not been reported.³ **Methods:** In a randomized, double-blinded, placebo-controlled clinical trial, treatment-seeking AUD patients were assigned to receive exenatide (2 mg subcutaneously) or placebo once weekly for 26 weeks, in addition to standard cognitive-behavioral therapy. The primary outcome was reduction in number of heavy drinking days. A subgroup of the patients had functional Magnetic Resonance Imaging (fMRI), and single-photon emission computerized tomography (SPECT) brain scans at baseline and after 26 weeks of treatment.⁴ **Results:** From August 2017 to October 2019, a total of 127 AUD patients with were enrolled. The mean age was 52 years, 60% were men, they had on average 17 heavy drinking days, and an overall alcohol intake of 2400g of pure alcohol in the last month. Our data revealed that although exenatide did not significantly reduce the number of heavy drinking days compared to placebo, it

significantly attenuated fMRI alcohol cue-reactivity in the ventral striatum and septal area, which are crucial brain areas for drug reward and addiction. In addition, the dopamine transporter (DAT) availability was lower in the exenatide group compared to the placebo group. Exploratory BMI subgroup analyses revealed that in obese patients with a BMI >30 kg/m² (n=30), exenatide reduced heavy drinking days by 23.6 percentage points (95% CI -44.4 to -2.7, p=0.034) and reduced total alcohol intake per 30 days by 1205 grams (95% CI -2206 to -204, p=0.026) relative to placebo. Adverse events were mainly gastrointestinal and injection site reactions.⁵

Conclusions: This first randomized controlled trial (RCT) on the effects of a GLP-1 receptor agonist in AUD patients provides new important knowledge on the effects of GLP-1 receptor agonists as a novel treatment target in addiction. **Funding:** The Novavi Foundation; The Research Foundation, Mental Health Services, Capital Region of Denmark; The Research Foundation, Capital Region of Denmark; The Ivan Nielsen Foundation; The A.P. Moeller and wife Chastine Mc-Kinney Moellers Family Foundation; The Augustinus Foundation; The Woerzner Foundation; Grosserer L.F Foghts Foundation; The Hartmann Foundation; The Aase and Ejnar Danielsen Foundation; The P.A. Messerschmidt and wife foundation and The Lundbeck Foundation. The funding sources as well as the manufacturer of exenatide once weekly (Bydureon®, AstraZeneca), had no influence on the trial design or data analysis. **Trial registration:** EudraCT: 2016-003343-11 and ClinicalTrials.gov: NCT03232112

No. 16

California Naloxone Prescription Mandate (AB2760) Implementation for Inpatient Psychiatric Patients at a LA County Hospital

Poster Presenter: Daniel Kulinich

Co-Authors: Mia Kunitomo, M.D., Jeffery Wilkins, M.D., Nicholas Athanasiou, M.D.

SUMMARY:

Background: Despite decreases in opioid dispensing rates over the past decade, there has been a significant increase in opioid-related deaths, predominantly involving illicit use or fentanyl-laced

drugs.^{1,2} In 2018, California passed legislation (AB2760) to curb opioid-related deaths by requiring providers to offer a naloxone prescription to high-risk patients, defined as those receiving prescription opioids, those with a history of substance use disorders, or a history of overdose³. Many studies have investigated naloxone prescription rates for those prescribed opioids, but to our knowledge, there have not been studies that assess AB2760 implemented naloxone prescription rates for inpatient psychiatric patients with a substance use history. **Objective:** Evaluate naloxone prescription rates for psychiatric patients with a substance use history at an LA-county hospital system. This preliminary data will provide a starting point for a quality improvement effort to increase naloxone prescription rates in a patient population with significant substance use morbidity. **Methods:** This single-institution retrospective study was conducted between January 1st, 2021, and December 31st, 2021. We performed chart reviews on patients admitted to the inpatient psychiatric ward with a history of, or active substance. Our primary outcome was whether patients with stimulant, cannabis, or opioid use disorder received a naloxone prescription upon discharge. **Results:** 565 unique patients admitted to the inpatient psychiatry unit were analyzed, and 305 had documented active use or history of substance use, including stimulants, cannabis, and opioids. Only three patients were prescribed naloxone upon discharge. **Conclusion:** This preliminary study assessed naloxone prescription rates using the most general criteria listed in AB2760, specifically if the patient has a history of substance use disorder. Given the increase in illicit substances laced with fentanyl, more specific language in AB2760 and identification of training gaps in prescribers can help increase naloxone prescriptions. Future studies will assess how AB2760-related prompts and education for naloxone prescribers influence prescription rates.

No. 17

Attentional Bias to Game-Related Visual Cues and Relationships With Self-Efficacy in Internet Gaming Disorder: An Event-Related Potential Study

Poster Presenter: Hyunho Lee

Co-Authors: Jung Seok Choi, Minkyung Park

SUMMARY:

Background The late positive potential (LPP) is an event-related potential (ERP) component which is considered as the electrophysiological marker of cue reactivity in addictive disorders. The LPP amplitudes in response to game-related stimuli have been found to increase in Internet gaming disorder (IGD) patients than in healthy controls (HC). The self-efficacy is an individual's belief in their capacity to act in the ways necessary to reach specific goals and represents the personal perception of external social factors. Further, it could influence on ERP indices. The present study was aimed to find associations of attentional bias to game-related visual stimuli with the self-efficacy using ERP analysis in IGD. Methods A total of 92 young adults (IGD, N=47, mean age=24.72; HC, N=45, mean age=24.78) participated in this study. All individuals were shown a series of game-related and neutral pictures, while their electroencephalogram with ERPs were recorded. LPP amplitudes were calculated as the mean amplitudes between 400 and 700 ms at the centro-parietal and parietal electrode sites. The self-efficacy of each group was estimated with the Self Efficacy Scale (SES) and other fundamental clinical scale scores were collected, including Young-Internet Addiction Test (Y-IAT), Beck Depression Inventory-II (BDI), and Beck Anxiety Inventory (BAI). **Results** The IGD group showed significantly higher LPP amplitudes for game-related cues in the centro-parietal area (CP3, CP1), compared with the HC group ($p<0.05$). The IGD group showed lower score on the SES and higher score on the BDI, and BAI as well as on the Y-IAT than the HC group (all $p<0.001$). There was a significant negative correlation between the LPP amplitude for game-related cues in the P3 and the SES score in patients with IGD ($p<0.05$). The correlation remained significant after adjusting BDI and BAI as covariates. Further, there was a negative correlation between the SES score and severity of addiction measured by Y-IAT in patients with IGD ($p<0.05$). **Conclusion** These results showed that patients with IGD had increased attentional bias to game-related cues without relationships with addiction severity and gaming time, suggesting LPP index as a vulnerability marker to the pathophysiology of IGD. The findings also indicate the possibility that lowered self-efficacy make individuals with IGD feel arousal when exposed to game-related cues and consider game-related

cues as social interactions, which may aggravate symptoms of IGD. In addition, significant relationships of decreased self-efficacy with increased attentional bias to game-related cues as well as with higher severity of addiction provide evidence on the self-efficacy as a treatment target in IGD. This research was supported by a grant from the Korea Mental Health R&D Project, funded by the Ministry of Health & Welfare, Republic of Korea, from the National Research Foundation of Korea, and from the Korea Brain Research Institute.

No. 18**Interventions for Opioid Use Disorder in People Who Are Incarcerated**

Poster Presenter: Jennifer Oruebor

Co-Author: Bianca Rombado, M.D.

SUMMARY:

Opioid Use Disorder (OUD) is a significant health problem in the US with nearly 50,000 opioid-involved overdose deaths in 2019. The US Department of Justice has estimated that approximately half of state and federal prisoners meet criteria for a substance use disorder, compared to 5% of the general population ¹. In line with previous findings, one US study found that the risk of overdose death amongst the formerly incarcerated was 5.29 times that of the general population. The risk was highest within the first weeks after release and opioids represented the leading cause of overdose death. ² The US Supreme Court case *Estelle v Gamble* established that a deliberate failure of prison authorities to address the medical needs of an inmate constitutes "cruel and unusual punishment", thus violating their 8th amendment rights. Addressing OUD amongst this population presents both a medical and ethical dilemma. Medication Assisted Treatment (MAT) is effective for opioid use disorder but is not readily accessible to people who are incarcerated. ³ There is evidence in the current literature that various approaches offered upon release from prison or jail can offer an effective way to manage opioid use disorder in this population ⁴. However, long-term benefits require a dynamic and interdisciplinary approach that begins at the start of incarceration and takes into account the social determinants of health when establishing

maintenance support upon release.⁵ There are relatively few studies establishing effective protocols for initiating MAT upon entry to jails or prisons and providing adequate maintenance treatment upon re-entry to society, representing a gap in the literature. This poster reviews some of the evidence-based treatments for OUD in the incarcerated population and outlines the need for interdisciplinary coordination of care to maintain abstinence, reduce recidivism and improve quality of life after release for this population.

No. 19

Virtual Reality-Assisted Cognitive Behavioral Therapy (Vr-CBT) in Patients With Alcohol Use Disorder: A Parallel-Group, Single-Blinded, RCT

Poster Presenter: Daniel Thaysen Petersen

Co-Authors: Anne-Cathrine Vissing-Uhre, Anders Fink-Jensen

SUMMARY:

Background and Aim Alcohol use disorder (AUD) is as a chronic, fluctuating brain disorder. Globally, AUD attribute to 3.3 million deaths each year. Cognitive behavioral therapy (CBT) is considered best practice in the treatment of AUD, still more than 60 percent relapse within the first year after treatment. Virtual reality (VR) has gained interest in simulating high-risk scenarios with potential therapeutical benefits. Therefore, we aimed to investigate the feasibility of VR-simulated high-risk scenarios in CBT-based treatment of patients with AUD (VR-CBT). **Methods and analysis** Ten patients diagnosed with AUD were randomized to three weekly sessions of either manualized CBT or VR-CBT. Treatments were performed by CBT-trained nurses in two outpatient alcohol clinics. In each session, nurses exposed VR-CBT patients to two of six restaurant VR-simulations with increasing degrees of alcohol-related cues. VR-simulations were used to: 1) attain insight to high-risk related thoughts, emotions and physiological reactions for identification and modification of dysfunctional beliefs, and to 2) trigger craving in order to perform coping-skill training and weaken associations between high-risk situation, craving and alcohol consumption. We scheduled follow-up visits at one-week and one-months after the final treatment. Outcome measures were feasibility,

short-term efficacy on alcohol consumption and craving, as well as VR-induced side-effects. **Results** A total of nine patients completed all treatment and follow-up visits. Patients had a median age of 46 years (range 22-67 years) and 56% were male. VR-exposure activated dysfunctional beliefs and revealed high-risk related thoughts, emotions and physiological reactions in all patients randomized to VR-CBT. Four of five patients randomized to VR-CBT experienced craving during VR-simulations (median 2, range 0-10). For all included patients, total consumption in units of alcohol decreased significantly from baseline to one-week (median 76%, range 13-100%, $p=0.002$), and one-month follow-up (71%, range 0-100%, $p=0.007$). Patients randomized to standard CBT experienced a non-significant reduction in alcohol consumption. Interestingly, patients randomized to VR-CBT obtained a greater and significantly reduction in total alcohol consumption at one week- (median 94% vs. 72%) and one month follow-up (98% vs. 55%). No difference was found, when reduction of alcohol consumption was compared between the two interventions. VR-exposure caused mild simulator sickness in 3/5 of patients, including general discomfort, tiredness, headache, dizziness with open eyes, eye discomfort, fullness of the head, unclear vision, stomach awareness, and difficulties focusing. **Conclusion** We proved that VR-simulations can induce emotions, thoughts, physiological reactions and craving for CBT purposes. VR-CBT performed better than conventional CBT in short term reduction of alcohol consumption, heavy drinking days and craving.

No. 20

Effectiveness and Safety of Monoamine Oxidase Inhibitor Treatment for Bipolar Depression Versus Unipolar Depression: An Exploratory Case Cohort Study

Poster Presenter: Thomas Kim

SUMMARY:

Objective: Patients with bipolar disorder spend most of their clinical lifetime in the depressive phase of their illness. However, antidepressants are discouraged in the treatment of bipolar depression due to concerns over manic induction and drug

ineffectiveness. Some reports suggest that monoamine oxidase inhibitors (MAOIs) may be safe and effective compared to other antidepressants in treating bipolar depression. The present study compared the safety and effectiveness of MAOI therapy in patients with bipolar versus unipolar depression. **Methods:** Data were collected from approximately 2500 clinical research charts of patients treated with MAOI therapy at a university mood disorder clinic between 1983 and 2015. A mixed-effects model was created with patient entered as the random effect. The model included the primary diagnosis (i.e., either unipolar or bipolar depression) and other clinical covariates as fixed-effect predictors. **Results:** Patients with bipolar depression demonstrated lower post-treatment clinical global impressions/severity scores versus patients with unipolar depression ($p = 0.04$). Neither group demonstrated a full syndromal manic or hypomanic episode. A higher proportion of patients with bipolar depression reported myoclonic tics and tremors, which may have resulted from concomitant lithium use. Amongst the covariates, only the number of prior antidepressant trials predicted poorer outcomes from MAOI therapy. **Conclusion:** MAOIs may be more effective—and as safe—for patients with bipolar depression versus unipolar depression. Future studies should explore this possible advantage using a larger sample size.

No. 21

WITHDRAWN

No. 22

Problematic Internet Use and ADHD

Poster Presenter: Juliette S. Mojgani, B.Sc.

Co-Authors: Michael Van Ameringen, M.D., Maryam Rahat, Ph.D., M.Sc., Beth Patterson, M.Sc., Barbara Tietbohl-Santos, M.D., Ph.D.

SUMMARY:

Background: Problematic Internet use (PIU) covers a broad range of online behaviours, including excessive social media use, gaming, gambling, streaming, pornography viewing, cyberhoarding and cyberchondria [1]. Prevalence ranges from 8.9% in Eastern countries to 4.6% in Western countries [2]. PIU is associated with a myriad of negative sequelae

including psychiatric comorbidities such as attention deficit hyperactivity disorder (ADHD) [3]. The aim of this study was to prospectively examine the relationship between PIU and ADHD in a Canadian adult psychiatric population. **Methods:** Individuals aged 18 and over, who were patients at an outpatient psychiatric clinic were invited to participate. Consenting participants were interviewed using the clinician-rated Mini International Neuropsychiatric Interview (MINI) to assess for current psychiatric disorders. Participants completed an online survey to measure their internet use patterns, impulsivity and executive function as well as symptoms of ADHD, obsessive-compulsive disorder (OCD), anxiety and depression. The following symptom severity measures were included in the survey: McMaster PIU Scale (MPIU), the Internet Addiction Test (IAT), the Compulsive Internet Use Scale (CIUS), the Barkley Adult ADHD Rating Scale (BAARS-IV), the Obsessive-Compulsive Inventory-Revised (OCI-R), the Barratt Impulsiveness Scale (BIS), the Generalized Anxiety Disorder Scale (GAD-7), the Patient Health Questionnaire (PHQ-9) and the Barkley Deficits in Executive Functioning Scale (BDEFS). Participants also completed an online neurocognitive battery. The sample was compared between those with/without an ADHD diagnosis (MINI) using descriptive statistics and regression modelling. **Results:** A total of 100 participants completed the study; they were 61% female, 92% Caucasian, with a mean age of 43.7 ± 14.2 years. Half (50%) had ADHD; this group had a significantly higher proportion of males compared to the non-ADHD group (50% vs. 28% $p < .05$); and was also significantly younger (37.5 ± 12.1 vs 49.8 ± 13.2 , $p < .001$). Compared to those without ADHD, significantly higher scores were found on measures of internet use (IAT and CIUS) in the ADHD group ($p < .001$) as well as higher rates of messaging ($p < .01$) and accessing sexual content ($p < .05$) (MPIU). Those in the ADHD group also reported higher symptom severity of depression ($p < .05$), OCD ($p < .05$), impulsivity ($p < .001$) and executive dysfunction ($p < .001$). Neurocognitive tests revealed higher impairments in the ADHD group in terms of motor ($p < .01$) and psychomotor speed ($p < .05$). Across the whole sample, positive predictors of problematic internet use on the IAT and CIUS included younger age ($p < .001$ IAT, $p < .05$ CIUS), higher scores on the

PHQ-9 ($p < .05$), OCI-R ($p < .01$) and BIS ($p < .001$).

Conclusion: In this outpatient clinical sample, problematic internet use was higher in those with ADHD than those without. The ADHD sample also reported higher rates of depression and OCD but not anxiety.

No. 23

Impact of Telemedicine on Psychiatric Visit Attendance Rates in an Urban Federally Qualified Health Center

Poster Presenter: Stephanie Neves

Co-Author: Joseph Squitieri

SUMMARY:

Background: The COVID-19 pandemic accelerated the incorporation of telehealth services into many healthcare practices across the country. Yet, concerns existed whether the transition to telehealth would increase disparities in treatment for safety-net communities due to technological barriers. This analysis highlights the increase in access to services via telehealth by comparing appointment show rates in 2019, prior to the implementation of telehealth, and in 2022, two years into the COVID-19 pandemic in a federally-qualified health center. Methods: Visit-level data for all psychiatric visits was collected via Relevant, a data collection platform, for two time periods: January 1 through June 30, 2019 and January 1 through June 30, 2022. Visit types included behavioral health screenings, psychiatric evaluations, and medication management appointments. Visits were conducted either via telehealth, with two-way audio-visual communication, or in-person, requiring the patient to be present at the clinic. Descriptive statistics and chi-square modeling were used to complete the analysis. Results: In 2019, a total of 7,077 visits were scheduled by 2,467 patients. These visits were in person and included 239 (3%) behavioral health intakes, 864 (12%) psychiatric evaluations, and 5,974 (84%) medication management visits. Of completed visits, 60% were billed to Medicaid recipients, 11% were insured through Medicare, and 23% were covered through commercial insurance or a New York State Marketplace plan. In 2022, a total of 7,662 visits were scheduled by 2,278 patients. Of the 568 visits completed in-person (25% of total visits for this time

period), 22 (4%) were psychiatric evaluations and 546 (96%) medication management visits. Telehealth visits included 258 (4%) behavioral health screenings, 455 (6.4%) psychiatric evaluations, and 6,381 (90%) medication management visits. Of completed visits in 2022, 56% of visits were completed by Medicaid recipients, 11% were insured through Medicare, and 28% were completed by patients insured through commercial or marketplace plans. The overall show rate was significantly higher in 2022 (with a combination of telehealth and in person visits), with 6336 (83%) visits checked out and 1326 (17%) missed appointments, than in 2019 (5114 [72%] checked out appointments and 1963 [28%] missed appointments), $X^2 [2, N=14739] = 230.93, p = < .0001$. In 2022, telehealth visits had a significantly higher show rate than in person visits (83.3% vs 74.12%, $X^2 [2, N=7662] = 31.5139, p = < .0001$). Conclusion: Telehealth services improved access for a safety-net population, demonstrated by the increased show rate. Advocacy at a state and federal level for payment parity for these visits is critical in ensuring the availability of psychiatric services during a time of unprecedented demand.

No. 24

Neural Mechanisms of Acceptance and Commitment Therapy for Obsessive-Compulsive Disorder: A Resting-State and Task-Based fMRI Study

Poster Presenter: Sang Won Lee

Lead Author: Seung Jae Lee

Co-Authors: Ho Seok Seo, Min Seok Kim

SUMMARY:

Introduction: This is a pilot study examining the impact of a Brooklyn-based therapeutic summer camp on at-risk children and adolescents aged 7-18 with mental health needs. Every summer for the past 50 years the Department of Child and Adolescent Psychiatry at Maimonides Medical Center runs a summer respite program known as H.U.G. (Help Us Grow). The program runs for six weeks and includes daily group therapy as well as arts and crafts, dance, and field trips. The purpose of the program is to provide a safe space for underserved youth with mental health needs where they can be accepted, make new friends, learn new skills, and decrease the

stigma of mental illness. The most prevalent diagnoses among campers include ADHD, depression, anxiety, and PTSD. Method: A survey was created including demographic information, the SCARED scale, the PHQ9, a social skills scale, and a scale of strengths and difficulties. The survey was given out to campers (N=39) in the first week of the program and at its conclusion. A separate survey was mailed to parents/caregivers consisting of the strengths and difficulties scale and a parental efficacy scale (thus far, N=8). Camp counselors also received a survey assessing their clinical observations of the campers' progress. Results: 39 children aged 10-17 were enrolled. 56.4% identified as female, 35.9% as male, 7.7 % as others or did not disclose. For ethnicity, 7.7% identified as Caucasian, 12.8% as Asian, 56.4% as Latino-Hispanic, 5.1% as Afro-Hispanic, 18.0% as mixed race or preferred not to say. Regarding family origin, 23.1% are from Mexico, 12.8% from China, Ecuador, or North America, and 2.6% are from other countries. 51.3% of participants reported they are bilingual English/Spanish speakers. Quantitative assessment of pre and post test data via chi square analysis showed statistically significant difference in three domains of the SCARED scale i.e. response to reduction in stomach aches ($p=0.015$), swearing less frequently when frightened ($p=0.012$), and improvement in talking with unfamiliar people ($p=0.036$). In response to the question "I get stomach aches at school" there was a 17.3% reduction in participants who answered "very true or often". The question "when I get frightened I swear a lot" showed 20.7% reduction in participants who answered "very true or often" and a 11.1% reduction in the same response to the question "It's hard for me to talk with people I don't know well". PHQ9 and social skills assessment did not yield statistically significant differences. Qualitative data is notable for campers having improved social relations and personal efficacy in using skills they learned. As one camper noted, "I can use what I learned at any moment in life." Conclusion: This pilot study sheds light on the positive impact of therapeutic summer camp for youth in improving social skills and decreasing symptoms of anxiety and depression.

No. 25

Focused Ultrasound (FUS) Modulation of Amygdala Blood Oxygenation Level Dependent (BOLD) Mri Signal in Humans: Preliminary Findings From FUS/Mri Pilot

Poster Presenter: Peter Raman

SUMMARY:

Noninvasive neuromodulatory interventions, including transcranial magnetic stimulation (TMS) and electroconvulsive therapy (ECT), are second-line approaches that have demonstrated some efficacy in treatment-resistant populations for mood, anxiety, and trauma stress disorders. However, these approaches are typically limited by their capacity to only modulate brain function in cortical areas. The amygdala has repeatedly demonstrated abnormally heightened activity in numerous clinical populations with mood and anxiety disorders, demonstrating brain-behavior relationships with fear-based and negative affect symptoms such as anxiety and worry. Neuromodulatory interventions such as TMS and ECT have been theorized to augment the function of subcortical circuitry such as the amygdala as part of their mechanistic action. It is reasonable to surmise that a non-invasive neuromodulatory approach that could directly target and modulate the function of subcortical brain structures may be useful. Low-intensity focused ultrasound (FUS) has been demonstrated in animals and in a small number of human studies to reversibly alter the function of both cortical and subcortical substrates. By utilizing a FUS device designed to modulate subcortical brain structures in humans, we conducted a small, within-subject, crossover pilot study (N=6) to examine two sets of FUS parameters (10Hz and 100Hz pulse repetition frequency, both with a 5% duty cycle) administered during fMRI for the potential to attenuate the amygdala blood oxygen-level dependent signal in humans. The first study showed that FUS at 10 Hz was found to better attenuate amygdala blood oxygenation-level dependent (BOLD) signal when compared to 100 Hz. The second study found that FUS at 10 Hz better attenuates amygdala resting state connectivity with the ventromedial prefrontal cortex (vmPFC) when compared to 100 Hz FUS. The third and final study showed decreased bilateral amygdala reactivity to emotional faces changes following 10 Hz pulse repetition frequency

FUS. Our goal was to provide initial evidence of target engagement of a clinically- relevant brain structure, thereby setting the stage for future studies to examine FUS more thoroughly as a potential neuromodulatory intervention tool.

No. 26

Relationship Between Cortical Surface Area and Short Term Non-Affective Memory in Patients With Bipolar Disorder and Healthy Controls

Poster Presenter: Natasha Topolski

Co-Authors: Andrea Boscutti, Jair Soares, M.D.

SUMMARY:

Aims: There is extensive literature documenting cognitive impairment in bipolar disorder (BD) and neuroanatomical abnormalities in BD. However, the relationship between cognitive impairment and brain structure in BD is not fully understood. One specific area of cognitive impairment in BD is short term non-affective memory (STNAM). This study aims to investigate the relationship STNAM and cortical surface area in the frontal and parietal lobes. **Methods:** 97 subjects including 57 patients with BD and 40 healthy controls were included in this analysis. STNAM was measured by the Brief Assessment of Cognition in Affective Disorders (BAC-A). Cortical surface area was obtained from T1-weighted MRI scans processed using standardized freesurfer pipelines. 42 regions in the frontal and parietal lobe were selected for this analysis due to previous associations with cognitive performance. Analyses were conducted utilizing individual multiple regression models with STNAM performance as the dependent variable and cortical surface area as the independent variable controlling for age, sex, diagnosis, and educational attainment. Correction for multiple comparisons of 42 regions was conducted by controlling for false discovery rate (FDR) at 5%. **Results:** After FDR correction for multiple comparisons, a significant positive relationship between STNAM performance and cortical surface area from four frontal lobe regions was found. These regions include the caudal middle frontal ($R_{adj} = 0.311$, $\beta=0.0006$, $p<0.05$), rostral anterior cingulate ($R_{adj}=0.310$, $\beta=0.0003$, $p<0.05$), and rostral middle frontal ($R_{adj}=0.305$, $\beta=0.0022$, $p<0.05$) region in the left hemisphere and the pars

orbitalis right hemisphere ($R_{adj}=0.304$, $\beta=0.0013$, $p<0.05$). For all models, educational attainment and age were also significant predictors of STNAM, whereas diagnosis and gender were not significantly associated with performance. **Conclusions:** These findings suggest that larger cortical surface area in the frontal cortex may be related to better short term non-affective memory. $</p>$

No. 27

Evaluating the Feasibility and Early Outcomes of School-Based Psychiatric Consultation: A Pilot Study

Poster Presenter: Karen Manotas, M.D.

Co-Authors: Jaewhan Kim, Ph.D., Chathuri Illapperuma, Ph.D., Kristi Kleinschmit, M.D., Aaron Fischer, Ph.D.

SUMMARY:

Background: While approximately 10% of school-aged children experience mental health disorders, only 1 in 5 of these children access psychiatric services. Schools provide an accessible and familiar entry point to mental health services, particularly for children with limited resources. The Utah School Mental Health Collaborative (USMHC) is an interdisciplinary initiative that includes psychiatric consultation. **Objectives:** Describe characteristics and outcomes of children referred to USMHC for psychiatric consultation. **Methods:** Seventeen children (mean age: 11.8 years [range 8-14 years], 88% male) received psychiatric consultation including the clinician-administered 200-item Child and Adolescent Functional Assessment Scale (CAFAS). Recommendations were made regarding school-based (classroom, therapy), home-based (medication), and crisis interventions. Follow-up visits occurred for 9 children after a mean of 146 (SD=31) days. **Results:** Reasons for referral included aggression (physical [47%], verbal [24%]), school refusal/absenteeism (18%), defiance (18%), classroom disruption (18%), inattention/poor functioning (18%), and suicidal ideation (12%). The most frequent diagnoses were trauma-related (41%), ADHD (41%), Depression (29%), anxiety (29%), and autism (23%). Baseline mean CAFAS score was 106 (SD=47); n=14 (82%) children had ≥ 1 elevated domain. Children with versus without follow-up were similar in regards age, gender mix, and baseline

CAFAS scores (104 and 107, respectively $p=0.81$). At follow-up, only 2 (22%) children had ≥ 1 elevated domain and CAFAS scores improved a mean of 51 points ($SD=52$, $p<0.02$, Cohen's $d=0.99$). Conclusion: Children with externalizing symptoms populated the majority of referrals. Significant functional improvement was measured in children presenting for follow-up. These results support further prospective investigation into the efficacy of USMHC school-based interventions, including psychiatric consultation.

No. 28

Hugs (Help Us Grow): Effects of a Therapeutic Summer Camp in Inner City Youths With Diverse Mental Health Needs

Poster Presenter: Mei Lin Margono, D.O.

Lead Author: Tanvira Mustafa Islam, M.B.B.S.

Co-Authors: Chin Kuo, M.D., Sarah A. Faitell, D.O., M.P.H., Marta V. Colon

SUMMARY:

Introduction: This is a pilot study examining the impact of a Brooklyn-based therapeutic summer camp on at-risk children and adolescents aged 7-18 with mental health needs. Every summer for the past 50 years the Department of Child and Adolescent Psychiatry at Maimonides Medical Center runs a summer respite program known as H.U.G. (Help Us Grow). The program runs for six weeks and includes daily group therapy as well as arts and crafts, dance, and field trips. The purpose of the program is to provide a safe space for underserved youth with mental health needs where they can be accepted, make new friends, learn new skills, and decrease the stigma of mental illness. The most prevalent diagnoses among campers include ADHD, depression, anxiety, and PTSD.

Method: A survey was created including demographic information, the SCARED scale, the PHQ9, a social skills scale, and a scale of strengths and difficulties. The survey was given out to campers ($N=39$) in the first week of the program and at its conclusion. A separate survey was mailed to parents/caregivers consisting of the

strengths and difficulties scale and a parental efficacy scale (thus far, $N=8$). Camp counselors also received a survey assessing their clinical observations of the campers' progress.

Results: 39 children aged 10-17 were enrolled. 56.4% identified as female, 35.9% as male, 7.7% as others or did not disclose. For ethnicity, 7.7% identified as Caucasian, 12.8% as Asian, 56.4% as Latino-Hispanic, 5.1% as Afro-Hispanic, 18.0% as mixed race or preferred not to say. Regarding family origin, 23.1% are from Mexico, 12.8% from China, Ecuador, or North America, and 2.6% are from other countries. 51.3% of participants reported they are bilingual English/Spanish speakers. Quantitative assessment of pre and post test data via chi square analysis showed statistically significant difference in three domains of the SCARED scale i.e. response to reduction in stomach aches ($p=0.015$), swearing less frequently when frightened ($p=0.012$), and improvement in talking with unfamiliar people ($p=0.036$). In response to the question "I get stomach aches at school" there was a 17.3% reduction in participants who answered "very true or often". The question "when I get frightened I swear a lot" showed 20.7% reduction in participants who answered "very true or often" and a 11.1% reduction in the same response to the question "It's hard for me to talk with people I don't know well". PHQ9 and social skills assessment did not yield statistically significant differences. Qualitative data is notable for campers having improved social relations and personal efficacy in using skills they learned. As one camper noted, "I can use what I learned at any moment in life."

Conclusion: This pilot study sheds light on the positive impact of therapeutic summer camp for youth in improving social skills and decreasing symptoms of anxiety and depression.

No. 29

Trends of Clinically Diagnosed Depression and Anxiety Among Children, Adolescents, and Young Adults From 2017-2021 in an Integrated Healthcare System

Poster Presenter: Mayra Patricia Martinez

Co-Authors: Sarah Carter, Ting Chow, Anny Xiang

SUMMARY:

Background: Increasing rates of depression and anxiety among children and adolescents have been reported in survey studies. We assessed incidence, prevalence, trend, and potential disparities for clinically diagnosed depression and anxiety in children, adolescents, and young adults in recent years. **Methods:** Data included ~1.7 million individuals aged 5-22 years who were Kaiser Permanente Southern California health plan members between 1/1/2017 and 12/31/2021. Data were extracted from electronic medical records and ICD codes were used to identify depression and/or anxiety diagnosis. Rates were also stratified by ages 5-10, 11-13, 14-17, and 18-22 years; sex; race/ethnicity; household income; obesity status; and history of comorbidity. Significant trend over time was assessed by Poisson regression. This analysis is from an ongoing research study. **Results:** For depression, overall incidence significantly increased over time ($p < 0.0001$): 1.4%, 1.6%, 1.8%, 1.8%, and 2.1% for each year from 2017 to 2021, respectively. Prevalence also significantly increased ($p < 0.0001$): 2.6%, 2.9%, 3.3%, 3.5%, and 4.1% for 2017 to 2021, respectively. For anxiety, rates were similarly significantly increased: incidence rates of 2.6%, 3.0%, 3.1%, 3.0%, and 3.5% for 2017 to 2021, and prevalence of 4.7%, 5.4%, 5.9%, 5.9%, and 6.9% for 2017 to 2021, respectively. Stratification by covariates showed higher depression incidence rates among subgroups for 2017-2021, respectively: ages 14-17 (2.3%, 2.6%, 2.9%, 2.9%, 3.2%) and 18-22 (2.0%, 2.4%, 2.8%, 2.9%, 3.4%); female (1.8%, 2.1%, 2.4%, 2.6%, 3.1%) and other (11.4%, 9.1%, 15.6%, 18.6%, 34.2%) sex; Native-American (1.7%, 2.0%, 2.1%, 2.0%, 2.7%) and White (1.8%, 2.0%, 2.3%, 2.4%, 2.6%) race/ethnicities; higher household income (1.5%, 1.7%, 1.9%, 2.0%, 2.2%); underweight (1.5%, 1.9%, 2.1%, 2.2%, 2.9%) and obese (1.7%, 2.0%, 2.2%, 2.7%), and those with comorbidities (1.9%, 2.1%, 2.3%, 2.3%, 2.8). Similar subgroup differences were observed for depression prevalence rates and anxiety incidence and prevalence. **Conclusion:** Rates of clinically diagnosed depression and anxiety increased over time from 2017-2021, especially among adolescents and young adults, and some subgroups. This increase in trends suggests a

need for increased mental health services, especially among subgroups like those reporting other sex identities. Further studies are needed to better understand the diagnosis, health care services and risk factors associated with these conditions. This study was supported by a grant from the Care Improvement Research Team of Kaiser Permanente Southern California.

No. 30

Comparative Analysis of Psychiatric Symptoms on YouTube and Tiktok Videos Concerning Anabolic Steroid Use

Poster Presenter: George Mina, B.S.

Co-Authors: Daniella Gurguis, Maria Fahmy, B.A., Angela Verardo, Zeshawn Ali

SUMMARY:

Background: With the growing popularity of bodybuilding and strength competitions, the mention of anabolic steroids (AS) has exploded on platforms like TikTok (TT) and YouTube (YT) with mixed reliability and accuracy of information. The aim of this study was to survey and compare the portrayal, perception, and reliability of videos on AS among YT and TT platforms and their mention of psychiatric symptoms or lack thereof. **Methods:** The "formal" search term "Anabolic Steroids" and the "informal" search term "Roids" were searched on YT and TT in November 2022 using private browser settings on Google Chrome. The top-viewed 55 YT and TT videos were selected using each term. Exclusion criteria included non-English videos and videos longer than 15 minutes. Videos were reviewed by two independent researchers. Information collected included publication date, length of video, views, likes, comments, presence of a medical professional, side effects of AS use, overall perception of AS use by main subject (0= absolute negative and 10= absolute positive), modified DISCERN score and Patient Materials Assessment Tool (PEMAT). The PEMAT score evaluated understandability and actionability and ranked quality from 0= poor to 100= excellent. The modified DISCERN-based reliability score ranked quality from 1 = poor to 5 = excellent. DISCERN, PEMAT, and overall perception scores were averaged between the two reviewers. Data were analyzed using SPSS statistics software v24. Chi-squared

analysis and student's t-tests were used to evaluate significance with $\alpha=.05$. **Results:** Included were 48 formal and 49 informal YT videos (97 total YT videos) and 49 formal and 50 informal TT videos (99 total TT videos). The average TT video was 64 seconds long and had 693,233 views, 63,114 likes, 439 comments, and 1148,552 followers. The average YT video was 395 seconds long and had 902,416 views, 14,323 likes, 1,509 comments, and 1,922,539 subscribers. Overall, TT videos had a greater positive overall perception of AS use than TT videos (5.54 vs 4.13; $p<.001$) and a significantly higher PEMAT Understandability (73.20 vs 65.00; $p=0.006$), There was no significant difference in actionability Scores ($p=0.389$) or DISCERN Reliability score ($p=0.172$). YT videos had a significantly higher number of medical professionals present than TT videos (19.58%vs2.04%; $p<.001$), and a higher percentage of them cited/displayed a scientific article (8.34% vs0%; $p=.004$). While there was no significant difference in how likely TT or YT videos were to mention side effects($p=.172$), YT videos were much more likely to mention psychiatric symptoms of AS use than TT (20.41% vs 10.01% respectively; $p<.001$). **Conclusion:** TT videos were more likely to have a positive perception of AS and less likely to feature medical professionals or list side effects of AS use. Among videos that mentioned side effects, TT videos were less likely to mention psychiatric symptoms.

No. 31

"Doc, I Need an Outpatient Psych Consult!": Incorporating Integrated Care in the Training Curriculum of Child and Adolescent Psychiatry Fellowship

Poster Presenter: Souparno Mitra, M.D.

Co-Authors: Shalini Dutta, M.D., Sasidhar Gunturu, M.D.

SUMMARY:

Introduction Within integrated care, the collaborative care model has also been established as an effective model to improve access to quality care in the adult mental health population. Many models exist within child and adolescent psychiatry for integrating services including child psychiatry access programs studied in multiple states.

Collaborative care models have also been studied with randomized control trials for behavioral problems, ADHD, anxiety and specifically for depression . Despite increases in child psychiatrists into the workforce, access remains a problem. The United States has 9.75 child psychiatrists per 100 000 children aged 0 to 19. However, there is a considerable variation in prevalence per 100 000 children among states, ranging from a low of 3.3 in Idaho to a high of 26.5 in Massachusetts. Child psychiatrists are still overwhelmingly concentrated in metropolitan areas with 70% of counties not having one. **Materials and Methods** We investigated whether this model was being utilized in the child and adolescent psychiatric training programs. We referred to the ERAS 2021 list of accredited child and adolescent fellowship programs. For every program, we analyzed the website's education and training program links specifically searching for keywords including but not limited to "collaborated care", "co-located care," "community psychiatry," "integrated care," and "public psychiatry." **Results** Using these search terms, we gathered data about training/didactic schedules for collaborated/integrated care and found that only 36 out of 136 programs incorporate an integrative care model in their program curriculum. The various modalities in integrated care training that are mentioned include didactic lectures, electives geared towards co-located care, outpatient psychiatric consult services, rotations in integrated pediatric clinics, and Grand Rounds. The duration of these rotations can range anywhere from 1 lecture to 4 weeks at a co-located practice. **Discussion** We propose that implementing more exposure to this care model within residency training programs and CAP fellowships would be beneficial. We would like to provide an example of a 2-month rotation at our residency program that provides exposure and experience with this model of care to better prepare trainees for when it is time to fully enter the workforce. This rotation includes experience with co-located care, PCP coaching, collaborative care and ambulatory ICU. Co-located care involves patients who require more than collaborative care, but do not need specialty care exclusively. In conclusion, we feel that after close review of ACGME-accredited CAP fellowship websites there is a gap in teaching trainees about this important model that can

increase cost-effective and appropriate access to care. Collaborative care can help patients and help use resources appropriately, an issue that is more vital with child/adolescent psychiatry.

No. 32

Assessment of Pediatric Weight and Height Trajectories During Long-Term Viloxazine ER (Qelbree) Treatment in an Open-Label Extension Safety Trial

Poster Presenter: Jonathan Rubin

Co-Authors: Joseph T. Hull, Tesfaye Liranso, Azmi Nasser, Ann Childress

SUMMARY:

Introduction: Stimulant medications and the nonstimulant norepinephrine reuptake inhibitor, atomoxetine, may reduce growth (weight and height) in children (Benard, et al. 2015; McCarthy, et al. 2018). Therefore, the FDA recommends closely monitoring growth outcomes when using these medications for pediatric ADHD. Viloxazine ER (viloxazine extended-release capsules; Qelbree), is a nonstimulant medication, FDA-approved for ADHD in children (≥ 6 yrs of age) and adults. Viloxazine ER has a pharmacologic profile that differs from other approved ADHD medications (Yu, et al. 2020) and thus may not impact growth in the same manner as other treatments.

Methods: The long-term impact of viloxazine ER on weight and height trajectories in pediatric ADHD subjects was assessed. Subjects' weight and height were measured at baseline and end of study in 5 double-blind, placebo-controlled (DBPC), phase 2 and 3 clinical trials and in 3-month intervals following first dose of viloxazine ER in an ongoing long-term, open-label extension (OLE) trial (NCT02736656). Weight (kg) and height (cm) values were converted into percentile values and corresponding z-scores using Centers for Disease Control (CDC) growth data tables. During the trials, viloxazine ER dose ranged from 100-400 mg/day (age 6-11 yrs) or 100-600 mg/day (age 12-17 yrs). The incidence of weight- and growth-related adverse events (AEs) terms were also assessed.

Results: At the time of data cut (31 July 2019), 1097 subjects took at least one dose of viloxazine ER in the OLE (66.4% male, mean (SD) age 10.8 (3.06) yrs, 58.8% age 6-11 yrs, mean (SD) BMI 18.8 (3.42) kg/m², weight 42.1 (16.01) kg, height 146.7 (17.46) cm). At all visits during the first 12 months of OLE, the mean (SE) z-score for weight and height was between -1 and 1, indicating weight and height remained within a normal range when compared with expected values. Similar results were observed when weight and height were analyzed by sex and by age group. At 12-months in OLE (n=338), the mean (SD) change from baseline in weight-for-age z-score was -0.2 (0.5) and height-for-age z-score was -0.14 (0.4). Weight- and growth-related AEs in the DB trials (incidence $\geq 1\%$) included (viloxazine ER [100-600 mg/day] n=1117 vs. placebo n=487): decreased appetite (8.1% vs. 0.8%), increased appetite (0.2% vs. 1.2%), nausea (5.1% vs. 2.7%), vomiting (4.7% vs. 1.4%), increased weight (0.4% vs. 1.2%), and decreased weight (1.3% vs. 0.4%). During the OLE weight- and growth-related AEs reported for $\geq 1\%$ of subjects were: decreased appetite 5.8%, vomiting 2.7%, nausea 2.4%, decreased weight 2.3%, and increased weight in 2.0% of patients.

Conclusions: Pediatric subjects taking Qelbree daily for 12 months maintained height and weight within the normal range. However, because viloxazine ER may impact weight, health care providers should monitor for changes in patient's weight while using it.

Funding: Supernus Pharmaceuticals, Inc.

No. 33

A Conceptualization of the Mental Health Burden of Covid-19 in Children and Adolescents Through an Eriksonian Lens

Poster Presenter: Steven Paul Nemcek, M.D.

SUMMARY:

While the verdict is still out on the longitudinal mental health effects of COVID-19 and related lockdowns, early research from the pandemic paints a mixed picture. On one hand, in a population-based cohort study out of the UK, primary care diagnoses

of anxiety and depressive disorders are significantly lower during the pandemic; however, these authors speculate that there may be a delay in diagnosis of these illnesses and a potential increase in severity at a later date.¹ Early literature in children and adolescent reports of depression, anxiety, and psychological distress, in addition to parent reports of the same also indicate likely elevations in symptomatology, including 40.1% of parents reporting signs of distress in their children.² German data looking at reported symptoms through three different COVID-19 waves also show elevation of mental health symptoms.³ While these data may take years to fully contextualize, intuitively one might assume that imposed lockdowns and the corresponding reduction in employment and in-person schooling, in addition to the potential for loss of loved ones during a pandemic and a unique burden placed on front-line workers would together create a synergistic environment ripe for mental illness. Another theoretical lens by which to view the causative effects of the restless unease and mental unwellness created by the COVID-19 socio-political environment might be found in exploring the delay and stagnation individuals might experience in progressing through foundational and significant life events and stages more broadly. Erik Erikson and Joan Erikson collaborated to describe a psychoanalytic theory of human development in eight stages, which were outlined in the book *Childhood and Society*, initially published in 1950.⁴ Conceptually, each stage is characterized by a specific conflict that must be resolved between one's maturing ego and the culture and society which surround it. The theory is that if an individual can resolve each conflict a particular stage presents, he will gain a skill that can be carried onward throughout the lifespan. The Eriksons believed one couldn't get stuck at a particular stage, but that the successful or unsuccessful progression through each stage was important developmentally and may affect how the individual deals with challenges at later stages. This poster summarizes the child and adolescent mental health literature related to the COVID-19 pandemic, and conceptualizes these data through an Eriksonian psychosocial development lens.

No. 34

Protective Factors for Student Mental Health: The Role of Social Support in Mental Health Among College Students

Poster Presenter: Nils Went, M.D.

SUMMARY:

Background: Depression is the most common mental illness worldwide. It has become an important public health problem. The number of incident cases of depression worldwide increased from 172 million in 1990 to 258 million in 2017, representing an increase of 49.86% (Liu et al 2020). Depression is one of the several mental health conditions diagnosed in adults as well as in the adolescent population. Children and adolescents are probably more likely to experience high rates of depression and most likely anxiety during and after prolonged isolation periods (Loades et al 2020). It is important to understand the importance of screening for mental health conditions and study the benefit of clinical services that offer preventive support and early intervention (Loades et al 2020). The student population happens to be a vulnerable population requiring special attention as poor mental health outcomes affect school performance, social engagement, and future employment. Mental health problems are common in college freshman and associated with lower academic function (Bruffaerts et al 2018). The goal of this study is to find out whether social support moderates the relationship between adverse childhood experiences and mental health outcomes among college students. Methods: We interviewed college students (n=147) aged 18-25 in Central Appalachia. Logistic regression analysis was used to assess the association of social support, school belonging and offspring depressive symptoms in the past year. Parent education, income, age, gender, past month mentally unhealthy days, and race were used as controls in the study. Results/Findings: Overall, 25.6% of participants reported low social support, while 22.4% reported low belonging in their school, while 21.8% reported poor mental health. Low social support (OR = 3.26, 95% CI, 1.27, 8.41) was significantly associated with depressive symptoms, while low belonging (OR = 2.03, 95% CI, 0.81,5.09) in one's school was not associated with

depressive symptoms. Discussion: It is important identify tools to help screen for mental health conditions in the college population during their wellness visits and then, if necessary, recommend various social support therapies to help manage mental health conditions. Globally, many individuals who require mental health treatment lack access to high quality care. There are human resource shortages, fragmented service delivery models, and a lack of research for implementation and policy change contributing to the current mental health treatment gap (Wainberg et al 2017). Conclusion: Developing alternative treatment plans involving social support programs for adolescents suffering from depression should be given high priority as it is a serious health burden and can cause distress to the patient and their families as well as cause long-term impairments in functioning leading to premature death (Thapar et al 2012).

No. 35

Now I Know My CBDs: Cases of Psychiatric Admissions After Cannabidiol-Derived Tetrahydrocannabinol Product Usage

Poster Presenter: Matthew Joseph Johnson, D.O.

Co-Authors: Carly Swenson, Ilona Fishkin

SUMMARY:

Cannabis contains many chemical entities, including trace amounts of delta-8-tetrahydrocannabinol ($\Delta 8$ -THC). $\Delta 8$ -THC is either naturally extracted from cannabis or synthesized from cannabidiol (CBD) and marketed to consumers over-the-counter as a legal and "safer" high compared to other THC-containing products. Despite this perception of "safety" among $\Delta 8$ -THC users, the FDA and CDC have cautioned against $\Delta 8$ -THC ingestion due to reports of adverse events, including psychiatric presentations as discussed here. We describe two cases of patients aged 19 and 20 who presented with acute psychiatric concerns following reported ingestion of $\Delta 8$ -THC. In one case, the patient had manic symptoms only in the context of $\Delta 8$ -THC ingestion - no previous psychiatric history. In the other, the patient had impulsive and psychotic symptoms grossly out of proportion to, and more severe than, the symptoms they previously experienced. Both cases had resolution of these symptoms while admitted

inpatient, primarily with abstinence from $\Delta 8$ -THC. These cases demonstrate a potential temporal association between ingestion of $\Delta 8$ -THC containing products and the development of manic or psychotic symptoms, as well as a likely dose-response relationship. They also highlight a growing need for drug-use histories that include specific questions around $\Delta 8$ -THC use. Further investigation is needed regarding the risks associated with $\Delta 8$ -THC use, especially in those with existing psychiatric diagnoses and those at increased risk for psychiatric disorders to ensure proper diagnosis and treatment, and to better understand potential drug-drug interactions of $\Delta 8$ -THC and psychiatric medications.

No. 36

Differences in Resilience Levels Across Diagnostic Groups of MDD, Adjustment Disorder, GAD and ADHD

Poster Presenter: John Cm Wong, M.B.B.S., M.Ed., M.Sc.

Co-Author: Natalie Lei, B.A.

SUMMARY:

Resilience in relation to mental health has been widely explored. This study expands on such efforts by identifying critical protective resilience domains across three diagnostic groups: threshold, subthreshold (presenting symptoms but failing to meet criteria) or no diagnosis of Major Depressive Disorder (MDD), adjustment disorder, Generalised Anxiety Disorder (GAD) and Attention-Deficit Hyperactive Disorder (ADHD; inattentive). **Methods:** Participant data was taken from the nationwide YEAR Study, where school-based youth (10-18) were invited for screening through a pool of predetermined schools stratified by level, zone, and type. The average 75th percentile of the cumulative frequency distribution of the mean scores was used as a cut-off to identify high-risk subjects to receive the semi-structured K-SADS screen interview. 10% of participants with normal scores were randomly selected to be interviewed. K-SADS Supplements were conducted based on screen results and diagnoses reviewed during consensus meetings with the PI or a Co-PI. The Singapore Youth Resilience Scale (SYRESS; $\alpha = .89$) was administered during the first screening phase, consisting of ten resilience

domains. **Results:** The analysis included 474 participants (mean age = 14.31, 60.76% female). Kruskal-Wallis H Tests were conducted to examine the differences in total and domain resilience scores across the three diagnostic categories, for each of the four disorders. Results showed that total resilience scores differed across diagnostic categories, for MDD [$H(2) = 24.95, p < .001$], GAD [$H(2) = 15.04, p < .001$], and ADHD [$H(2) = 6.30, p = .04$]. No significant differences were found between groups for adjustment disorder. Post-hoc analyses with a Bonferroni adjustment revealed that the no-diagnosis group exhibited a significantly higher average rank in total resilience scores compared to the threshold group across conditions. This was similarly observed at a domain level – the no-diagnosis group exhibited significantly higher average ranks on resilience domains compared to subthreshold and/or threshold groups, though specific domains differed across MDD, GAD, and ADHD. For adjustment disorder, only scores on the domain of positive coping differed over diagnostic categories [$H(2) = 9.43, p = 0.01$], with the subthreshold diagnosis group exhibiting a significantly lower average rank than threshold and no-diagnosis groups. Barring this exception, subthreshold groups did not differ significantly from threshold groups in terms of resilience scores. **Conclusion:** These results demonstrate that resilience scores differ across diagnostic categories, with no-diagnosis groups exhibiting higher resilience levels than subthreshold and/or threshold groups. These results further inform intervention targets and warrant greater attention on individuals who present with symptoms but fail to meet diagnostic criteria. This study was supported by Singapore Tote Board, NUS Mind Science Centre Seed Grant.

No. 37

Beyond Schizophrenia Spectrum: The Importance of Neurology Collaboration in Late Onset Psychoses

Poster Presenter: Leo Meller, B.S.

Co-Authors: Sarah Staley, M.D., Kristin Beizai, M.D.

SUMMARY:

Mr. B., a 57-year-old Caucasian male with a past psychiatric history of PTSD, depression, anxiety, and substance use disorder presented to a community

psychiatric clinic at age 56 with new onset of hallucinations. He was diagnosed with schizophrenia spectrum disorder and treated with antipsychotics (olanzapine, then haloperidol decanoate long-acting injectable) for six months. He re-presented to our hospital system 3 months later with distress and suicidality related to ongoing hallucinations, with notable upper extremity tremor. In a psychiatric admission 6 months later for similar complaints, new findings included cognitive impairment (MOCA 20/30), hallucinations, and persistent movement disorder - including parkinsonian symptoms (tremors, cogwheeling) and oral dyskinesia. Antipsychotics were discontinued and valbenazine initiated for presumed tardive dyskinesia. Psychiatry had curbside discussion with neurology, and Mr. B. tested negative for Huntington's disease. Discharge diagnoses included PTSD, depression, anxiety, unspecified neurocognitive disorder and psychosis. During a medical admission 4 months later (new onset of falls), he was evaluated by the consultation-liaison psychiatry service related to the persistent anxiety, suicidal ideation, hallucinations and abnormal movements. Given his late psychosis onset, early cognitive decline and persistent motor symptoms, neurology was formally consulted. Neurology examination revealed hypomimia, hypometric saccades, tongue tremor, lip pursing, bilateral upper extremity cogwheeling, bradykinesia, slowed finger and toe taps, antalgic gait, and orthostatic hypotension. Differential diagnoses included Parkinson's plus syndrome (Lewy body dementia or multiple system atrophy) versus drug induced parkinsonism. Recommended workup included DaTscan to distinguish parkinsonian pathology from antipsychotic induced parkinsonism and myocardial scintigraphy to further evaluate Lewy body dementia. Herein, we discuss an atypical case of late-onset psychosis with early cognitive decline, the importance of cognitive screening, and the differential, features and work-up of Parkinson's plus syndromes. We highlight the importance of psychiatry advocacy for early neurology involvement in cases of psychiatric disorders with unusual presentations. Effective collaboration strategies include early consultation and establishment of roles, problem anticipation, organized documentation and most importantly, clear communications (1). Moreover, we bring forth the

interesting discussion of DaTscan and myocardial scintigraphy for Lewy body dementia evaluation. DaTscan has been found to be highly sensitive and specific in Lewy body dementia differentiation (2) and a recent clinicopathologic validation study demonstrated the robustness of myocardial scintigraphy in differential diagnosis of Lewy body dementia (3). All in all, we underline the importance of early collaboration in late-onset psychosis due to neurological disease.

No. 38

The Impact of Benzodiazepine Dosing on Receipt of Electroconvulsive Therapy: A Cross-Sectional Analysis of Inpatient Catatonia Treatment

Poster Presenter: Adam Mullet

Co-Authors: Mathew Gregoski, Benjamin Kalivas

SUMMARY:

Background: Catatonia is a complex neuropsychiatric illness associated with great cost and prolonged length of stay (1,2). There is general consensus that first line treatment for catatonia is benzodiazepines (3,4). If unresponsive to benzodiazepines or in cases of medical emergency, electroconvulsive therapy (ECT) is treatment of choice (5). While these two treatments are often proposed as first line options for catatonia relatively little new research exists to assist with how or when to make the decision to escalate from benzodiazepines to ECT (6). Methods: This study is a cross-sectional study of hospitalized patients at a 740-bed, tertiary care, academic hospital. The data set included all inpatient encounters with a diagnosis of 'catatonia' from August 2018 through June 2022. The primary outcome was receipt of electroconvulsive therapy. The main independent variable was maximum dose of lorazepam received. Results: Sixty-one unique patients were included in the analysis. The average age of the patients included was 43 and 38% were male. Length of stay for admissions with a diagnosis of catatonia was on average 33.73 days. Thirty-eight of 61 admissions were to psychiatric service; the remainder were to medical or surgical services. The range of maximum lorazepam dose was from 0 to 30mg with a median of 6 mg. 34% of patients received ECT during their hospitalization. Patients who received ECT had a median lorazepam dose of 8

compared to 6 of those who did not receive ECT. This was a statistically significant difference. Conclusions: This study represents a large case series of patients with catatonia treated in both psychiatric and medical hospitals. This study demonstrated a significant positive relationship between maximum lorazepam dose and receiving electroconvulsive therapy while admitted for treatment of catatonia. However, there was no clear signal for a dose threshold above which ECT becomes statistically significantly more likely. A specific cutoff for initiating ECT once a specific dose of lorazepam has been given is not necessarily supported by the results of this study. However, based on this study, with every increase in lorazepam there should be a recognition that the need for ECT is more likely. The results of this and further research could potentially be used to develop a catatonia treatment protocol that could be studied for effects on outcomes like length of stay and readmissions leading to further innovation in the treatment of catatonia and reductions in the burden of the illness.

No. 39

Racial and Structural Disparities in the Use of Physical Restraints in Emergency Departments

Poster Presenter: Erika Chang-Sing

Co-Authors: Jane Gagliardi, Ambrose Wong, Colin Smith

SUMMARY:

Clinicians apply physical restraints to keep agitated patients from hurting themselves and others. However, restraints often cause lasting distress, damage the patient-clinician relationship, and sow distrust in the medical system. Our prior studies using emergency department (ED) data from New England found racial disparities associated with restraint. Here we aim to evaluate for restraint patterns within a distinct geopolitical region in the Southeastern United States. Research on restraint use will help us analyze our biases and promote more equitable care. This was a cross-sectional longitudinal study that evaluated restraint characteristics using medical records from a regional network in North Carolina. Patient data was collected for each ED visit from 2015 - 2022 with patients age 16 and older and analyzed using a

multivariable logistic model. The primary outcome was the presence of a physical restraint order. Our models adjusted for sex, race, age, insurance, and arrival method. Analysis of 899,912 visits (2763 cases of restraint, 10,007 cases of sedation, and 9678 cases of police arrival) showed that patients brought in under police custody had an odds ratio (OR) of restraint of 94.6 (95%CI 83.6 -107.1). Although black patients were less likely to be brought in by police than white patients (OR: 0.87 (0.83 - 0.92)), they were more likely to be subsequently placed in physical restraints. Adjusted for sex, age, and insurance, black patients brought in by police had an OR of 1.72 (1.46 - 2.04) for restraint compared to white patients brought by police. Contrastingly, black patients were less likely than white patients to be restrained after arriving through other means (0.69 (0.63, 0.76)). This study highlights the structural biases minority patients face and the intersections of disparities in behavioral care. Particular attention may be needed by emergency clinicians when faced with decisions for coercive measures regarding individuals that disproportionately interface with the justice system.

No. 40

Substance Use and Substance Use Disorders in Emergency Department Patients Requiring Involuntary Sedation for Agitation/Violence

Poster Presenter: Sana Chughtai, M.D.

Co-Authors: Omar Alnemer, B.S., Katherine Brownlowe, M.D., Cassandra Pasadyn, B.A., Sheela Vaswani, M.D.

SUMMARY:

Background: Acute agitation is often managed with involuntarily administered sedatives via intramuscular or intravenous routes. Currently, there is limited data on the use of involuntary sedation in patients presenting to the Emergency Department (ED) for psychiatric evaluation. Patients who have used cannabis, alcohol, or stimulants are at a higher risk of displaying psychotic behaviors and may be at higher risk of becoming violently agitated, leading to administration of involuntary sedation in the ED.

Methods: We conducted a retrospective cohort study of patients who received emergency psychiatric care from a single health system's EDs

between 1/1/2020 and 12/31/2021. Inclusion criteria was age ≥ 18 and received involuntary sedation for agitation/violence. Patient information, including mental health diagnoses and substance use, was abstracted. Descriptive statistics were used to describe the patient population receiving involuntary sedation. **Results:** The 8,512 patients who received a psychiatric evaluation in the ED within the study time frame were randomized and 1,961 were screened for study inclusion. Involuntary sedation was used in 17.1% (n=335). The patients receiving involuntary sedation were 35.6 ± 13.6 years old (range 15-85). Over half (54.3%, n=178) were brought to the ED by police and 72.6% (n=239) required security presence during their ED stay. Among those who were involuntarily sedated, 13.7% (n=46) were diagnosed by the ED psychiatry consult team with a substance use disorder only, and 37.6% (n=126) were given concomitant substance use and mental health disorders for a total of 51.3% (n=172) of involuntarily sedated patients presenting with a substance use disorder. Two thirds of patients (64.8%, n=217) were currently using substances, defined as self-reported substance use within 30 days of presentation or substance use confirmed via urine drug screen at the time of presentation. Of the 217 involuntarily sedated patients with current substance use, 126 (58.1%) included cannabis, 79 (36.4%) included alcohol, 59 (27.2%) included methamphetamine, 49 (22.6%) included cocaine, and 35 (16.1%) included opioids. Within the cohort of 335 involuntarily sedated patients, 31.0% (n=104) required more than one round of involuntary sedation. Of these 104 patients, 57.7% (n=60) were currently using substances. **Conclusions:** This retrospective cohort study found that half of patients involuntarily sedated in the ED for agitation/violence were diagnosed with a substance use disorder. Substance use may play a substantial role in agitation/violent behaviors in ED patients receiving mental health care, and the need for involuntary sedation should prompt a discussion of and treatment for any concomitant substance use disorders in this population.

No. 41

Trends in Emergency Department Visits Among Individuals Ages 5-24 for Suicidal Ideation and Suicide Attempts Before and During the Covid-19 Pandemic

Poster Presenter: Radhika Kothadia

Co-Authors: Richard Lesesne Frierson, M.D.,
Kaustubh Joshi

SUMMARY:

Objectives Evidence suggests that the COVID-19 pandemic has negatively affected children's mental health. The emergency department (ED) is often the first point of contact with a physician for youth who are experiencing suicidal thoughts or have attempted suicide. This study compares trends in ED visits for suicidal ideation (SI) and suicide attempts (SA) among individuals in South Carolina (SC) ages 5-24 before (i.e., March – December 2019) and during the COVID-19 pandemic (i.e., March – December 2020). We compared disposition outcomes, total billed cost, and how trends varied between rural and urban counties during the indicated time frames. We also examined if individuals who presented to the ED during the pandemic had prior or subsequent mental health-related ED visits. **Methods** We used a deidentified data set of patient records from all EDs in SC provided by the SC Revenue and Fiscal Affairs Office. Institutional review board approval was not required as this did not constitute human subjects research. The elements in patient records included age and International Classification of Diseases 10th Revision (ICD-10) diagnoses associated with the ED visit. Mental health-related visits included all diagnoses with ICD-10 codes beginning with "F." Visits coded for SI included any diagnosis field of R45851, and visits coded for SA included any diagnosis field equal to or beginning with T1491, X71-X83, T36-T65, or T72 (with a 6th digit of 2). We examined a total of 16,906 patient records. The data provided by SC RFA is an enumeration for the time period of interest, and p-values were calculated. **Results** The total number of ED visits for SI and SA among individuals ages 5-24 was lower during the pandemic compared to before the pandemic. The proportion of mental health-related ED visits (%MH) for SA was higher during COVID compared to pre-COVID for ages 11-13 ($p<0.001$), ages 14-18 ($p<0.001$), and ages 19-24 ($p=0.007$). The proportion

of total ED visits (%ED) for SA was higher during COVID compared to pre-COVID for ages 11-13 ($p<0.001$), ages 14-18 ($p<0.001$), and ages 19-24 ($p<0.001$). The %MH for SI was higher during COVID compared to pre-COVID for ages 11-13 ($p=0.008$), ages 14-18 ($p=0.006$), and ages 19-24 ($p<0.001$). The %ED for SI was higher during COVID compared to pre-COVID for ages 11-13 ($p<0.001$), ages 14-18 ($p<0.001$), and ages 19-24 ($p<0.001$). **Conclusions** Although the total number of ED visits for SI and SA decreased during the pandemic for individuals ages 5-24, a significantly greater percentage of ED visits in individuals ages 11-24 were attributed to SI and SA during the pandemic compared to before. Trends from month to month suggest that seasonality, school closures, stay-at-home mandates, and severity of the COVID-19 pandemic may have affected the rate of ED visits for SI and SA.

No. 42

Using a Tele-Behavioral Health Rapid Intake Model to Address High Demand for Psychotherapy at an Academic Medical Center During Covid-19

Poster Presenter: Kristina Brooke McMahan

Co-Authors: Kristine Lokken, Ph.D., Karli Martin, Psy.D., Melissa Greenfield, Psy.D., Rachel Fargason, M.D.

SUMMARY:

Background: Wait times for mental health appointments have been a longstanding problem in academic medical centers. This problem intensified worldwide with the COVID-19 pandemic. Approximately 70% of mental health services experienced pandemic-related disruption in services, while simultaneously experiencing an increase in demand for services. Since the start of the pandemic, wait times for mental health appointments have varied across populations, ranging from 12 weeks to 18 months. As increased wait time can lead to negative outcomes and increased severity of psychiatric symptoms, the authors implemented a novel rapid intake telemedicine clinic to decrease wait time and increase patient access to psychological care in an academic medical center. **Methods:** To address an overwhelming influx of referrals and a growing wait-time-until-first- appointment at an academic medical

center serving as a lone safety net hospital during the Covid-19 pandemic, a 5-provider Psychology Rapid Intake Team was established using a hybrid of telehealth and in-person appointments based on patient preference. New patient volumes, wait time for 1st appointment, and wait time to begin therapeutic intervention were reviewed during the same calendar 3-month period immediately prior to and following implementation of the rapid intake clinic. *Results:* A paired-samples t-test was conducted to compare new patient volumes pre- versus post-intervention. Results revealed a significant increase in the number of new patients providers were able to accommodate in the post-implementation (M = 62.00, SD = 7.21) compared to the pre-implementation (M = 31.00, SD = 2.61) condition; $t(2) = -8.60, p < .05$. There was a significant decrease in the average wait times for 1st appointment post-implementation (M = 24.99, SD = 2.38) compared to the pre-implementation (M = 37.32, SD = 1.47) condition; $t(2) = 5.56, p < .05$. In addition, days to begin therapeutic intervention decreased dramatically (394%) from the pre- (M = 142.50) to post-implementation (M = 28.84) period. *Conclusions:* The COVID-19 pandemic strained a mental healthcare system which led to increasingly long wait times for intake appointments and delayed psychotherapy interventions. The initiative of the Psychology Rapid Intake Team served to improve access, reduce patient risk related to prolonged wait times, and accelerate patient engagement with psychotherapy services. The model can serve as a unique, sustainable, and scalable infrastructure for behavioral health delivery in large health care systems.

No. 43

Improving Measurement-Based Care Implementation in Mental Health Outpatient Setting: A Virtual Focus Group Interview With Healthcare Professionals

Poster Presenter: Virginia Carroll O'Brien, M.D.

Lead Author: Hayoung Ko

Co-Authors: Sydney Jones, Lee Cooper

SUMMARY:

Although measurement-based care (MBC) is an evidence-based practice, MBC is not always

systematically implemented, especially when practitioners are asked to execute MBC without formalized training. This study aims to improve MBC implementation in a mental health outpatient setting by conducting virtual focus group interviews. Clinicians (n = 18) and staff (n = 7) identified attitudes, facilitators, and barriers of MBC implementation via transcribed verbatim. The results indicate that a virtual focus group is feasible and productive, evidenced by a total of 291 and 97 individual codes provided by each group (i.e., clinician/staff). While clinicians identified a similar number of barriers (40.9%) and facilitators (44.3%), staff identified more barriers (67%) than facilitators (24.7%) for MBC. The primary facilitators included perception of the benefits of MBC (e.g., MBC is helpful with intake, diagnosis, and provides clinical insights; MBC provides accurate information), and cloud-based measurement-feedback system (MFS) that reduces clinician and client's burden in completion. The primary barriers indicated client's non-compliance or negative attitudes toward MBC, time constraints, technical difficulties, and difficulty to utilize MBC with certain types of clients. The virtual focus groups provided critical information on the shortcomings and strengths of MBC. Our findings underscore implementation challenges in healthcare settings and provide insight for both research and clinical practice in mental health fields. The identified barriers and facilitators can inform future trainings to increase sustainability and better integrate MBC with positive downstream consequences in patient care.

No. 44

The Metabolic Profile of Anhedonia: Spendthrift Phenotype Characteristics Associated to Non-Clinical Anhedonia

Poster Presenter: Andrés Marcelo Treviño-Alvarez, M.D.

Co-Authors: Tomas Cabeza de Baca, Marci Gluck, Jonathan Krakoff

SUMMARY:

Background Persons with mental health disorders are particularly affected by weight gain. We have established energy expenditure phenotypes based on dietary responses which predict weight change. Anhedonia and depressive symptoms have also been

associated with altered eating behavior and weight change. In a healthy cohort without diagnosed mental health disorders we investigated whether anhedonia and depressive symptoms were related to changes in 24h-energy expenditure (24hEE) in response to fasting, which defines thrifty vs. spendthrift phenotypes. **Methods** Participants aged 18-55 who were 1) weight stable in the 6 months prior to admission 2) had normal glucose regulation and 3) healthy and on no medications based on history, physical exam and lab screening participated in a clinical trial investigating the effects of diet on 24hEE as measured in a whole room indirect calorimeter. On admission participants were placed on a weight maintaining diet and on day 2 completed the physical anhedonia scale (PAS) and inventory of depressive symptoms (IDS). After at least 5 days on a weight maintaining diet, participants then spent 24h in a respiratory chamber during energy balance and fasting. **Results** 24hEE decreased with fasting (mean \pm SD = mean 1856.9 \pm 263.0 kcals/24h) compared to energy balance (mean \pm SD = 2033.8 \pm 307.2 kcals/24h) (mean Δ =167.3 \pm 96.2 kcals/24h). Higher anhedonia scores were associated with a smaller decrease in 24hEE during fasting, consistent with a more spendthrift phenotype (less prone to weight gain) ($r=0.28$ $p=0.01$) and higher fasting urinary catecholamine excretion rates (e.g., Epinephrine, $r=0.31$, $p=0.02$; Dopamine, $r=0.38$, $p=0.008$). There was an interaction between PAS and IDS scores such that as IDS scores increased (+1SD), the association between anhedonia and the 24hEE spendthrift characteristic (decrease in 24hEE from energy balance to fasting) was blunted (Simple slope analyses for PAS vs. Δ 24hEE: at IDS mean - 1SD β = 6.01, SE = 1.92, $p=0.002$; at IDS mean, β = 3.75, SE = 1.33, $p=0.006$; at IDS mean + 1SD β = 1.5, SE = 1.63, $p=0.36$). **Conclusions** The association between higher anhedonia traits in a healthy population and spendthrift metabolic characteristics may reflect sensing of homeostatic needs more adequate to their energy demands. This association is reduced with increased IDS score indicating that depressive symptoms may alter this homeostatic sensing and may provide a plausible explanation for weight gain in a subset of individuals with depression. **Trial Registration:** NCT00523627

No. 45
WITHDRAWN

No. 46
The Relationship Between Religion, Spirituality, and Mental Health in Youth Who Identify as Transgender

Poster Presenter: Ruby Lekwauwa, M.D.

Co-Author: Benjamin Doolittle, M.D., M.Div.

SUMMARY:

Objectives: Religiosity/spirituality confer protective mental health benefits in adolescents although the relationship between the two in transgender youth is unclear. This systematic review of the literature seeks to clarify this relationship. Methods: We searched five databases for quantitative and qualitative studies exploring the relationship between religiosity/spirituality and mental health in transgender youth. Results: Eighteen papers met criteria. Six showed a negative relationship between religion/spirituality and mental health, seven showed a mixed relationship, two showed a positive relationship, and three showed a neutral relationship. Only four studies exclusively evaluated the experience of religiosity/spirituality and mental health of transgender youth. The other fourteen studies more broadly evaluated the experience of LGBTQ youth, where participation among transgendered adolescents was low. Twelve studies were cross-sectional cohort studies, while six were qualitative. Conclusions: The relationship between religiosity/spirituality and mental health in adolescents identifying as transgender is complex. Quantitative studies were mixed regarding the association between religion/spirituality and mental health. Qualitative studies showed a more nuanced relationship between religiosity/spirituality in which religiously motivated stigma from parents or communities resulted in worsened mental health outcomes, while intrinsic religiosity appeared to correspond to improved psychological well-being. Implications of these findings for mental health providers and religious leaders are described.

No. 47

Cannabis Use and Cognitive Functioning: Chronic Effects on Neurotransmitters and Neuroimaging

Poster Presenter: Mahnoor Azmat

Co-Authors: Usman Ali Sharif, M.D., Naziya Hassan, M.D., Mir Ali Raza Talpur, M.D., M.B.B.S., Saad Nazir, M.D.

SUMMARY:

Background: Cannabis is derived from a plant and contains a number of unique ingredients with varying proportions that is commonly being used throughout the world for recreational and medicinal purposes (Whiting et al 2015). The most researched upon ingredients of cannabis are delta-9 tetrahydrocannabinol(THC) and cannabidiol(CBD). Both of these ingredients have different effects on neurological functioning. The acute effects are very well documented in terms of cognitive deficits but the long term effects are yet being studied in further detail. Research has shown that due to the altered functionality of the parahippocampal gyrus, thalamus and midbrain, the verbal learning rates of individuals with cannabis use was slower than their counterparts who were not using cannabis. It is seen that individuals with cannabis use may have a poor inhibitory control and would mostly look at immediate small rewards rather than long term rewards which may indicate a slowing of their reward circuitry (Kroon et al 2021). This was also further confirmed with neuroimaging whereby use of delta-9 THC showed reduced activity in the anterior cingulate gyrus, precuneus, right inferior frontal gyrus with paradoxical activation of right parahippocampal region, superior temporal gyrus and left posterior anterior cingulate gyrus. A possible explanation provided by the authors with regard to this indicated a slowing of inhibitory response along with some activation of other areas of the brain for the function to remain (Oomen, 2018). A review by Bloomfield et al (2019) showed that adolescent cannabis users had smaller volumes in the hippocampus, prefrontal cortex and arcuate fasciculus which can further explain the deficits in cognition that develop due to cannabis. If we shift our focus to maternal effects of cannabis on the neuronal circuitry, it would help to understand the long term effects that cannabis can possibly cause. Fetal studies done in the past have shown that

maternal exposure to cannabis causes altered D2 receptor gene expression in the mesocorticolimbic system of the brain. This region is further involved in emotional regulation, cognition and reward pathway of the human beings. Bottom of Form Method: PubMed, SCOPUS and Web of Science literature databases were screened and filtered by using specific search terms, inclusion/exclusion criteria with no time limitation until July 2022. A total of 22 papers were reviewed in detail for this article. Results: The literature review provides insight into the long term effects of cannabis and how it can change the brain function in individuals who have been using it for a short or long span of time. Conclusion: At this point, further prospective studies are needed to measure the brain changes in individuals who have been using cannabis for a long time. These changes could point out to the specific areas of the brain that are being impacted in an irreversible manner.

No. 48

The Linkage Between Post-Traumatic Stress Disorder and Autoimmune Diseases

Poster Presenter: Saad Nazir, M.D.

Co-Authors: Pardeep Kumar Sajjani, Usman Ali Sharif, M.D., Mir Ali Raza Talpur, M.D., M.B.B.S.

SUMMARY:

Background: PTSD is a psychiatric disorder that manifests after experiencing great mental or emotional distress or bodily harm, such as during war, a violent attack, a natural disaster, or other potentially fatal situations. According to numerous research, there is an association between PTSD and immunological malfunction. This review aims at the relationship between PTSD and autoimmune disease. **Methods:** The literature search included Pubmed, Google Scholar, and APA psycNET searching for keywords: PTSD, autoimmune, inflammation, cytokines, and genes. The search yielded 118 studies; five fulfilled the search criteria, of which four studies are research papers, and one is a review article. **Results:** Many studies have shown a relationship between PTSD and immunological dysfunction. Although the specific pathophysiology of PTSD causing autoimmune disease is unknown, several mechanisms may explain the link between

PTSD and immune dysfunction. First, studies have shown low baseline levels of the immunomodulatory glucocorticoid hormone, cortisol, and the corticotropin-releasing hormone in PTSD due to the HPA axis' hyperresponsiveness to negative feedback which results in an immunological state with dysregulated immune function. Second, many studies have found increased levels of proinflammatory cytokines in PTSD patients, including interleukin 1, interleukin 6, tumor necrosis factor, and C-reactive protein as well as higher signaling through proinflammatory nuclear factor- κ B transcriptional control pathways, indicating inflammation may play a role in the pathogenesis of the disorder. Third, regulatory T cells (Tregs) play a unique role in autoimmune disorders by suppressing pro-inflammatory cellular responses and secreting anti-inflammatory cytokines. Treg differentiation and function are probably involved in the breakdown of immunological homeostasis in PTSD since abnormal Treg production and insufficient immune response suppression have been documented in PTSD. Fourth, alterations in immune cell gene expression and decreased methylation of immune-related genes have been seen in PTSD patients, suggesting a link between stress and epigenetically driven immunological dysregulation. Last but not least, recent findings indicate that PTSD is associated with immune cell aging as assessed by shorter age-adjusted telomere length, which has been linked to higher inflammation and may be more important in all older persons with additional age-related immunological alterations. Stress-related abnormalities in the HPA axis, immune system, and telomere maintenance may all contribute to changing autoimmune function and triggering an exaggerated inflammatory response **Conclusion:** The articles reviewed consistently demonstrated an association between PTSD and autoimmune diseases. Therefore, PTSD can be a risk factor for it but further long-term studies are needed to clarify the linkage.

No. 49

SSRIs and Tinnitus: Side Effect or a Potential Treatment?

Poster Presenter: Jeuel Pana, M.D.

Co-Author: Shambhavi Chandraiah, M.D.

SUMMARY:

Reports exist of SSRIs causing but also treating tinnitus. We report on late onset tinnitus as a side effect of sertraline. A 35-year-old female experienced tinnitus six months after achieving stability on sertraline 100mg daily for generalized anxiety disorder. The tinnitus was described as high-pitched, not rumbling, persisting throughout the day and night. There were no precipitants, pain, infection, or other co-morbid medical illness related to this symptom although she had baseline mild right ear deafness. She decided against medical work-up but agreed to a gradual sertraline discontinuation over ten days which resulted in a full resolution of tinnitus. Return of anxiety symptoms caused her to restart sertraline at a lower 50mg dose with resolution of anxiety and no return of tinnitus. However, a month later, she increased sertraline to 100mg for worsening anxiety with return of bilateral tinnitus within one week. Cross-tapering from sertraline to escitalopram 15mg resulted in improvement but still present intermittent, tolerable, unilateral tinnitus in the left ear. While tinnitus is noted as a rare side effect of tricyclics and SSRIs, most reports are of sertraline caused discontinuation syndromes. However, one study reported treatment of tinnitus with low-dose sertraline. We will address the importance of determining side effect etiology by assessing temporal association, ruling out other etiologies, and as feasible replicating the side effect with re-challenge with the offending medication. The etiology of antidepressant caused tinnitus (related to serotonin depletion and limbic dysfunction) and treatment of tinnitus being potentially associated with NMDA inhibition will be discussed.

No. 50

Delirium Prevention With Melatonergic Agents: An Efficacy Reanalysis in a Subgroup of Older Adults

Poster Presenter: Victor Rodrigues

Co-Authors: Sávio Batista, Daniel Lacerda Heringer, Julio Nunes Silva, Penha Cristina Barradas

SUMMARY:

Background: Delirium in older patients is frequent in many medical circumstances. A recent publication of a network meta-analysis (NMA) of randomized controlled trials (RCTs) compared the efficacy of

melatonergic agents on delirium prevention in a population of 20 years old or older. It is unknown if an analysis in a subgroup of older adults would culminate in a different result. The objective of this study is to compare the efficacy of melatonergic agents in the prevention of delirium in older adults.

Methods: A frequentist random effects model of NMA was performed to evaluate the odds ratio of melatonergic agents compared to control groups and to rank the treatments using the surface under the cumulative ranking curve (SUCRA). The outcome considered was the incidence of delirium. The current analysis included only studies with a population of 65 years old or older considered in the referred publication. This study utilized the software R version 4.1.1 (R Core Team 2021) and the package netmeta version 2.5.0. **Results:** The analysis included five RCTs. There were 724 treated patients, 360 (50%) in Control, 222 (31%) with Melatonin 3 mg/d, 56 (8%) with Melatonin 0.5 mg/d, 53 (7%) with Melatonin 5 mg/d, 33 (5%) with Ramelteon 8 mg/d. The incidence of delirium was significantly lower in the groups of Ramelteon 8 mg/d (OR 0.07; 95% CI 0.01, 0.58; $p = 0.01$), Melatonin 0.5 mg/d (OR 0.16; 95% CI 0.03, 0.81; $p = 0.03$), and Melatonin 5 mg/d (OR 0.21; 95% CI 0.06, 0.72; $p = 0.01$), when compared to the control group. The treatment rank from best to worst was: Ramelteon 8 mg/d (SUCRA, 0.9), Melatonin 0.5 mg/d (SUCRA, 0.7), Melatonin 5 mg/d (SUCRA, 0.6), Control (SUCRA, 0.2), and Melatonin 3 mg/d (SUCRA, 0.0). **Conclusions:** For the outcome incidence of delirium, the results suggest that Ramelteon 8 mg/d is the best approach for delirium prevention, while Melatonin 3 mg/d had the worst performance. This study has some limitations: (i) the use of different diagnostic methods for delirium depending on the included RCT; (ii) some regions of the globe were not included, such as Latin America; and (iii) some studies had a small sample of participants. Even though the referred publication recommended a low dose of a melatonergic agent for delirium prevention, future studies might also consider a higher dose for older patients.

No. 51
WITHDRAWN

No. 52
Risperidone Induced Priapism in a Young Male and Its Non-Conventional, Oral Treatment

Poster Presenter: Samra Shoaib, M.D.

Co-Authors: Luis Joya, Blina Abdullahu, Arsalan Boodhun

SUMMARY:

In this case report, we highlight the occurrence of a serious urological condition, priapism, as a side effect of an atypical antipsychotic along with its non-conventional but fast acting treatment. Priapism is defined as penile erection taking place for over four hours in a single occurrence without any sexual stimulation. This is a painful urological emergency and needs to be treated as an emergency before any viable penile tissue is lost. While priapism is mostly idiopathic (1), it could also be iatrogenic, caused by many different medications. Risperidone is an antipsychotic which has been found to be associated with priapism and has been reported several times in literature (2). Our patient is a 21 year old male with a past psychiatric history of Schizo-affective disorder and autism spectrum disorder. Risperidone was started to help alleviate his auditory hallucinations and suicidal thoughts. The following morning the patient complained of first-time priapism. Urology was consulted and oral pseudo ephedrine was recommended. It is important to note that the conventional intra-corporal pseudo ephedrine was not administered due to limited resources and hence its oral counterpart was employed. Within an hour, patient's priapism was resolved. Oral pseudo ephedrine is not typically used as a treatment for priapism secondary to antipsychotics and this case report presents it as a great alternative in cases of limited resources. (1) Shigehara K, Namiki M. Clinical Management of Priapism: A Review. *World J Mens Health*. 2016 Apr;34(1):1-8. doi: 10.5534/wjmh.2016.34.1.1. Epub 2016 Apr 30. PMID: 27169123; PMCID: PMC4853765. (2) Paklet L, Abe AM, Olajide D. Priapism associated with risperidone: a case report, literature review and review of the South London and Maudsley hospital patients' database. *Ther Adv Psychopharmacol*. 2013 Feb;3(1):3-13. doi: 10.1177/2045125312464104. PMID: 23983987; PMCID: PMC3736961.

No. 53

Assessment of Underdiagnosis of Tardive Dyskinesia (TD) by Geographic Region, Social Determinants, and Other Patient Characteristics

Poster Presenter: Sam Leo

Co-Authors: Su Zhang, Ayush Patel, Rajeev Ayyagari, Pooja Gandhi

SUMMARY:

Background: Tardive dyskinesia (TD) is a hyperkinetic movement disorder that can be induced by antipsychotic agents (APs). This study aimed to estimate TD diagnosis rates across geographic regions of the United States (US) among adults who use APs. **Methods:** In this retrospective cohort study, patients with prescription claims for a ≥ 30 -day supply of an AP were identified in the IBM MarketScan[®] commercial insurance database (2012–2019). Additional information was collected from the US census, the Internal Revenue Service (IRS), and the Centers for Medicare & Medicaid Services. Included patients had a diagnosis of TD (based on International Classification of Diseases, Ninth Revision, Clinical Modification [ICD-9-CM] and ICD-10-CM codes) after the first AP prescription (index date), were aged ≥ 18 years at the index date, had ≥ 12 months of continuous insurance eligibility after the index date, and had geographic location information. Observed TD diagnosis rate was first estimated by metropolitan statistical area (MSA; consisting of a major city and surrounding geographic areas linked by socioeconomic factors with $\geq 50,000$ individuals). A weighted multivariable linear regression model was developed to calculate the expected TD diagnosis rate per 1000 patients with an AP prescription with multiple factors at the MSA level. Estimated and expected TD diagnosis rates were aggregated at the state level. Underdiagnosis of TD was defined as when the observed TD diagnosis rate according to claims was lower than the expected TD diagnosis rate. **Results:** Among the 572,314 people who met the inclusion criteria, the mean observed TD diagnosis rate across the 341 MSAs was 3.1 per 1000 patients with an AP prescription, with 86 (25.2%) MSAs containing no patients with a TD diagnosis. Over 50% of states and MSAs had an underdiagnosis of TD. The states with the highest expected TD rates (per 1000 patients with an AP prescription) were Montana (5.28), Idaho

(4.52), and Alaska (4.32), and the states with the highest observed TD rates were North Dakota (7.09), Idaho (5.85), and New Mexico (5.67). The states with the largest negative differences between observed and expected TD diagnosis rates (ie, the highest rate of underdiagnosis) were South Dakota (-3.72), Vermont (-3.57), and Montana (-3.21). The MSAs with the highest expected TD rates were Missoula, MT (5.47), Billings, MT (5.39), and Madison, WI (5.16), and the MSAs with the highest observed TD rates were Chambersburg-Waynesboro, PA (18.52), Napa, CA (13.70), and San Angelo, TX (13.07). The MSAs with the highest underdiagnosis rates were Missoula, MT (-5.47), Billings, MT (-5.39), and Gainesville, FL (-4.39). **Conclusion:** Overall, this study shows that among patients on a commercial health plan who were prescribed an AP, there is an underdiagnosis of TD in over half of geographic regions of the US. This research highlights educational opportunities for improved TD recognition in areas with TD underdiagnosis.

No. 54

Use of Machine-Learning to Identify Unique Patient Segments Within the Tardive Dyskinesia Population

Poster Presenter: Sam Leo

Co-Authors: Austin Miller, Sofia Shoaib, Keshia Maughn

SUMMARY:

Background: Tardive dyskinesia (TD) is a hyperkinetic movement disorder that may occur with long-term antipsychotic agent (AP) use and, thus, represents a heterogeneous population. This study uses cluster analysis, a machine learning (ML) technique, to investigate distinct patient segments within the TD population. **Methods:** A retrospective claims analysis was performed using data from the All-Payer Claims Database. Index date was the earliest known TD diagnosis claim (January 1, 2017, to June 1, 2020), and patients were included if they had a claim for typical or atypical APs in the 12-month baseline window, had ≥ 2 diagnoses of TD at any time within the study period, ≥ 12 months of continuous capture (≥ 2 claims on different dates ≥ 12 months apart) before and after the index date, were ≥ 18 years old at index date, and did not have Huntington disease. Patients were grouped/segmented using ML cluster

analysis by leveraging principal component analysis, identifying the optimal number of clusters via the silhouette method, and clustering via hierarchical clustering. **Results:** The segmentation analysis included 6218 patients with a mean age of 58.7 years, a higher proportion of females (64.3%), and a higher proportion who identified as White (44.4%) compared with Black (7.7%) or Asian (1.1%; 46.5% did not specify their race). Five distinct segments were identified and were named after the dominant psychiatric condition present: 1) schizophrenia (44%) (n=2810; low proportion with schizoaffective disorder, lowest proportion with bipolar disorder; high physical health [50% with Charlson Comorbidity Index=0]); 2) anxiety (41%)/bipolar disorder (66% (n=1302; high proportion with sleep-wake disorders; high atypical AP use [85% vs 73% overall]); 3) depressive disorder (99%)/anxiety (75%) (n=910; oldest patients; highest proportion of Medicare beneficiaries); 4) bipolar disorder (100%) (n=714; highest proportion each of chronic pulmonary disease, diarrhea, obesity, falls, trauma/stress); and 5) schizoaffective disorder (100%) (n=482; youngest patients; highest proportion each with Medicaid use, diabetes without complications, hyperlipidemia; high proportion with personality disorders). Overall cost, inpatient spending, and outpatient spending at baseline and follow-up were higher for the schizoaffective disorder, depressive disorder/anxiety, and bipolar disorder segments compared with the schizophrenia and anxiety/bipolar disorder segments. Pharmacy spending at baseline was similar across segments, but at follow-up the schizophrenia segment had the lowest spending, and the anxiety/bipolar disorder segment had the highest spending. AP adherence dropped across all segments after TD diagnosis. **Conclusion:** Segmentation helps to better understand variance between patients with TD regarding differences in natural history, clinical profiles, treatment, and clinical outcomes, which will help to understand how to provide better care.

No. 55

Improving Electronic Health Record Suicide Risk Prediction by Leveraging Natural Language Processing

Poster Presenter: Joshua Levy, Ph.D.

SUMMARY:

Background: Suicide risk prediction remains imprecise, frequently failing to adequately gauge risk. One substantial recent innovation in risk prediction is the use of electronic health record (EHR) data, incorporating analysis of structured variables such as demographics, visit history, and prescription data. This methodology, however, does not incorporate unstructured EHR data. Unstructured EHR data, such as clinical notes, may improve predictive accuracy by allowing access to detailed information that does not exist in structured data-fields. To assess comparative benefits of including unstructured data, we developed a large case-control dataset matched on a state-of-the-art structured EHR suicide risk algorithm, utilized natural language processing (NLP) to derive a clinical note predictive model, and evaluated to what extent this model provided predictive accuracy over and above existing predictive thresholds. Methods: We developed a matched case-control sample of Veterans Health Administration (VHA) patients in 2017 and 2018. Each case (all patients that died by suicide in that interval, n=5029) was matched with five controls (patients who remained alive during treatment year) who shared the same suicide risk percentile. All sample EHR notes were selected and abstracted using NLP methods. We applied machine-learning classification algorithms to NLP output to develop predictive models. We calculated area under the curve (AUC) and suicide risk concentration to evaluate predictive accuracy overall and for high-risk patients. Results: The best performing NLP-derived models provided 19% overall additional predictive accuracy (AUC=0.69; 95% CI: 0.67, 0.72) and 6-fold additional risk concentration for patients at the highest risk tier (top 0.1%), relative to the structured EHR model. Conclusions: The NLP-supplemented predictive models provided considerable benefit when compared to conventional structured EHR models. Results support future structured and unstructured EHR risk model integrations. Approach is highly implementable, only requiring access to text data and open-source software.

No. 56

Lived Lives Revisited: Learning From Survivors of Suicide Within a Rural Community in Ireland

Poster Presenter: Kevin M. Malone, M.D.

SUMMARY:

Lived Lives Revisited came into being in response to a call from the National Office for Suicide Prevention (NOSP) in 2021. This initiative by NSOP called for collaborative research projects relating to suicide in Ireland, with a focus on “priority groups”. These groups according to Connecting for Life (CfL) Ireland’s National Suicide Prevention strategy are at elevated risk. Having been awarded one of these research grants, The *Lived Lives* Project team set about planning and designing how the project could be brought into the public in Ireland, who at the time were in the height of the COVID global pandemic. The fear of contamination associated with COVID led to national Public Health advice to don masks and “do not touch” as part of efforts to curb the epidemic. The phrase “Do not touch” has been a mantra for *Lived Lives* which uses cloth and touch as part of the artistic metaphor – touch the art works, and maybe you will touch the story. Of note, The *Lived Lives* team welcomed microbiology expert advice at all stages from a Consultant Microbiologist (Dr. Suzy Fitzgerald, St.Vincent’ University Hospital). The *Lived Lives Revisited* team had to move swiftly to push back the project by 6 months, as the original exhibition was supposed to manifest in October during the height of the COVID pandemic. To buy some time, and to remain true to the project, *The Lived Lives Revisited* team created a webinar on the project which was presented to participants in Don World Mental Health Day October 2021. This mediated exhibition facilitates the experience of re-visiting *The Lived Lives* Project in the Regional Cultural Centre through the collaborative lens of An Garda Siochana 1st Responders, Healthcare workers, and Letterkenny TY students, many of whom will have participated in previous *Lived Lives* iterations in Donegal (Letterkenny and Gaoth Dobhair). The project will facilitate reflection on the previous and current *Lived Lives* conversations around suicide in the Northwest. It will also explore the possibilities through immersive and aesthetic experiences within the artworks how *Lived Lives* can make a unique contribution to the understanding of Suicide in contemporary Ireland. This visceral experience will contribute to the development of tailored multi-media psycho-education around suicide. A Rapid Review of global peer-reviewed research studies on

suicide prevention programmes for 1st Responders has also been undertaken, and findings will be presented as part of the *Lived Lives Re-visited* project.

No. 57**Intersections of Race and Queerness: Analysis of Risk, Demographics, and Service Utilization at a Brooklyn-Based LGBTQ+ Mental Health Clinic**

Poster Presenter: Jinal Rajendrakumar Patel, M.B.B.S.
Co-Author: Alhasan Ghazzawi, M.D.

SUMMARY:

Background: Sexual and gender minorities face unique health disparities and systemic challenges, including social stigma and discrimination, with racial or ethnic minority LGBTQ+ persons experiencing the highest levels of disparities ⁽¹⁾. LGBTQ+ persons have an increased risk of mental illnesses and adverse health outcomes, with transgender and bisexual people having the highest risk of suicide, self-harming behaviors, and adverse health outcomes, compared to gay and lesbian people ⁽²⁾. Moreover, more than 40% of LGBTQ+ people of color identify as bisexual, further adding to the disparities that occur at the intersections of biphobia and racism ⁽³⁾. LGBTQ+-specific mental health clinics aim to treat and meet the comprehensive mental health needs of LGBTQ+ communities by providing gender affirming and culturally informed clinical care ⁽²⁾. However, there is a paucity of data on utilization of these services and resources by LGBTQ+ people and racial or ethnic minorities. Aims: The aim of this descriptive quantitative analysis is to assess the demographics, risk and service utilization of patients at a community mental health center LGBTQ+ clinic. Methods: Clinical and socio-demographic information was obtained from electronic health records for 91 adult and pediatric outpatients. Suicide and self-harm risk was calculated using the Columbia Suicide Severity Rating Scale. Results: Preliminary results show the mean age of patients was 29 years. Sex assigned at birth was male for 42.9% and female for 57.1%. Most common gender identities were cis-gender (74.8%), non-binary (14.3%) and transgender (8.8%). For sexual orientation, most patients identified as gay (33.0%), bisexual (25.3%), and queer (26.4%), and only 9.9%

self-identified as lesbian. Most patients identified as White (47.3%), Latinx (27.5%), with Asian (18.1%) and African American patients (8.8%) being a small minority. Most patients were not religious (70.3%) and all patients were fluent in English. Majority of bisexual patients were people of color (77%) whilst most gay (57%) and lesbian (78%) patients were white. Bisexual, transgender, and Asian patients had the highest suicide risk, whilst cisgender and Latinx patients had the lowest risk. Conclusions: Our study shows a significant discrepancy between the demographics of Brooklyn and the population utilizing the LGBTQ+ mental health clinic. Older adult, lesbian, African American, and non-English speaking patients are significantly under-represented, indicating a relative underutilization of mental health services by these groups and the need to improve access to care. Our results highlight the intersectional nature of clinical risk in LGBTQ+ patients, and racial and ethnic minorities. Future research at the clinic will aim to understand the mental health needs of queer racial and ethnic minorities, and develop strategies to mitigate clinical risk and increase service utilization by underrepresented groups.

No. 58

Bridging Research, Accurate Information and Dialogue to Address Unequal Participation of Underrepresented Populations in Psychiatric Research

Poster Presenter: Azizou Salami

Lead Author: Nelly Gonzalez-Lepage, M.D., M.B.A.

SUMMARY:

Research indicates that Black and Latinx populations are less likely to participate in psychiatric research due to historic structural issues and personal healthcare encounters grounded in a legacy of racial discrimination and medical injustice (1). Community perspectives are needed to understand how these historical events and contemporary experiences influence participation in psychiatric research and how best to address this challenge. We conducted an exploratory qualitative study using the Bridging Research, Accurate Information, and Dialogue (BRAID) model. Methods: Over a period of four months, we conducted a series of six dynamic

conversation circles (CC) with community members, clinicians, and public health researchers, to encourage open and honest discussions and identify effective strategies to promote participation in psychiatric research. An iterative, inductive thematic analysis of the CC transcripts was conducted to identify emerging themes and subthemes. Findings and Conclusion: This poster provides findings that emphasize the importance that trust (or lack thereof) plays in determining one's confidence to participate in psychiatric research -- within the context of the historic overview of disparate and unjust treatment in psychiatry. We found that the BRAID model was an effective tool to foster continuous, open, and bilateral dialogue among community participants and trust in psychiatric research. Building BRAID infrastructure can support ongoing community input into health equity programs and co-design of health messages for the Bronx community.

No. 59

Enhancing Training and Competency in Motivational Interviewing for Psychiatry Residents in an Academic Medical Center

Poster Presenter: Jenna Palladino

SUMMARY:

Background Motivational Interviewing (MI) is a collaborative style of communication intended to explore and strengthen a person's own motivation for and commitment to make meaningful changes. Despite the widely growing body of evidence demonstrating the effectiveness of MI in a variety of settings, there is little research related to the training of medical providers in this approach. Research that has been conducted has largely been limited to brief training with emphasis on provider's self-reported views on their competency, confidence and satisfaction in utilizing MI skills. Very few studies have utilized systematic assessment of provider's skills from preintervention to postintervention with empirically validated measures in graduate medical education¹. The objective of this project is to outline the comprehensive curriculum used to train residents in MI skills across a psychiatry residency program. An additional objective is to demonstrate the effectiveness of this program through the use of

empirically validated assessments of skill proficiency amongst residents at various time points in the training process. Subjects Used This program involves 41 psychiatry residents in the Department of Psychiatry and Behavioral Health at Stony Brook Medicine. Procedures: Starting in 2019, a developmental approach to MI training was incorporated into the psychiatry residency program across all program years. The first year of training is focused on didactic instruction and introductory knowledge (four-hour introductory workshop). The second year of training is focused on skill acquisition (monthly one-hour didactics). The third year of training is focused on skill development and case consultation (continued monthly one-hour didactics). The fourth year is focused on skill maintenance, training, and leadership (bi-monthly one-hour didactics, opportunities to co-train). Results? The Motivational Interviewing Treatment Integrity Form, Version 4.2.1 (MITI 4.2.1) was utilized to measure the impact of training on skill development over time. The MITI is a behavioral coding system intended to measure treatment integrity and evaluates component processes within MI. Results on the MITI show improvement in all areas for residents who received this training curriculum. Surveys of didactic sessions show improvement in resident satisfaction of program content and delivery since the MI training program started. Conclusion? Preliminary data support the feasibility, acceptability, and sustainability of a developmental model of training in MI during psychiatry residency. Pilot data also suggests improvement in skills measured on the MITI 4.2.1 and satisfaction with program implementation justifying future data collection.

No. 60
Curriculum Development for a Youth Mental Health Mentorship Program

Poster Presenter: Elizabeth Qin, M.D., Ph.D.

Co-Authors: Rubi Luna, M.D., Lisa Fortuna, M.D., M.P.H., Marina Tolou-Shams, Ph.D.

SUMMARY:

Minorities and underprivileged individuals are underrepresented in mental health professions, as in much of medicine. One strategy to draw underrepresented groups to mental health is by

early exposure to the field and its variety of career paths. At the University of California San Francisco (UCSF, as partnered with the Zuckerberg San Francisco General Hospital and Opportunities for All), a new mentorship and career training program was recently developed called Community Health Advanced by Next Generation Efforts in San Francisco (CHANGE SF). CHANGE SF provides an opportunity for local youth to early exposure to careers in mental health, through partnering with UCSF faculty and staff, as well as through a formal curriculum program. For the program's inaugural year, we developed a specialized curriculum for the first cohort of interns, which was tailored toward their specific interests in mental health. We coordinated a mental health career panel composed of a variety of clinicians in various disciplines and domains at UCSF, reviewed research methods and papers in popular topics in mental health, discussed Grand Rounds presentations, and discussed local issues related to mental health in San Francisco. We sought to provide a broad scope of knowledge while also diving into each intern's specific area of interest. The interns reported finding great benefit from the curriculum, in conjunction with their career mentorship activities. Most of the interns expressed that they were planning to move forward in their exploration of careers in mental health after completion of the program, whether in college or beyond. Designing a specialized curriculum, such as this one for the first year of a youth mentorship program, helps to pave the way for future cohorts of this program, as well as potentially being a model for others. Ongoing work and future directions include gathering further feedback from the interns on how to more effectively tailor the curriculum program to their needs and interest, medium- and long-term follow-up of the interns to determine the efficacy of the program and curriculum in drawing youth in underrepresented groups to mental health, as well as to continue adapting this curriculum for future years of this new program.

No. 61
A Case of Anorexia Nervosa With Severe and Rare Medical Complications Illustrates the Need for Collaborative Care

Poster Presenter: Aneela Jafri

Co-Author: Saba Afzal

SUMMARY:

Introduction-Medical problems are common in Anorexia Nervosa (AN). Because of the multisystem nature of the problems, collaborative care is the rule rather than the exception and eating disorders patients are routinely treated by a multidisciplinary team consisting of primary physician, dietitian, psychologist, and psychiatrist 1. The medical complications of AN can be very severe and mortality rates are very high 2. Poor insight complicates matters further as patients are reluctant to seek help until very late and present to the hospitals with life threatening emergencies. We present the case of a patient with ESRD, a rare complication of AN who also developed life threatening neurological complications due to her eating disorder . Case- A 36-year-old white female presented to the hospital with complaints of "generalized weakness" and not feeling well. Her past medical history included ESRD requiring HD for two years, hyperparathyroidism and HTN. Past psychiatric history was positive for AN-purging type, MDD, unspecified anxiety disorder and suicidal behaviors. She was diagnosed with AN in her adolescence and suffered renal failure because of severe purging. Her current BMI was calculated at 11.38. The patient fell in the ED due to syncopal episode and sustained left frontal subarachnoid hemorrhage. Post fall, she had two tonic-clonic seizures which were managed by lorazepam and levetiracetam. She was admitted to ICU and dietary, neurology, neurosurgery, nephrology, and psychiatry consults were obtained for optimal management. The patient had very poor insight into her problems and was unwilling to consider any other psychiatric interventions except continuing her home meds. From a medical standpoint the patient was extremely emaciated and orthostatic and was managed with IV fluids and dietary interventions. For seizures and subarachnoid hemorrhage, neurology and neurosurgery monitored the patient, but no further interventions were required. Patient underwent regular hemodialysis and was discharged upon stabilization. Discussion- This case illustrates the severity of medical complications which can occur and the challenges involved in managing AN. Up to 37% of the patients with AN can have renal impairment 3 and about 5% go on to develop ESRD requiring maintenance HD 4. The underlying

mechanism is unclear but acute kidney injury secondary to severe dehydration and hypokalemia are possible causes 5. Fortunately, orthostasis resulting in fall and subarachnoid hemorrhage did not cause any major harm to this patient but her risk for catastrophic injury remains elevated because of extremely poor nutritional status, dehydration, and electrolyte imbalance. There is evidence that prompt early interventions may prevent the development of irreversible complications, poor insight, and reluctance to seek help remain the major obstacles.

No. 62**Excitatory Transcranial Magnetic Stimulation: An Effective Treatment for Depression Following Traumatic Brain Injury**

Poster Presenter: Harpreet Singh

Co-Author: Sofia Eva Olsson, B.S.

SUMMARY:

Background: Traumatic brain injury (TBI) affects an estimated 1.5 million U.S. citizens each year (Thurman et al., 2016). A common long-term symptom of (TBI) is depression which is often medication-refractory and may lead to suicide (Elliott et al., 2021). Repetitive transcranial magnetic stimulation utilizes electromagnetic impulses above a targeted brain region to either excite or inhibit neuronal activity in that area (Stilling et al., 2020). This study assesses the impact of an excitatory protocol in patients experiencing post-concussion depression. Methods: This was a retrospective chart review. Depression before and after 15 rTMS treatments was measured using PHQ-9 scores. Paired t-tests were utilized to assess for significance and variance in PHQ-9. Results: A total of 32 patients were assessed in the study. It was concluded that 15 excitatory rTMS sessions on a treatment schedule of five sessions per week, decreased PHQ-9 scores by an average of 6.62. This was significant ($p < 0.001$) with a large effect size of 0.93. Patients' PHQ-9 scores indicated overall improvement from an average of moderately severe depression before rTMS to mild depression after rTMS. Conclusion: Based on this study, 15 excitatory rTMS sessions appear to be an effective treatment option for patients experiencing depression after traumatic brain injury.

No. 63
WITHDRAWN

No. 64
Efficacy of Rhythmic Breathing Yoga Training in Improving Burnout in Mental Health Clinicians
Poster Presenter: Sandeep Vaishnavi, M.D., Ph.D.

SUMMARY:

Background: Burnout is a significant problem among clinicians. Burnout can lead to errors in care, increased costs to health care systems, and clinicians leaving the workforce. SKY (Sudarshan Kriya Yoga), a rhythmic breathing yoga technique, has been shown to decrease physiological signs of sympathetic hyperarousal and may potentially decrease burnout in health care workers. While there is some limited evidence for SKY for burnout in other specialties, little is known about SKY and burnout in mental health workers and clinicians. **Methods:** We collected data on burnout as part of a program to use SKY to reduce burnout of outpatient mental health workers. We assessed burnout levels from questions from the Maslach Burnout Inventory, and then again post-intervention, after SKY training. 12 clinicians spent a total of 10 hours of group training via a remote video platform over 4 days. Each clinician gave their responses privately. **Results:** At baseline, 33% agreed with "I am definitely burned out and have one or more symptoms of burnout such as emotional exhaustion," 17% agreed with "The symptoms of burnout that I'm experiencing won't go away; I think about work frustrations a lot," and 8% agreed with "I feel completely burned out; I am at the point where I may need to seek help." 25% agreed with "I enjoy my work; I have no symptoms of burnout" and 17% agreed with "I am under stress and don't always have as much energy as I did, but I don't feel burned out" at baseline. Overall, 58% of the cohort reported having symptoms of burnout at baseline. After intervention, 14% agreed with "I am definitely burned out and have one or more symptoms of burnout such as emotional exhaustion," 64% agreed with "I am under stress and don't always have as much energy as I did, but I don't feel burned out," and 21% agreed with "I enjoy my work; I have no symptoms of burnout." Overall,

after intervention, only 14% reported having burnout symptoms compared to 58% at baseline; this was a significant improvement: Chi-square=4.44, p=0.035. **Conclusion:** This study suggested that there might be a significant burnout problem in mental health, with a majority of our cohort reporting burnout symptoms. A rhythmic breathing yoga practice, SKY, was able to significantly improve the percentage of mental health workers and clinicians who reported burnout symptoms over just 4 days. These results provide preliminary evidence for the use of SKY for burnout in mental health, and can help inform larger studies in the future.

No. 65
The Effects of Adverse Childhood Experiences on the Development of Diabetes Mellitus Type 2, Primary Hypothyroidism, and Insulin Resistance
Poster Presenter: Mariam Alavidze

SUMMARY:

OBJECTIVES Diabetes mellitus (DM) and hypothyroidism are leading endocrine disorders globally. The etiology of DM and hypothyroidism is complex and the influence of toxic stress on it is yet to be explored. Few studies report high scores of ACE in DM patients. Our study aims to investigate the effect of ACE on DM2, insulin resistance (IR), and primary hypothyroidism in a local population and to understand ACE effects on the risk of developing these diseases in adulthood. **MATERIALS AND METHODS** A cross-sectional web-based study was conducted. 123 adults over 21 years old who were clinically diagnosed with DM, IR, and primary hypothyroidism in Georgia were investigated using an ACE (scores ranging from 0-4+) survey and CDC guidelines for risk factors for ACE. **RESULTS** 42 participants had only one endocrine disorder: 27 DM, 7 IR, and 8 hypothyroidism. 81 patients simultaneously had 2 disorders: 27 had DM+hypothyroidism, and 54 had hypothyroidism+IR. The ACE score of 4+ was associated with increased odds of DM (OR=2.51, 95% CI 5.32, 1.18) and hypothyroidism (OR=1.34, 95%CI 3.04, 0.59). Participants who had hypothyroidism, mostly got 3 or more ACEs scores which shows that there is an intermediate to high risk to develop this specific disease in adulthood after having been exposed to

adverse childhood experiences. Although subclinical hypothyroidism was more prevalent among participants, patients who had Hashimoto's disease got higher scores in the ACE survey. The ACE had a low correlation with IR (OR=0.65, 95%CI 1.34, 0.31). Although when there was an overlap of IR with hypothyroidism, a high ACE score was observed (OR=1.78, CI 95% 6.28, 0.51). Participants with DM+hypothyroidism had the strongest association with ACE (OR=3.26, 95% CI 9.29, 1.14). We found that DM had the strongest association with the high ACE score as more than half of them, had 4 or more ACE scores. The second major finding of the study showed that there was a dose-response relationship between ACEs and health outcomes: the higher ACE score participants had, the harder it was to manage their diabetes. CONCLUSION Results of the study suggest that a high ACE score predisposes the development of DM, hypothyroidism, and IR with hypothyroidism. The findings also lead us to believe that ACE increases the risk to acquire two concomitant endocrinological disorders in adulthood. This opens new critical opportunities for prevention, not only of the childhood adversity itself, but the host of negative physical, behavioral, and mental health outcomes that follow.

No. 66

WITHDRAWN

No. 67

Occupational Therapy PERSpective: A Case Study of Vocational Skill Training in the Recovery of Patient With Substance Use Disorder

Poster Presenter: Feyikemi Mary Akinyelure

SUMMARY:

INTRODUCTION According to the World Federation of Occupational Therapy (WFOT), nearly 40 years ago, Occupational therapists have worked on the frontlines of healthcare to help those with substance abuse problems to overcome addictions and resume productive, fulfilling lives. Employment is essential during the treatment and recovery process for individuals with substance use disorders. Occupational Therapist play a vital role in ensuring the success of the patient by offering services that increase the likelihood of employment. Without

treatment or engagement in recovery activities, addiction is progressive and can result in death. However recovery capital of a patient is a strength-based concept resources that support recovery. Abstaining from substance use does not automatically provide a return to previous life functioning and roles but therapeutic workplace or shelter workshop can be effective in promoting drug abstinence and self reported community. METHOD A study was conducted amongst 20 patients above 20 years with above 5 years history of substance use disorder as a result of unemployment for the past 10 years, and showed interest in learning vocational skills. 5 patients identified to learning barbing, 10 patients to computer training and 5 with shoemaking. This study was conducted for the duration of 8 months. These skills were measured using Comprehensive Occupational Evaluation (COTE) Scale. RESULT The result indicated that amongst the 20 patients understudied, 16 patients took their vocational skill of interest as a coping skill, they did not return to the use of psychoactive substance, while the remaining 4 patients returned to the use of psychoactive substance. CONCLUSION In conclusion, this study indicates vocational skills training is effective for the recovery of patients diagnosed with substance use disorder.

No. 68

Positive Outcomes From a Pilot CBT-I Educational Intervention for Psychiatry Faculty and Residents in a Small Residency Setting

Poster Presenter: Shelby Goicochea

Co-Authors: Abirami Krishna, Kitty Leung, Brian Celso

SUMMARY:

Background: Insomnia is one of the most common presenting symptoms for patients seeking care. Left untreated, insomnia can have significant short-term and long-term detrimental effects on both physical and mental health. Cognitive behavioral therapy for insomnia (CBT-i) is recommended as the first line treatment for chronic insomnia. CBT-i was found to be more effective than pharmacotherapy in improving certain sleep parameters with longer lasting clinical gains and fewer relapses post-treatment. Unfortunately, insomnia patients are more likely prescribed medication for sleep despite

limited effectiveness and higher risks. **Methods:** Our quality improvement project aimed to train psychiatry residents and faculty in CBT-i via a Psychiatry Grand Rounds presentation. Change in participants' learning was measured with a pre and post-test. Additionally, the attendees were asked to rate their knowledge in treating sleep disorders and degree of comfort administering CBT-i. A repeated measures t-test was used to measure the degree of difference between the pre-test and post-test. **Results:** Complete data was obtained on 10 individuals who attended the Grand Rounds. Ten percent of faculty and residents passed the pre-test and 40% of the participants passed the post-test. This was a 30% improvement from the pre-test (Figure 1). The results from the pre-test (M = 4.4, SD = 2.71) and post-test (M = 6.6, SD = 4.27) indicate that the CBT-I presentation resulted in an improvement in knowledge on sleep disorder treatment, $t(9) = -4.13$, $p = 0.003$. Sixty percent of participants reported enhanced knowledge in treating sleep disorders and there was a 30% improvement in participants' comfort administering CBT-i. **Conclusion:** CBT-i is often underemployed due to the lack of providers well-versed in CBT-i. Inclusion of CBT-i into psychiatry resident curriculum training would help advocate for this effective intervention. Thus, patients with insomnia have improved access to a more effective treatment while minimizing any medication burden.

No. 69

Digital Cognitive Behavioral Therapy for Insomnia Comorbid With Depression and Anxiety: A Systematic Review and Meta-Analysis

Poster Presenter: Suonaa Lee

Lead Author: Eun Lee, M.D.

Co-Authors: Kyungmee Park, San Lee, Jae Won Oh

SUMMARY:

Introduction: People with insomnia have high comorbidity with depression and anxiety which can also exacerbate insomnia. Regarding the association between insomnia, depression and anxiety, cognitive behavioral therapy for insomnia (CBTi) is considered for managing not only insomnia but also comorbid depression and anxiety^{1,2}. To increase the accessibility, the traditional CBTi has been scaled up

for digitally available version (dCBTi). Despite the research on the effects of dCBTi³, studies on the outcomes of dCBTi applications on insomnia with comorbid depression and anxiety have been limited. The present meta-analysis aimed to assess the effects of dCBTi on depression and anxiety symptoms as well as insomnia. Furthermore, subgroup analysis for the adherence of participants was performed.

Methods: The PubMed, PsycINFO (Ovid), Embase, and Cochrane databases were searched for randomized controlled trials (RCTs) on adult patients with insomnia and having reported measures of depressive or anxiety symptoms. **Results:** A total of 2504 articles were identified and 22 RCTs were included in the final meta-analysis. At the post-treatment assessment, the dCBTi group had a small to moderate effect in reducing depressive (standardized mean difference (SMD)= -0.42; 95% CI: -0.56, -0.28; $p < 0.001$; $k = 21$) and anxiety symptoms (SMD = -0.29; 95% CI: -0.40, -0.19; $p < 0.001$; $k = 18$) but had a large effect on sleep outcome measures (SMD = -0.76; 95% CI: -0.95, -0.57; $p < 0.001$; $k = 22$). In subgroup analysis, the effects were more robust for depression, anxiety, and sleep outcomes with high adherence rates than low adherence rates. In addition, the fully automated dCBTi intervention effects were significant for depression, anxiety, and sleep outcomes. **Conclusion:** The results demonstrated that dCBTi yielded significant effects on alleviating depressive and anxiety symptoms as well as insomnia. Future studies are needed to provide sufficient clinical evidence of its effectiveness and should consider investigating factors for improving adherence using digital therapeutics. **Acknowledgments:** This study was supported by the National Research Foundation of Korea funded by the Ministry of Science, ICT & Future Planning, Republic of Korea, supported the present study (Grant number: 2022R1A2B5B03002611).

No. 70

Multi-Planar Bed Vibration: A Novel, Non-Pharmacologic Approach to Insomnia

Poster Presenter: Megan Maag

SUMMARY:

Introduction: Considering 70 million Americans suffer from poor sleep and nearly 42 million have a chronic sleep disorder (REF), it's unsurprising that 64% of respondents to a 2,000+ person survey conducted in 2022 by the American Academy of Sleep Medicine, admitted to regularly using a pharmacological sleep aid, which can be associated with a range of undesirable outcomes from poor efficacy and morning sedation to addiction and bodily harm. ? As a response to the discovery that low frequency vibration contributes to "highway hypnosis" (falling asleep behind the wheel), several small studies have examined the intentional use of vibration as a method for sleep induction. One of these studies discovered vibration significantly reduced time needed for participants to fall asleep (sleep latency) during a single, brief lab-based encounter. Our goal was to replicate these findings longitudinally in a home setting. **Methods:** A twin mattress was outfitted with four low-frequency effectors (LFEs) and phasers to create travelling, patterned, infrasonic, low-frequency vibration. Amplitude was adjusted to comfort using a bedside dial. Sleep was monitored over four sequential weeks in a single 22-year-old healthy male subject with 3 devices, each employing a unique mechanism: the OuraRing (actigraphy), Google NestHub (GHz radar chip), and SleepScore (ultrasound). No vibration was used during weeks 1 and 4 to establish a baseline/return to baseline. Week 2 vibration was a highly periodic waveform (25 Hz, migrating at 1 Hz), while week 3 vibration was an irregular, chaotic waveform. Objective data was collected from the 3 devices to plot sleep latency, as well as time spent in each sleep stage. **Results:** 1. Patterned, highly periodic, low-frequency vibration shortened sleep latency by nearly 50% consistently for one week (from 15 to 8 minutes) 2. Chaotic, irregular vibration of week 3 also shortened latency, but less so (from 15 to 12 minutes) 3. Baseline and repeat baseline were statistically nearly identical 4. Strong agreement was seen among the 3 different sleep sensors 5. There were no significant changes to sleep stage duration with use of vibration **Conclusion:** The primary mechanism of improved latency with vibration may be more related to somatic distraction than an inherent quality of the vibration itself, as evidenced by the nearly 50% reduction in sleep

latency with the highly periodic waveform during week 2 vs. the more modest 20% reduction with the chaotic wave form during week 3. The subject himself reported that use of the bed curbed engagement with pre-occupying thoughts at bedtime, and found the vibration to be enjoyable and relaxing, particularly during week 2. Our findings support future use of multi-planar vibration as a highly effective non-pharmacologic sleep aid, especially for sufferers of racing mind insomnia.

No. 71

Telesupervision in Psychiatry: Lessons Learned From a Competency-Based Supervision Framework to Assess Telesupervision

Poster Presenter: Margaret-Anne Mackintosh, Ph.D.

Co-Authors: Erika Shearer, Shilpa Hampole, Sofia Reyes, Shiloh Jordan

SUMMARY:

Background: When COVID-19 overwhelmed hospitals in New York City, one medical center rapidly trained and redeployed advanced psychiatry trainees as part of a new psychiatry-palliative care liaison team, easing the burden on palliative and psychiatry staff. Telesupervision (supervision through a digital modality) allowed trainees to perform supervised work both remotely and on-site (Shalev, 2020). This demonstrates how training programs can employ novel methods to address overwhelming needs (e.g., global disasters, geographical barriers). While telesupervision has increasingly been adopted in clinical training programs, viability is under debate. The literature supports feasibility and effectiveness of telesupervision, especially in psychology programs; however, it is important to track and assess experiences of trainees and supervisors undergoing both in-person and telesupervision experiences over time. This national quality improvement project used a longitudinal, mixed methods design to assess whether telesupervision in psychology training sufficiently supports trainees in developing expected core clinical competencies. The goals of this presentation are to describe interim results and discuss how findings may apply to psychiatry training. **Method:** Five rural and one urban Veterans Affairs psychology training programs were enrolled in the project.

Monthly questionnaires based on a competency-based supervision framework were completed by 84 supervisors, 107 interns, and 27 post-doctoral fellows from October 2021 to April 2022. Data were additionally collected on trainee competency development. **Results:** The majority (77.3%) of respondents were from rural sites, with 6.8% in-person only, 68.9% telesupervision only, and 23.7% mixed in-person and telesupervision. About 11% reported technological disruptions, with little to no impact on the supervision process. Analyses revealed no differences between telesupervision and mixed in-person/telesupervision on patient safety ($\chi^2(4)=9.70$, $p=.046$), adverse client outcomes (none reported), supervision access ($\chi^2(2)=4.09$, $p=.129$), and working alliance ($F=0.29$, $p=.752$). Trainee competency ratings indicated no changes in scores over time (2017–2022). Some findings point to telesupervision being 1) most conducive to direct observation of clinical work, and 2) increasing learning outcomes with higher mean frequency ratings for both outcomes in the telesupervision only and mixed modality compared to in-person only results ($F=6.91$, $p<.001$, and $F=3.50$, $p=.032$, respectively). **Conclusion:** Findings support telesupervision effectiveness in the development of clinical core competencies in psychology training. Applicability of results to psychiatry training will be discussed. Given the national shortage of psychiatry providers in conjunction with the potential that telesupervision brings to improving access to training, it is imperative that we continue to examine how technology may enhance education outcomes and access.

No. 72

Online Therapy, Medication, or Both? Comparing the Effectiveness of Different Treatment Modalities for Generalized Anxiety Disorder

Poster Presenter: Callum Stephenson

Co-Authors: Gilmar Gutierrez, M.D., Anchan Kumar, Mohsen Omrani, Nazanin Alavi

SUMMARY:

Background: Generalized anxiety disorder (GAD) is a highly prevalent and debilitating mental health disorder. The gold standard treatments for GAD are cognitive behavioural therapy (CBT) and

pharmacotherapy. CBT can be costly, time-consuming, and often inaccessible. Fortunately, the electronic delivery of CBT (e-CBT) has emerged as a promising solution to address these barriers. However, due to the novelty of this intervention, more research testing the efficacy of e-CBT independently and in conjunction with other treatments are needed. **Objective:** The following study investigated the treatment efficacy of e-CBT compared to, and in conjunction with pharmacotherapy for GAD. **Methods:** This study employed a quasi-experimental design where patients selected their preferred treatment modality in consultation with their psychiatrist. Patients diagnosed with GAD were enrolled in one of three treatment arms: e-CBT, medication, or combination. The 12-week e-CBT program was delivered through the Online Psychotherapy Tool (OPTT), a secure, cloud-based, digital mental health platform. The medications prescribed in the medication and combination arms followed standard clinical practice guidelines. The efficacy of each arm was evaluated using clinically validated questionnaires that measured depression, anxiety, and stress severity, as well as changes in quality of life. **Results:** There were no significant differences observed between arms (N e-CBT = 41; N Medication = 41; N Combination = 33) in the number of weeks completed or baseline questionnaire scores. All three arms showed significant improvements in anxiety questionnaire scores after treatment. The medication and combination of arms provided substantial improvements in depression scores. The e-CBT and Combination arms significantly improved quality of life scores, and the combination arm also significantly improved stress scores. There were no significant differences between the groups in depression, anxiety, or stress scores post-treatment. However, the combination arm had a significantly different improvement in quality-of-life scores. Gender and treatment arm were not significant predictors of dropout, whereas younger age was. **Conclusions:** Incorporating an online psychotherapy program on its own or in combination with traditional pharmaceutical interventions appears to be a viable option for treating patients with anxiety. Treating a GAD patient with e-CBT or medication appears to offer significant improvements in symptoms, with no meaningful difference between

the two. A combination of the two treatment arms also offers significant improvements, while not necessarily superior to either independently. The findings suggest that all three options are viable interventions that offer similar benefits. Taking the patient's preferred treatment route based on their lifestyle, personality, and beliefs into account when deciding on a treatment modality is recommended.

No. 73

Results From the Muslims' Perceptions and Attitudes to Self-Management Mental Health Mobile Applications

Poster Presenter: Nawal Yousaf

Co-Author: Ahmed Hankir

SUMMARY:

Aim: The integration of faith-based approaches and the inclusion of spirituality and religion in mental health clinical practice has provided a form of more holistic and comprehensive care for patients of different religions and cultures. However, this culturally inclusive approach is yet to be offered in self-help mental health mobile applications. This study aims (a) to understand the perceptions of secular-based mental health applications among the general Muslim population and (b) to identify which features they would like to see in a self-management digital tool specifically designed to improve the wellbeing of Muslims. **Method:** An online 20-question survey was administered to a sample representative of the general population in July 2022. The survey was promoted through multiple means of communication such as social media sites (Twitter, Instagram). All results were then collected and analyzed in graphs by the Google form platform. **Results:** Two hundred and eleven individuals participated in the survey. Despite 90% (N.=192) of respondents experiencing periods of high stress or low mood in the past 6 months. Only 10% (N.=23) respondents stated the regular use of self-help mental health applications. Upon exploring the reasons for this, 52% (N.=109) respondents stated that they had never felt the need to use a mental health application to improve their mental health. 35% (N.=73) respondents expressed that current mental health applications were not suitable for the Muslim population as they did not include any faith-

based approaches. Interestingly, 81.3% (N.=170) of respondents stated they would use a mobile application that uses Islamic-based approaches and was specifically catered for the Muslim population. **Conclusion** Self-help mental health applications have a limited use within the Muslim population due to their secular nature and exclusion of psychotherapeutic approaches that accommodate religious and spiritual beliefs. These results may inform the design of self-management wellbeing digital tools.

No. 74

Determinants of Resilience and Unfavorable Mental Health Outcomes of Violence: A Nationwide Representative Cross-Sectional Study

Poster Presenter: Fenfen Ge

SUMMARY:

Background Violence against women is a serious global health problem and associated with a range of adverse mental health outcomes. There is scarcity of transdiagnostic data-driven approaches to facilitate understanding of varying mental health symptom-burden following violence. We used machine learning to disentangle resilience and unfavorable mental health problems clusters among women who had experienced violence and identify predictors of these. **Methods** Participants were 11,338 women who reported having experienced violence during their lives in the Stress-And-Gene-Analysis (SAGA), a nationally representative study in Iceland. We used information on participant's self-reported mental health symptoms, including posttraumatic stress disorder, depression, anxiety, trauma-related sleep, and binge drinking. We further used information on 31 candidate features/covariates covering social demographic, social economic, adverse childhood experiences (ACEs), childhood health, resilience, health related behaviors, perceived social support and violence-related information. We used K-means to identify mental health clusters and both logistic regression and XGBoost to investigate the importance of each feature for the clusters. **Findings** We identified three distinct clusters, including 41% of women with low symptom burden while 59% with unfavorable or high symptoms burden (i.e., subthreshold and severe symptomology). Both

models have good performance, the C-statistic was 0.84 for the logistic regression model and mean (SE) area under the curve was 0.81 (0.01) for XGBoost model. Identified risk factors of unfavorable cluster were younger age, shorter time since the violence exposure, being exposed multiple times to violence, unemployment, experience of certain ACEs (i.e., sexual abuse and emotional abuse/neglect), while identified protective factors were high coping ability and support from family members. **Interpretation** A large proportion of women who experience violence suffers from multiple mental health symptoms while high coping ability and support from family members are associated with lower probability of such adverse outcomes.

Poster Session 13

No. 1

Sex Differences in Efficacy and Adverse Effects of Antipsychotic Treatment: A Systematic Review

Poster Presenter: Mete Ercis, M.D.

Co-Authors: Jorge Andres Sánchez Ruiz, M.D., Marin Veldic, M.D., Aysegül Ozerdem, M.D., Ph.D.

SUMMARY:

Introduction: Antipsychotics are used to treat various psychiatric conditions. Many psychiatric disorders, if not all, differ in their prevalence, symptom profiles, and disease course in men and women. Although sex is considered one of the determinants of treatment outcomes in many illnesses and there are substantial differences in pharmacokinetic variances,¹ it has not received enough attention to influence treatment guidelines.² To our knowledge, this is the first systematic review aiming to identify sex differences in antipsychotic treatment outcomes in mental disorders, independent of diagnosis, to explore the potential mechanisms explaining these differences. **Methods:** We conducted a systematic review on sex differences in the efficacy and adverse effects of antipsychotics following the PRISMA 2020 statement. The protocol has been registered on PROSPERO (CRD42020212478). An extensive search of multiple databases was run in November 2020 and updated in January 2022. Title/abstract screening, assessment of final eligibility, data extraction, and risk of bias assessment were conducted by two reviewers

independently. Disagreements were resolved by consensus. **Results:** A total of 117 reports out of 4866 were included; 30 publications reported on the efficacy, 74 on adverse effects, and 13 on both efficacy and adverse effects of antipsychotics. Most publications (n=110) included patients with schizophrenia spectrum disorders, followed by bipolar disorders (n=24) and major depressive disorder (n=21). Seventy-five publications (64.1%) had a low risk of bias and 30 of the publications (25.6%) had a moderate risk of bias. Irrespective of diagnoses, 19 publications reported no difference in response to treatment or remission between sexes, 18 publications reported more favorable outcomes for females whereas 5 reported better treatment responses for men. Sex differences in extrapyramidal side effects (EPS) varied depending on the type of EPS. Metabolic syndrome was found to be equally prevalent between the two sexes in six of the studies reporting on metabolic syndrome (n=10). Eight publications reported similar rates of hyperprolactinemia between men and women whereas three others reported it to be higher in females. Of the five articles that discussed the overall side effect burden, two showed that females were affected more than males and the rest showed no differences. **Conclusion:** Number of studies focusing on sex difference in treatment outcomes with antipsychotics is limited. Our review was limited by substantial heterogeneity between the studies. Nevertheless, current data shows that women might respond better to antipsychotics than men, but they might also experience more side effects across different diagnoses. Further research on sex differences in efficacy and adverse effects of antipsychotics as well as studies on sex difference in pharmacokinetics are needed to understand differential treatment outcomes between men and women.³

No. 2

Pharmacologic Targeting of Perimenstrual ADHD Symptom Exacerbation

Poster Presenter: Sarah Grace

Co-Authors: Madeline Saavedra, Christopher Fichtner

SUMMARY:

Hormonal oscillations of estrogen and progesterone in the monthly menstrual cycle cause normative changes in female physiological functioning (1). These fluctuations can cause severe changes in emotional, cognitive, and behavioral functioning for hormone-sensitive individuals with underlying psychiatric disorders (2). The days immediately prior to and during menses mark significant decline in both estrogen and progesterone (3), hormones that may be associated with enhanced cognitive function (4). Reduced cognitive functioning is an established marker of attention deficit hyperactivity disorder (ADHD) and includes difficulties with executive and non-executive functioning. We had the opportunity to treat two women with ADHD who endorsed worsened attention and focus in the days leading up to and during menses. Both women were initially treated with extended-release (ER) formulations of stimulants and showed favorable though partial responses at optimum doses. However, both patients experienced exacerbated ADHD symptoms in the days prior to and during their menstrual cycle, endorsing recurrent attention and concentration problems eclipsing therapeutic gains of pharmacotherapy. In each case we supplemented the primary ER formulation regimen with a moderate dose of an immediate-release (IR) formulation of the same stimulant on the days leading up to and during menses. Both patients reported improved focus and concentration with minimal side effects. Estrogen is believed to act on dopaminergic striatal circuits in the prefrontal cortex (5, 6) and progesterone elevations have been associated with improved neuropsychological measures such as verbal working memory and greater activation of the prefrontal cortex and hippocampus (7). We hypothesize that decreased estrogen and progesterone levels during menses may increase vulnerability to exacerbation of ADHD symptoms in patients with a favorable but partial response to pharmacotherapy. Boosting stimulant dose perimenstrually restored therapeutic response for both patients. Supplementation with IR formulations during the premenstrual phase, when estrogen and progesterone levels have dropped, may help patients avoid symptomatic setbacks in ADHD treatment brought on by hormonal changes during menstruation.

No. 3**Psychiatric Neurosurgical Ablation Can Help Patients With Refractory Obsessive-Compulsive Disorder**

Poster Presenter: Sehar Raza

Co-Author: Eric Alcera

SUMMARY:

Objectives: To study the efficacy and safety of psychiatric neurosurgical ablative treatments specifically anterior capsulotomy for intractable and treatment-resistant OCD. **Background:** Conventional treatments for OCD include exposure and response prevention (ERP) therapy and medications. **1** Nearly 10-20% of patients do not respond to treatment. Among those, a carefully selected subgroup may benefit from a stereotactic psychiatric neuroablative procedure called anterior capsulotomy. **2** In capsulotomy, lesions are placed in the ventral subregion of the anterior limb of the internal capsule (ALIC) bilaterally. The procedure interrupts the connections between the prefrontal cortex and subcortical gray matter disrupting the altered connectivity in the CSTC (cortico-striatal-thalamo-cortical) circuit. **2,3** Capsulotomy technique using gamma radiation has evolved since 1955. Recently, a minimally invasive, laser-based ablation under real time MRI called laser interstitial thermal therapy (LITT) has been introduced to perform anterior capsulotomy in OCD patients. **Methods:** A search for articles relevant to OCD, treatment resistant OCD, capsulotomy, gamma knife for OCD, and LITT outcomes in OCD was performed on MedlinePlus, PubMed, and Google Scholar. Articles reporting on ablative neurosurgical interventions (capsulotomy) were included, while studies involving combinations of neuroablation procedures and deep brain stimulation (DBS) or DBS alone were excluded. **Results:** OCD symptom severity was measured by the Yale-Brown Obsessive Compulsive Scale (YBOCS). The main criterion for a full response was a $\geq 35\%$ decrease in the YBOCS score. **4** Response rates of 38%, 55%, 75% as full responders were observed in different cohorts for gamma ventral capsulotomy (GVC) within a 12 month follow up. Specific target localization and radiation dosage varied with cohorts. Response rates in other groups were 67% and 87% with dose reduction in a 6-60 month follow up. Side effects such as headache, apathy,

personality changes, radiation related necrosis, and cyst formation in the brain were observed in a small number of patients (1.5%).^{2,7} These side effects decreased with radiation dose adjustments. Studies using LITT also confirmed similar results with 61% and 77.8% full response rates.^{5,6} Side effects included a period of transient apathy, fatigue, and asymptomatic cerebral hemorrhage. Conclusion: Anterior capsulotomy can be a safe, effective, and well-tolerated procedure to improve quality of life in patients with refractory OCD.^{6,7} GVC is noninvasive and has evolved over time in terms of targets and radiation dosing, hence minimizing side effects.² LITT based anterior capsulotomy is minimally invasive with a better safety profile due to the lack of radiation and similar results as GVC.^{5,6,7} There is a need for more literature to inform providers with these treatment options for patients with refractory OCD.

No. 4
Efficacy of Ketamine in Unmedicated Adults With Obsessive-Compulsive Disorder: A Randomized Controlled Trial

Poster Presenter: Carolyn Rodriguez, M.D., Ph.D.

SUMMARY:

Background: OCD is characterized by an inability to inhibit intrusive thoughts (obsessions) and repetitive behaviors (compulsions). Serotonin reuptake inhibitor (SRI) treatment of OCD exhibits a long lag time (2-3 months) before clinical benefit, and this benefit is typically only partial. Identifying effective, fast-acting treatments will help reduce OCD morbidity and its life effects. We previously reported the rapid OCD symptom reduction of ketamine, a glutamate N-methyl-d-aspartate (NMDA) receptor antagonist, versus saline infusions in a proof-of-concept crossover trial (n=15) in unmedicated adults with OCD. Building on this initial finding, we evaluated the efficacy of ketamine in a larger group of unmedicated OCD patients with improved control conditions (active placebo control condition). Methods: This was a randomized controlled trial of a single infusion of ketamine compared to an active placebo condition (midazolam, an anesthetic). Unmedicated adult patients (age 18-65) with OCD were randomly assigned under double-blind

conditions to receive a single intravenous infusion of ketamine (0.5 mg/kg) or midazolam (0.045 mg/kg) in a 2:1 ratio (total n=45). Participants met DSM-5 criteria for OCD with at least moderate symptoms (Yale-Brown Obsessive Compulsive Rating Scale score of at least 16). Exclusion criteria included severe depression (17-item Hamilton Depression Rating Scale was less or equal to 18 to enter the study) and comorbid psychiatric or medical conditions that made participation unsafe. The primary outcome was change in OCD severity 1 week after drug administration, as assessed by the Y-BOCS. Duration of effect was explored with weekly Y-BOCS up to 4 weeks post-infusion. We focused on estimating intention to treat effects based on longitudinal mixed effects modeling. For both moderator and mediator investigation, we employed the MacArthur approach embedded in mixed effects modeling.

Results: Regarding the primary outcome, the ketamine group had significantly greater improvement in Y-BOCS score than the midazolam group 1 week after treatment (Cohen's d = 1.25, p < 0.001). The effects from a single intravenous infusion of ketamine persist up to 3 weeks post-infusion (Cohen's d = 0.59, p = 0.007), gradually reducing each week and then becoming insignificant by Week 4. We examined age, sex, and race as potential moderators of treatment effects, although none were identified as significant moderators.

Conclusions: To our knowledge, this is the largest clinical trial to date of ketamine in unmedicated OCD patients. Ketamine demonstrated rapid and durable OCD symptom improvement compared to the active control condition. By using an active placebo design to control for nonspecific anesthetic effects, this study provides new supporting evidence for the specific OCD therapeutic effects of ketamine.

No. 5
Disinhibition and Aggression From Divalproex in an Adolescent With Traumatic Brain Injury: A Case Report and Literature Review

Poster Presenter: Benjamin Shin, M.D.

Co-Authors: Nekisa Haghighat, M.D., Susie Park, Pharm.D.

SUMMARY:

Objectives Few reports describe psychotropic-induced disinhibition or paradoxical reactions in adolescents, particularly in those with known traumatic brain injuries (TBIs). None of these have analyzed the likelihood of drug-associated adverse effects using standardized rating scales. This report describes a case in which divalproex may have induced marked disinhibition in an adolescent with recent TBI using a standardized rating scale to assess the probability that the observed behavior was due to an adverse drug event. Included is a literature review describing similar paradoxical reactions to divalproex. **Methods** A 13-year-old female with no prior history of psychiatric illness presented with visual and auditory hallucinations nine days after a motor vehicle accident. A grade 2 diffuse axonal injury and small subdural hematoma were noted on MRI. Quetiapine 25 mg twice daily was started. Three days after admission, divalproex sodium was initiated in order to manage persistent mood instability. Soon after, the patient displayed marked disinhibition in the form of verbal and physical outbursts, screaming obscenities, and attempts to physically attack staff. This behavior persisted until divalproex was discontinued the next day, after which she remained calm and cooperative until discharge. Five independent raters used the Naranjo Adverse Drug Reaction (ADR) Probability Scale to evaluate the likelihood that the observed behavior was the result of an adverse drug reaction. A literature review was also performed to search for other known cases of paradoxical reactions with valproate. **Results** Rater scores (n = 5) averaged a Naranjo ADR score of 5.6 (S.D. = 0.707) indicating that there is a 'probable' causal relationship between the clinical event (marked disinhibition) and the drug in question (divalproex). There was one hundred percent agreement between the raters that the unexpected ADR appeared only after proximal divalproex exposure and resolved after its complete discontinuation. Literature review indicates that the present report serves as only the fourth known case (from 1977-2016) of valproate-associated paradoxical reactions in adolescents. This report is the first of its kind to assess the likelihood of this suspected ADR using a standardized probability scale. **Conclusions** Caution is warranted when treating adolescents with psychotropic agents

traditionally used to manage TBI-related aggression. Paradoxical disinhibition presenting with physical and verbal aggression is reported with divalproex sodium and may be linked to other antiepileptic agents. A single change should be instituted to medication profiles to establish adverse event relationships, which can be further assessed using a standardized rating scale.

No. 6**Magnetic Seizures Therapy for Depression in Parkinson Disease**

Poster Presenter: Fidel Vila-Rodriguez

Co-Authors: Alexander Levit, M.D., Ph.D., Chun Tham, Ivan Torres

SUMMARY:**Magnetic Seizures Therapy for Depression in**

Parkinson Disease Introduction: Depression is highly prevalent in Parkinson Disease (dPD), yet the efficacy of existing treatments is modest. Electroconvulsive therapy (ECT) has been shown to be effective for dPD and is also associated with improvement of motor symptoms (1). Magnetic seizure therapy (MST) is a non-invasive convulsive neuromodulation treatment that triggers seizures by a more focal electromagnetic induction mechanism, and has shown to have fewer cognitive side effects than ECT (2). Objectives: We report the outcomes of the first patient with Parkinson's Disease to ever receive MST in the context of a pilot Phase II clinical trial measuring motor, autonomic, cognitive, and psychiatric outcomes. Methods: The patient received MST using a MagPro MST device (Magventure, Farum, Denmark) and a twin cone coil. They have received a total of 9 sessions delivered twice a week under general anesthesia with methohexital and succinylcholine. Results There have been no serious adverse events and side effects have been mild consisting of fatigue after the treatments. The patient has experienced a significant improvement in motor symptoms and decrease in levels of anxiety and depressive symptoms. Discussion The outcomes are encouraging albeit preliminary in this first case of Parkinson's treated with MST. A pivotal trial to test the efficacy of MST might be warranted.

No. 7**Silent: A Syndrome of Irreversible Lithium Effectuated Neurotoxicity**

Poster Presenter: Elizabeth Zborek

Lead Author: Miles Brooke

Co-Authors: Aaron Marbin, Richard Callahan

SUMMARY:

Patient is a 37 year old Haitian-American female with a past psychiatric history significant for type I bipolar disorder with psychotic features, presenting to the psychiatric behavioral health unit due to bizarre behavior and suicidal ideation. While on the unit, patient was noted to have tremor, weakness, and ataxic gait. Brain imaging was subsequently obtained due to concern for lithium toxicity or a demyelinating disorder such as multiple sclerosis. Neurology was consulted, and the patient was transferred to the medical floor for further observation. Brain imaging revealed evidence of white matter lesions. Brain MRI with contrast did not reveal ring enhancing lesions and the patient did not meet McDonald's Criteria for the diagnosis of multiple sclerosis (MS) via MRI. Current and prior lithium levels were reviewed during chart review, and medication interactions with lithium were also considered. During this admission, lithium was not supratherapeutic. The patient's presentation in the context of concurrent lithium and chlorpromazine consumption was more suggestive of SILENT (Syndrome of Irreversible Lithium Effectuated Neurotoxicity) since chlorpromazine can increase intracellular levels of lithium and magnify its effects. The patient displayed symptomatic improvement upon steroid treatment, and it was determined that a lumbar puncture to further rule out MS would have caused unnecessary psychological stress to the patient in her current condition. This case also demonstrated how lithium toxicity does not always correlate to lithium blood levels. Overall, this case highlights the importance of monitoring symptoms, comorbid conditions, and medication selection while prescribing a commonly prescribed psychotropic medication such as lithium.

No. 8**Racial/Ethnic Disparities in Engagement and Clinical Outcomes From a Collaborative Care Model for Depression and Anxiety**

Poster Presenter: Kelly Yang, B.S.

Co-Authors: Michelle Blackmore, Benjamin Cook, Henry Chung

SUMMARY:

Objective: Using data from the implementation of a collaborative care model (CoCM) of behavioral health in primary care, we examine racial/ethnic differences in treatment engagement and clinical outcomes among patients with anxiety and depression. **Methods:** Data were collected between 2015-2018 from eight primary clinics of an urban academic medical center that implemented the CoCM. White, non-Hispanic Black, and Hispanic patients who scored positive for depression and/or anxiety using the Patient Health Questionnaire-9 (PHQ-9) or the Generalized Anxiety Disorder-7 (GAD-7) scales were included if they agreed to CoCM treatment. The primary analytic outcome was treatment engagement, categorized into three measures: receipt of any follow-up after initial assessment, receipt of minimally adequate 4-week follow up (at least one follow-up visit within 4 weeks of initial assessment), and receipt of minimally adequate 16-week follow up (at least three follow-up visits within 16 weeks of initial assessment). Secondary outcomes were response and remission of depression and/or anxiety. Response was defined as a PHQ-9 or GAD-7 score <10 or a >50% reduction in the initial score, while remission was defined as a PHQ-9 or GAD-7 score of <5. Logistic regression was used to examine differences in outcomes by race/ethnicity after adjustment for age, sex, race/ethnicity, insurance status, PHQ-9 and GAD-7 scores at initial assessment, Federally Qualified Health Center (FQHC) status of the primary care clinic, number of follow-up visits received, and socioeconomic status, as measured by three zip-code level variables (median household income, percentage of single-parent households, and percentage of population with any postsecondary education from the Agency for Healthcare Research and Quality Social Determinants of Health Database). This study was deemed exempt by the Institutional Review Board. **Results:** Of 4,911 participants, 330

(7%) were White, 1,658 (34%) were Black, and 2,923 (60%) were Hispanic. After adjusting for covariates, Black and Hispanic participants were significantly less likely to have had any follow up or minimally adequate follow up at either 4 or 16 weeks compared to White participants. Black and Hispanic participants who received minimally adequate 16-week follow up were more likely to demonstrate a clinically significant response in depression symptoms and remission of anxiety symptoms compared to their White counterparts. Conclusions: The CoCM is effective at treating depression and anxiety in patients from racial-ethnic minority backgrounds when they receive adequate follow-up. However, significant disparities in receipt of adequate follow-up existed, with Black and Hispanic patients being less likely to receive this follow-up compared to White patients. Efforts must be made to improve the retention of racial-ethnic minority patients in care when implementing CoCM.

No. 9

Is There a Role for L: Methylfolate in ADHD Management? A Case Report

Poster Presenter: Amrita Solanky, M.D.

SUMMARY:

Recently discovered genetic polymorphisms and mutations in the methylenetetrahydrofolate reductase (MTHFR) gene have led to new therapeutic approaches that could help personalize mental health care. MTHFR is a key enzyme of folate metabolism and changes in its gene can result in reduced enzyme activity which has been associated with psychiatric illnesses. L-methylfolate is approved as Deplin in depressed and schizophrenic patients, but its use in ADHD remains controversial. Its role in modulating the synthesis of monoamines such as dopamine and norepinephrine could be important to the management of MTHFR deficient ADHD patients. Here we present a rare case of treatment-resistant ADHD in a pediatric patient with MTHFR polymorphisms who responded dramatically to the use of L-methylfolate. This report focuses on the MTHFR gene and enzyme activity and highlights the current literature on the use of L-methylfolate for ADHD.

No. 10

The Neurocognitive Effects of Psychedelics in Major Depressive Disorder, Post-Traumatic Stress Disorder, and Healthy Population

Poster Presenter: Mario R. Velit, M.D.

Co-Authors: Eloise Cherian, Paulo Shiroma, M.D.

SUMMARY:

Background: Psychedelics have been used by many cultures for rituals, recreational, and therapeutic purposes due to their ability to disrupt brain systems and allow for a therapeutic window of insight that realigns one's range of associations. This systematic review aims to provide an overview of pharmacological trials that examine the neurocognitive effects of psychedelics among patients with PTSD, MDD, and healthy individuals. **Methods:** Systematic literature search included the MEDLINE database up until June 2022. We included a) studies written in English, b) randomized or open-label human studies that included the use of MDMA, psilocybin, mescaline, LSD, ayahuasca, or cannabis, and c) adults (≥ 18 years old) with a primary diagnosis of PTSD, or unipolar or bipolar depression and healthy individuals. Study outcomes required the inclusion of cognitive changes measured by validated neuropsychological tests. Data were extracted from selected studies, including information pertaining to sample characteristics, design, drug dose, neurocognitive outcomes, and study limitations. **Results:** A total number of 424 studies were identified, screened, and reviewed through a literature search, from which 29 were included: MDMA (8), Cannabis (12), LSD (4), Ayahuasca (1), Psilocybin (4). MDMA did not demonstrate significant results in PTSD; in healthy subjects, it showed improvement in language and psychomotor speed, but a decline in executive function, working memory, reaction time, and attention. Cannabis in healthy subjects showed improvement in semantic memory priming, but a decline in executive function, working memory, attention, procedural learning, and motor skills. LSD in healthy subjects demonstrated improvement in language, a decline in executive function and reaction time, and ambivalent results for working memory. Ayahuasca in healthy subjects showed improvement in attention, but a decline in executive function and working memory. Psilocybin in healthy subjects showed decreased executive

function, processing speed, working memory, attention, and motor skills. Conclusions: Psychedelics demonstrate improvement and decline in a variety of neurocognitive domains. Cannabis and MDMA represent the majority of studies with validated neuropsychological tests evaluating cognition, with no studies found for mescaline. These results suggest the need for further clinical trials evaluating neurocognition in PTSD, Depression, and healthy subjects to determine acute and chronic effects on cognition.

No. 11

Categorical Response Rates, Time Course of Response, and Symptom Domains of Response With Karxt (Xanomeline-Trospium) in the Phase 3 Emergent-2 Study

Poster Presenter: Rishi Kakar

Co-Authors: Andrew C. Miller, Sharon Sawchak, Stephen Brannan, Inder Kaul

SUMMARY:

Background: KarXT combines the dual M₁/M₄ preferring muscarinic receptor agonist xanomeline and the peripherally restricted muscarinic receptor antagonist trospium. KarXT is designed to preserve the beneficial effects of xanomeline in the central nervous system while mitigating side effects due to peripheral muscarinic receptor activation. In the 5-week, randomized, double-blind, placebo-controlled phase 3 EMERGENT-2 study (NCT04659161), KarXT met the primary endpoint, improved other secondary efficacy outcomes, and was generally well tolerated in people with schizophrenia with acute psychosis. We conducted post hoc analyses to characterize PANSS categorical response rates, time course of response, and response across the PANSS Marder 5-factor symptom domains (positive symptoms, negative symptoms, disorganized thought, uncontrolled hostility/excitement, and anxiety/depression) in EMERGENT-2. **Methods:** Analyses were conducted in the modified intent-to-treat (mITT) population (randomized, received ≥ 1 study drug dose, and had baseline and ≥ 1 postbaseline PANSS assessment). Proportion of KarXT- or placebo-treated people achieving 4 categorical thresholds of response were evaluated at weeks 2 to 5: PANSS total score reductions from

baseline of $\geq 20\%$, $\geq 30\%$, $\geq 40\%$, and $\geq 50\%$. PANSS total scores were floor adjusted by subtracting 30 points from baseline and postbaseline scores. Number needed to treat (NNT) for each threshold at week 5 was calculated as 1 divided by the difference in the PANSS responder rates for KarXT. Symptom domains of response were evaluated using a PANSS Marder 5-factor analysis. **Results:** The mITT population included 236 people (KarXT, n=117; placebo, n=119) for analysis. PANSS response rates at week 5 with KarXT ranged from 53.8% for the $\geq 20\%$ threshold to 17.1% for the $\geq 50\%$ threshold. NNTs for KarXT/placebo ranged from 6 for the $\geq 20\%$ threshold to 17 for the $\geq 50\%$ threshold. PANSS response rates were significantly higher with KarXT vs placebo ($P < 0.05$) starting at weeks 4, 3, and 5 for the $\geq 20\%$, $\geq 30\%$, and $\geq 40\%$ thresholds, respectively; the $\geq 50\%$ threshold was significantly higher with KarXT vs placebo only at week 4. Significantly greater reductions were seen with KarXT vs placebo on each of the PANSS Marder 5-factor subscale scores at week 5 ($P < 0.05$; Cohen's *d* treatment effect sizes: 0.36-0.58). **Conclusions:** In EMERGENT-2, higher response rates for clinically meaningful PANSS total score improvement thresholds were seen with KarXT vs placebo in people with schizophrenia with acute psychosis. In addition, KarXT demonstrated significant improvements vs placebo across all 5 Marder factor subscale domains. Our results support the primary and secondary outcome measures in EMERGENT-2 and the potential for KarXT to be the first in a new class of treatments for people with schizophrenia based on muscarinic receptor agonism and an alternative to direct dopamine D₂ receptor antagonists.

No. 12

Onset, Duration, and Severity of Procholinergic and Anticholinergic Adverse Events With Karxt (Xanomeline-Trospium) in the Phase 3 Emergent-2 Study

Poster Presenter: Rishi Kakar

Co-Authors: Sharon Sawchak, Inder Kaul, Christoph U. Correll, Steven Paul

SUMMARY:

Background: KarXT combines the dual M₁/M₄ preferring muscarinic receptor agonist xanomeline

with the peripherally restricted muscarinic receptor antagonist trospium with the goal of preserving the centrally mediated effects of xanomeline while mitigating adverse events (AEs) associated with peripheral muscarinic receptor activation. In the 5-week, randomized, double-blind, placebo-controlled phase 3 EMERGENT-2 study (NCT04659161), KarXT met the primary endpoint, improved other secondary efficacy outcomes, and was generally well tolerated in people with schizophrenia with acute psychosis. We conducted post hoc analyses to further characterize the most common procholinergic and anticholinergic AEs associated with KarXT. **Methods:** The onset, duration, and severity of the most common procholinergic and anticholinergic treatment-emergent AEs (TEAEs) were assessed in the safety population (all people who received ≥ 1 dose of study medication). The number needed to harm (NNH) for each procholinergic and anticholinergic TEAE was calculated as 1 divided by the difference in TEAE incidence rates for KarXT and placebo. **Results:** A total of 251 participants (KarXT, n=126; placebo, n=125) were included in the safety population. At least 1 procholinergic/anticholinergic TEAE was reported by 31.0%/33.3% of participants in the KarXT group and 8.0%/19.2% of those in the placebo group. The most common TEAEs occurring in $\geq 5\%$ of participants in the KarXT group and at a >2 -fold greater incidence than in the placebo group were nausea (19.0% vs 5.6%), vomiting (14.3% vs 0.8%), constipation (21.4% vs 10.4%), and dyspepsia (19.0% vs 8.0%). Nausea, vomiting, constipation, and dyspepsia with KarXT generally began within the first 2 weeks of treatment and were intermittent and transient in nature, with median durations ranging from 1.0 days for vomiting to 6.5 days for dyspepsia. About one-third of vomiting TEAEs were only a single episode of emesis. The majority of procholinergic and anticholinergic TEAEs with KarXT were mild in severity. Overall, 1.6%/1.6%/0%/0.8% of participants in the KarXT group and 0%/0%/0%/0% in the placebo group discontinued the study due to nausea/vomiting/constipation/dyspepsia. The estimated NNH for KarXT/placebo was 8 for nausea, 8 for vomiting, 10 for constipation, and 10 for dyspepsia. **Conclusions:** In EMERGENT-2, KarXT was generally well tolerated and associated with a low overall AE burden. The majority of AEs associated

with KarXT were consistent with xanomeline and trospium activity at muscarinic receptors, first occurred within the first 2 weeks of treatment, and were transient and mild in severity. Few patients discontinued treatment with KarXT due to procholinergic or anticholinergic AEs. KarXT has the potential to be the first in a new class of treatments for people with schizophrenia based on muscarinic receptor agonism and a promising alternative to direct dopamine D₂ receptor antagonists.

No. 13

TV-46000, a Long-Acting Subcutaneous Antipsychotic (LASCA) in Schizophrenia: Phase 3 Study (RISE) and Long-Term Safety and Tolerability Study (SHINE)

Poster Presenter: John Michael Kane, M.D.

Co-Authors: Orna Tohami, Nir Sharon, Roy Eshet, Helena Knebel

SUMMARY:

Introduction: TV-46000 is a LASCA that combines risperidone and an innovative copolymer-based drug delivery technology in a suspension that is being evaluated for administration once monthly (q1m) or once every 2 months (q2m) in patients with schizophrenia. **Methods:** The Risperidone Subcutaneous Extended-release study (RISE; NCT03503318) compared TV-46000 q1m and TV-46000 q2m with placebo (1:1:1) in patients with schizophrenia who underwent stabilization on oral risperidone. The Safety in Humans of TV-46000 sc Injection Evaluation study (SHINE; NCT03893825) was a long-term safety study of TV-46000. Patients who completed the RISE study without relapse (rollover) along with newly recruited (de novo) patients comprised the SHINE population. Safety data were pooled from the RISE and SHINE studies. **Results:** In RISE, 544 patients were randomized. Time to impending relapse significantly favored TV-46000 (hazard ratio [95% CI]; q1m vs placebo: 0.200 [0.109–0.367], $P < .0001$; q2m vs placebo: 0.375 [0.227–0.618], $P < .0001$) indicating decreases in risk of relapse of 80.0% and 62.5% compared with placebo, respectively; Kaplan-Meier estimates of patients remaining relapse-free by wk 24 were 0.93 for q1m and 0.89 for q2m. In SHINE, 109 de novo patients and 225 rollover patients received ≥ 1

dose(s) of study drug (q1m, n=172; q2m, n=162) and were evaluated for safety. 3 patients in each treatment regimen experienced a relapse event during SHINE; Kaplan-Meier estimates of patients remaining relapse-free by wk 56 were 0.98 for q1m and 0.88 for q2m, indicating 2% and 12% risk of relapse, respectively. In the pooled safety population from the RISE and SHINE studies (n=525), the mean (SD) duration of TV-46000 exposure was 47.2 (32.37) wks, with most (80%) patients receiving TV-46000 treatment for >13 wks. 323 (62%) patients receiving TV-46000 reported AEs. The system organ classes (SOCs) with highest exposure-adjusted event rates (EAERs; event rate/100 years of patient exposure) for TV-46000 overall were general disorders and administration site conditions (52.89) and nervous system disorders (34.34). Within the general disorders and administration site conditions SOC, the most frequently reported preferred term (PT) was injection site reaction; within the nervous system SOC, the most frequently reported PTs were headache, akathisia, extrapyramidal disorder, dizziness, and somnolence. 51 patients had serious AEs (TV-46000 overall, n=37 [7%]; placebo, 14 [8%]). 10% and 11% of patients withdrew because of AEs in the TV-46000 overall and placebo groups, respectively. 8 deaths were reported (7 patients for TV-46000 overall and 1 for placebo) with none related to the study drug. **Conclusions:** Treatment with TV-46000 (q1m or q2m) significantly prolonged time to impending relapse by 5.0 and 2.7 times, respectively, vs placebo in patients with schizophrenia in the RISE study. The benefit-risk profile of TV-46000 is consistent with other formulations of risperidone.

No. 14

Myths, Misconceptions, and Clinical Dilemmas Surrounding the Use of Long-Acting Injectable Antipsychotic Agents for Treatment of Schizophrenia

Poster Presenter: John Michael Kane, M.D.

Lead Author: Christoph U. Correll

Co-Authors: Leslie L. Citrome, M.D., M.P.H., Jose Manuel Rubio-Lorente, M.D., Marko Mychaskiw

SUMMARY:

Introduction: Treatment nonadherence in schizophrenia is a continuing challenge but can be improved with use of long-acting injectable antipsychotic agents (LAIs). Although well-documented data support LAIs in schizophrenia management, their use is often limited by a lack of clarity among clinicians on their place in therapy. There are a variety of clinical dilemmas that clinicians may face when treating patients with schizophrenia. Education for clinicians on use of LAIs in these contexts and on how to address these clinical dilemmas is important for improving patient outcomes. **Methods:** A panel of 4 experts was formed to collate common myths/misconceptions, systematically review the literature, and provide expert opinions to dispel myths and misconceptions. They also identified clinical dilemmas (scenarios) in schizophrenia management where LAI treatment may be useful based on empirical evidence. The experts then developed a heuristic tool (the Schizophrenia Clinical Outcome Scenarios and Patient-Provider Engagement [S.C.O.P.E.[™]] framework) of considerations that physicians may use when facing these dilemmas. **Results:** Three main myths/misconceptions were identified: (1) physicians know when patients are nonadherent, (2) patients do not accept/want LAI treatment, and (3) LAIs are only appropriate for patients who have demonstrated nonadherence. The panel came to the following conclusions regarding the myths. Myth 1: adherence is difficult to assess accurately, and clinicians often overestimate adherence. Treatment with LAIs may reduce nonadherence and help transform it from covert to overt nonadherence. Myth 2: physicians tend to overestimate patient concerns about LAIs, leading many to avoid prescribing them. However, most patients, when approached skillfully, are accepting of LAI treatment. Myth 3: LAIs delay time to hospitalization, reduce relapse rate, and reduce risk of rehospitalization as well as mortality in patients with schizophrenia, including those with early-phase disease who have yet to demonstrate clear nonadherence. Based on this, expert consensus supports the broader use of LAIs, not only for patients who have demonstrated nonadherence but also for patients in the early course of their illness. The panel also identified 10 key clinical dilemmas (scenarios) in schizophrenia

management where treatment with LAIs may address the dilemma based on empirical evidence, which became the basis for the S.C.O.P.E.[™] framework. The S.C.O.P.E.[™] framework also includes considerations for shared decision making and monitoring of adverse effects. **Conclusions:** The S.C.O.P.E.[™] framework is an educational tool that can be used by clinicians treating patients with schizophrenia along with standard psychiatric evaluations in inpatient and outpatient settings to help them to better understand myths and misconceptions held by some clinicians, manage common clinical dilemmas, and identify the place in therapy for LAIs in schizophrenia treatment.

No. 15

Treatment Disparities for Major Depressive Disorder

Poster Presenter: Michael Martin

Lead Author: Maurice Ohayon

Co-Authors: Maggie McCue, Andrew Krystal, M.D., Marie-Lise Cote

SUMMARY:

Background: In recent years, there has been an increasing awareness of the health disparities in diagnosing and treating depression among the general population, with several studies highlighting the important role of social determinants of health as predictors of major depressive disorder (MDD) and its evolution.¹⁻⁴ This study aims to show the impact of these social determinants on the treatment of MDD. **Method:** In this longitudinal study, 2 interview waves were conducted between 2002 and 2015 with participants from a program that evaluates sleep and mental disorders. The initial interviews (wave 1) were carried out with 12,218 participants aged ≥18 years from the general population in 8 US states. At follow-up 3 years later (wave 2), 10,931 of the initial participants agreed to be interviewed again. The analyses were carried out on those who participated in both interviews (N=10,931). Diagnosis of MDD was made according to *Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition* criteria. Logistic regression was used to compare participants with MDD who were not taking any antidepressant medication (untreated) with those receiving antidepressants for

MDD (treated). **Results:** Among the 10,931 participants who completed both interviews, 12-month prevalence of MDD was 9.5% (95% CI, 9.0%–10.0%); 26.3% of the participants with MDD were untreated. Compared with treated participants, untreated participants were more likely to be male (odds ratio [OR], 3.1; 95% CI, 2.2–4.5; $P<0.0001$); aged 18–24 years (OR, 17.6; 95% CI, 6.7–46.5; $P<0.0001$); or Black (OR, 6.4; 95% CI, 2.9–14.2; $P<0.0001$). After adjusting for age, gender, and race, untreated participants were more likely to have less than a high school education (OR, 2.5; 95% CI, 1.0–6.2; $P=0.046$); be a shift or night worker (OR, 1.8; 95% CI, 1.1–2.9; $P=0.011$); have no health insurance (OR, 1.6; 95% CI, 1.1–2.5; $P=0.021$); have a household income <\$50,000 per year (OR, 2.0; 95% CI, 1.3–3.2; $P=0.002$); or live in densely populated areas (>2 million inhabitants) (OR, 2.2; 95% CI, 1.1–4.2; $P=0.019$). Untreated participants were also less likely to have consulted a physician specifically for their depression compared with treated participants (30.6% vs 61.5%, respectively) or to receive mental health support from a nonmedical professional (29.8% vs 39.4%, respectively). **Conclusions:** This study shows that treatment of MDD is strongly linked to key domains of social determinants of health and ethnodemographic factors in a population that is highly representative of clinical practice. These disparities negatively impact the treatment of MDD, with more than 25% of individuals diagnosed with MDD not receiving any antidepressant medication. Our findings underline the importance of reducing disparities through ongoing efforts to improve MDD screening and treatment, including addressing social determinants of health for groups experiencing disadvantages.

No. 16

Comprehension and Usability of a Spanish-Translated Prescription Digital Therapeutic for Substance Use Disorder

Poster Presenter: Anthony Oliver

Co-Authors: Paula Walker, Gigi Shafai, Yuri Maricich

SUMMARY:

Introduction and Rationale: Despite high rates of substance use disorder (SUD) in Hispanics, over 90% of Hispanic individuals needing SUD treatment do

not receive it.¹⁻⁴ Geographic barriers are among the causes of this disparity.^{5,6} Spanish-language prescription digital therapeutics (PDTs), which are FDA-authorized software applications,⁷ may offer a cost-effective and scalable way to provide evidence-based SUD treatment to this population. The current study evaluated patient comprehension and usability of a Spanish-translated developer version of a PDT for SUD. Method: This human-factors study was conducted virtually; 16 self-identified Spanish bilingual, biliterate participants with practitioner-verified SUD were recruited from two sites (NM and NY). Spanish-language literacy was confirmed by the study staff. U.S. Food and Drug Administration guidance on applying human factors to medical devices to ensure device effectiveness and safety was followed.⁸ Participants used a Spanish language PDT and then answered questions in a 90-minute interview to assess usability and satisfaction with the PDT as well as understanding of the cognitive-behavioral therapy (CBT) content of the app. Participants assessed key clinical functions within the app, including completing onboarding tasks and reviewing CBT modules, and answered usability questions using a modified version of the System Usability Scale. Comprehension of presented content was assessed using a pass/fail criterion. Participants answered the Net Promoter assessment of satisfaction question (0-10 score, with 10 representing "extremely likely to recommend"). Results: We found that the content of the PDT was adequately translated and generally understood by the participants. Qualitative feedback provided by patients indicated that the app was user-friendly, the CBT content was useful, and that they would like to use the app as part of their treatment. Mean scores on usability questions were 4.3 for "easy to use," 4.7 for "learn to use the app quickly," and 4.3 for "feel very confident using the app." Mean Net Promoter Score was 8.2. This study also highlighted that some individuals who self-identify as English-Spanish biliterate may be simply bilingual, without written facility in the second language. Regional and socioeconomic status variations in Spanish dialect also created comprehension challenges. Conclusions: This qualitative study found high acceptability, usability, and satisfaction with a Spanish language version of a PDT to treat SUDs. Comprehension of the educational material was high. Expanded use of a

Spanish-language PDT may help improve health equity for Spanish-language users in this population.

No. 17

Race Mediates Healthcare Utilization During the Period Before the First Episode of Psychosis and Mania

Poster Presenter: Javier Ortiz Orendain

Co-Authors: Manuel Gardea Resendez, Mark Frye, M.D., Monica J. Taylor-Desir, M.D.

SUMMARY:

Background: Prior to the first episode of schizophrenia (SZ) and bipolar disorder (BD) there is a period of deterioration characterized by unspecific psychiatric symptoms. These symptoms result in the use of psychiatric services and consequently diagnoses and treatments. Racial disparities are well documented in mental health and affect the use of health services during the period before the first episode. Method: Using the Rochester Epidemiology Project (REP), a unique record linkage database in the upper midwest of the USA, we searched for subjects born after 1985 that had been diagnosed with BD or SZ. Cases were ascertained for diagnosis and identification of the first episode of mania or psychosis. We analyzed the data by comparing white (W) patients vs non-white (NW) patients. Results: After inspecting 1335 patients, we identified 205 cases with a first episode (SZ = 131; BD = 74). The proportion of white patients was significantly higher ($p = 0.048$) in the BD group (76%) compared to the SZ group (61%). White patients had a longer period of healthcare utilization prior to the first episode (W = 8.55 (SD 6.02) years vs NW = 6.06 (SD 5.63) years; $p = < 0.05$). White patients had about three times more healthcare utilization during the year prior to the first episode (IRR 3.3, CI 2.6 - 4.2). Non-white patients had less use of mental health services, diagnosis, and pharmacological treatments ($p = < 0.05$) compared to white patients before the first episode. Substance use history was similar between the two groups. Conclusion: Race seems to mediate the healthcare utilization patterns prior to the first episode of BD and SZ. Non-white patients tend to have less service utilization in most metrics compared to white patients. Due to the diminished engagement with the healthcare system, this can

cause a delay in the early detection and increase the duration of untreated illness furthering the difference in outcomes in the severely mentally ill across races. Interventions to increase access and awareness to specific populations can help reduce the racial disparities in people with SZ and BD.

No. 18

Communication Enhancing Strategies to Support Low Literacy or Non-English Speaking Patients in Mental Health Care Treatment

Poster Presenter: Xiomara Nieves Alvarado, M.D.

Co-Authors: Jonathan M. Nahmias, M.D., Chisom Ezigbo

SUMMARY:

Background: Patient-physician trust and medication adherence are major contributors to the success of mental health interventions. Patients with low written literacy levels or who do not speak English may be at greater risk for poorer medication adherence due to difficulties with communication or comprehension. Psychiatric providers may also have difficulty establishing a therapeutic alliance due to communication barriers. We performed a needs assessment to gauge provider acceptability and feasibility of the use of visual aid tools then developed ~20 visual aid sketches for provider use.

Methods: We received survey responses from 53 mental health medication providers including psychiatry residents, attendings, and advanced practice practitioners. The surveys contained 6 questions to assess their current use of visual aids and their perceptions on the likelihood that visual aids would enhance trust and education about medications for patients that have low English literacy. We then created ~20 sketches which underwent multiple rounds of feedback and re-editing from local cross-cultural community stakeholders and patient education experts. Each sketch is a cartoon figure that depicts some of the most commonly occurring mental health symptoms for major psychiatric disorders (e.g., panic attacks, auditory hallucinations, depressed mood, fatigue, etc.). **Results:** The results of the initial provider survey indicated that most providers did not use visual aids during the majority of patient visits and when they did, they most often personally sketched

material on a whiteboard or paper. The majority (>50%) of respondents also noted they somewhat or strongly agreed they were concerned about their ability to communicate medication instructions with low written literacy and non-English speaking populations. The majority also indicated they felt visual aids enhance patient education and physician trust. **Conclusions and Discussion:** The results of our initial clinician survey suggest that making our ~20 sketches available for clinicians would be acceptable and feasible. As the next step in our project, we intend to incorporate this visual aid tool into the electronic medical record (EMR) system so that providers can add the sketches to the patient's "after-visit summary" printouts. We anticipate this visual aid tool could be used to both describe symptoms that the patient is currently experiencing, as well as clarify which prescribed medications will alleviate specific psychiatric symptoms the patient experiences. In the next phase of our project, we would measure patient and physician perceptions of trust quantitatively and qualitatively using surveys as well as medication adherence via pharmacy fill history and hospitalization rate.

No. 19

Creating a Protocol to Connect Inpatient Psychiatry Patients With Culturally Appropriate Lay Mental Health Advocates

Poster Presenter: Jonathan M. Nahmias, M.D.

Co-Authors: Aiyana Ponce, B.S., Bruny Kenou, B.S.

SUMMARY:

Background: Historically, mental health stigma, access to care, and discrimination all contribute to worsened mental health outcomes, especially for minority populations. Some of the inequities could be overcome by peer support programs, such as through peer supporters assisting with and encouraging an increased uptake of mental health outpatient services. These programs seem to have the biggest impact if there is a cultural match between patients and peer supporters; unfortunately, culturally appropriate peer support programs are not widely available. To address this, the Lay Mental Health Advocates (LMHA) program was created. This free, 8-week long virtual training program was designed by NIH Fellows in

collaboration with mental health professionals to teach laypersons the fundamentals needed to advocate for someone who is dealing with mental illness. After completion of the training, the LMHA are culturally matched with Duke Behavioral Health Inpatient Unit (BHIP) patients before their discharge on a voluntary basis in a program called LMHA meets BHIP. In this submission, we discuss the progress of the program made to date and first preliminary results. **Methods:** Initially, a mental health needs assessment of the Durham community was done to develop additional customized training modules for the LMHA. A literature review and landscape analysis were performed to assess how other programs operate and which gaps the LMHA program could bridge. Participatory and co-creative 1:1 key information interviews were held with Duke leadership, community organizations, and project mentorship. Focus groups will be held with patients of BHIP to assess how valuable patients find having a lay peer supporter after their discharge and what areas of support they would most benefit from; we plan to compare their responses with what LMHA could legally and practically offer. **Results:** LMHA advocates who have an interest in serving patients in the Durham community will complete an additional training which includes information on local community resources, respecting patient privacy, and what to do in cases of adverse events such as suicidal ideation. We created a workflow where patients and LMHA advocates would be matched based on patient preferences and the advocate's background. The focus group discussions will guide the implementation of the matching process. **Discussion:** Our project adds to the current research landscape, as there is little in the literature that describes a protocol to pair culturally-matched peer support advocates to inpatient psychiatry patients, free of charge. It also fills a gap in the local Durham community. While this project is still in development, the final protocol, which will be completed in the next couple of months, could serve as a blueprint if other institutions want to do the same.

No. 20

A Novel Approach to Identify Predictors of Major Depressive Episodes (MDE) Among Adolescents Based on Machine Learning

Poster Presenter: Cassidy Seol

Co-Author: Xueyu Zhu

SUMMARY:

Introduction: Major depressive episodes (MDE), a form of depression, have been one of the most common mental health concerns among adolescents with about 22.84% of all US adolescents experiencing it in their lifetime. This number is dramatically higher compared to that of the adult population who reported MDE in their lifetime (15.87%). What is surprising is the misconception that adolescent MDE is similar to adult MDE, even if there are meaningful differences between them. The purpose of this study is to investigate the unique characteristics of adolescent MDE using increasingly popular machine learning algorithms as an analysis tool. We examined which of the nine attributes used to define MDE in the National Survey on Drug Use and Health (NSDUH) are the most important predictors of MDE among adolescents. We also investigated if there are additional attributes that could have a stronger effect on MDE than the original ones. Finally, we explored what impact substance use disorder (SUD) could have on the risk factors for MDE. Methods: Using the NSDUH dataset, one of the largest annual surveys sponsored by the U.S. Department of Health and Human Services, we trained the two most popular machine learning classifiers: logistic regression (LR) and random forest (RF), and compared their performance based on several measures such as receiver operating characteristics, and the area under the ROC curve. They were then utilized as a common analysis framework to identify sociodemographic predictors of adolescent MDE for two different adolescent groups with/without SUD. Results: Both LR and RF classifiers were identified as equally excellent ML algorithms. For adolescents without SUD, all performance metrics (accuracy, sensitivity, specificity, precision, and F-score) were within the range of 0.948 to 0.999 for both identifiers. LR identified "possession of a handgun" and "the usage of any tranquilizers or sedatives" as the two most important predictors for MDE, while RF identified "feeling the same way for more than 2 weeks" and "height in inches". For adolescents with SUD, all performance metrics were within the range of 0.922 to 0.979 for both identifiers. LR identified "usage of other hallucinogens" and "the year of last cigarette

use” as the two most important predictors for MDE while RF identified “having trouble keeping the mind on things” and “sleeping a lot more than usual”. Conclusion: We have shown that most of the top predictors of adolescent MDE identified by machine learning algorithms such as LR and RF are different from the traditional nine attributes used to assess adolescent MDE. We have also shown that usage of illicit substances, such as tranquilizers, sedatives, or hallucinogen is a common predictor of adolescent MDE, whether they are with or without SUD. The current study result suggests that the importance of the traditional nine predictors used to define adolescent MDE in NSDUH needs to be reevaluated.

No. 21

Identification of Sociodemographic Risk Factors for Depression Among Cannabis Users During Covid-19: An Analysis Using Machine Learning Algorithms

Poster Presenter: Cassidy Seol

Co-Author: Xueyu Zhu

SUMMARY:

Introduction: The Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition (DSM-5), defines depression with several criteria. These criteria include a clause that states that none of the present depressive symptoms can be attributed to the psychiatric effects of a substance, including cannabis. The purpose of this study is to develop a quantitative methodology to identify sociodemographic risk factors associated with psychiatric depressive symptoms (PDS) among those who could be excluded from the DSM-5 criteria. Specifically, those who depend upon or abuse cannabis. **Method:** NSDUH is one of the largest annual surveys sponsored by the Substance Abuse and Mental Health Services Administration. Using the 2020 National Survey on Drug Use and Health (NSDUH) data that was compiled at the height of COVID-19, we trained several popular machine learning (ML) algorithms: logistic regression, independence Bayes, and random forest. After evaluating ML algorithms based on several performance metrics, such as accuracy, sensitivity, specificity, receiver operating characteristics (ROC), and the area under the ROC curve (AUC), we identified two quality ML algorithms and utilized them to identify the most important risk

factors of PDS from 2,890 variables in the NSDUH data file. **Result:** We first identified unique sociodemographic characteristics of the cannabis user group in comparison with the general population. The cannabis users were majority male (55.65%), unmarried (69.60%), and young adults (62.41%). They had a lower percentage of college graduates (24.38%), lower income, and low-cost health insurance plans. Both LR and RF classifiers were categorized as good and fair ML algorithms, respectively. Their performance metrics were within the range of 0.72 to 0.95 for LR and 0.71 to 0.94 for RF. They simultaneously identified “The level of impairment indicator to perform daily activities” as the most important predictor for MDE, which indicates that the risk factors identified pertain to a noted difficulty performing seemingly mundane and routine activities. They also recognized “receiving alternative mental health treatment past 12 months” and “the number of days used cigarettes with marijuana in the past 30 days” as the second important predictors for MDE, respectively.

Conclusion: Our results, which were primarily focused on cannabis users, remained consistent with the clinical observations for several depressive disorders and other criteria in DSM-5. This suggests the criteria in DSM-5 could still be utilized to identify PDS among cannabis users, even if DSM-5 explicitly includes a clause that none of the present depressive symptoms can be attributed to the psychiatric effects of a substance. This study provides meaningful guidance to help identify PDS among cannabis users, especially when the root cause of PDS could not be attributed to anything in particular.

No. 22

Brief and Effective Interventions to Enhance Caregivers’ Understanding and Support of Gender-Expansive Youth in the Inpatient Setting

Poster Presenter: Tanya Ngo

Co-Authors: Matthew P. Abrams, B.A., Kristen Kim, M.D., Michelle Wu

SUMMARY:

“B,” a 10-year-old Mexican-American patient with no prior psychiatric history was admitted to the inpatient psychiatry service on an involuntary hold for evaluation of suicidal ideation in the context of

gender dysphoria and increased psychosocial stressors including homelessness and lack of contact with his mother. B was assigned female at birth but identifies as “a boy,” using “he/him” pronouns. B reported being open with his gender identity but did not feel his family was supportive; he attributed this stressor to contributing to his current suicidality. B’s condition failed to initially improve despite tolerating fluoxetine treatment. Our team noticed that his predominately Spanish-speaking father referred to B as his “hija” [daughter], voiced confusion towards B’s gender identity, and disregarded B’s preferred pronouns. Our care team then had an in-depth conversation with the father focusing on B’s gender dysphoria and how this was a significant contributor to current mental health concerns. The father was informed how feeling unsupported about one’s gender identity can cause negative mental health effects. The father was provided with examples on ways he could support B’s gender expression, such as allowing short haircuts, having access to baggier clothing, using B’s preferred pronouns, and referring to B as “hijo” [son]. The differences between gender identity and sexual orientation were also discussed, as the father acknowledged he was inappropriately mentioning concerns about B’s secondary sex characteristics and sexuality unrelated to B’s mental health or gender. Specifically, B’s father was engaged in Spanish by a fluent Spanish speaker, which appeared to be an asset to establishing rapport and providing effective, culturally-responsive psychoeducation. This team member also role-played common scenarios and conversations related to affirmation of gender identity, in addition to providing education. Following this, our team mediated a conversation between B and his father, where B’s father was able to utilize the communication strategies and gender-affirming language discussed. After this brief intervention, the patient presented with noticeably brighter affect, denying any depressive symptoms or suicidal ideation, and expressed desire to be discharged. In this poster, we discuss the utility and importance of providing family-based psychoeducation on gender dysphoria with appropriate cultural considerations. We also describe the value of using an intersectional approach given the importance of family acceptance of gender identity in ensuring safe disposition planning among the pediatric population. Further,

Spanish is a very gendered language, and this poster highlights lessons learned and evidence regarding how language may impact patient experiences surrounding gender affirmation. We also present the feasibility and challenges of providing this type of brief intervention and psychoeducation in an inpatient psychiatric setting.

No. 23

Racial and Ethnic Differences in Pathways to Care, Diagnosis, and Disposition Among Youth at a Multi-Modality Psychiatric Emergency Services Program

Poster Presenter: Rachel Oblath, Ph.D.

Co-Authors: Carolina-Nicole Herrera, Alison Mary Duncan, M.D.

SUMMARY:

Black youth have the highest rates of attempted suicide and Latino youth have the highest rates of suicidal ideation, as compared with other racial and ethnic groups (Ivey-Stephenson et al., 2020). Black and Latino youth experiencing these or other acute psychiatric crises may receive emergency mental health services. In fact, psychiatric emergency department (ED) visits among youth of color have been rising rapidly in the past decade (Kalb et al., 2019; Pittsenbarger & Mannix, 2014, Abrams et al., 2022). Despite known racial disparities in utilization of both outpatient and psychiatric ED services (Bruckner et al., 2014; Costello et al., 2014), there is limited research examining health equity in multimodal PES. This study examines racial and ethnic differences in pathways to access, diagnosis, and admission to inpatient psychiatric care within an urban PES serving primarily publicly insured and uninsured patients. We analyzed 26,511 PES encounters among patients 21 and younger (30.4% non-Latino Black, 28.7% Latino, 33.2% non-Latino White, 7.7% another race/ethnicity) from 9/1/17 through 8/31/21. These encounters included visits to emergency departments and psychiatric urgent care centers, and mobile crisis team evaluations at varying community locations, including schools. We estimated a series of logistic regression models predicting evaluation modality, primary psychiatric diagnosis, and admission to inpatient care; all models controlled for sociodemographic variables and whether the visit occurred after the onset of the

COVID pandemic. Non-Latino Black patients were significantly more likely than non-Latino White patients to be evaluated in an ED (OR=1.18, 95% CI: 1.10, 1.26) or school setting (OR=1.16, 95% CI: 1.00, 1.36) and less likely to present in an urgent care center (OR=0.55, 95% CI: 0.48, 0.63). Latino patients were significantly more likely than non-Latino White patients to utilize a mobile crisis team (OR=1.16, 95% CI: 1.09, 1.25) and less likely to visit a psychiatric urgent care center (OR=0.57, 95% CI: 0.50, 0.65). Youth of color were significantly more likely than their White peers to be diagnosed with a stress disorder (non-Latino Black OR=2.36, 95% CI: 2.20, 2.53; Latino OR=2.21, 95% CI: 2.06, 2.37; Other OR=1.66, 95% CI: 1.50, 1.85) or a primary psychotic disorder (non-Latino Black OR=3.55, 95% CI: 3.03, 4.07; Latino OR=1.95, 95% CI: 1.63, 2.33; Other OR=2.60, 95% CI: 2.07, 3.27). Youth of color were also significantly less likely to be discharged to inpatient care (non-Latino Black OR=0.70, 95% CI: 0.65, 0.76; Latino OR=0.82, 95% CI: 0.76, 0.88; Other OR=0.85, 95% CI: 0.76, 0.95). We found significant racial and ethnic differences in evaluation modality, primary diagnosis, and admission to inpatient care. Possible mechanisms underlying these differences and directions for future research will be discussed.

No. 24

Gender-Specific Relationships of Physical and Digital Activities and Executive Function Among Children in the Digital Age: Findings From AddS in Korea

Poster Presenter: Seo Jin Oh, Ph.D.

Co-Authors: Si Young Song, Jiwon Lee, Susanna Joo, Hyoun.K. Kim

SUMMARY:

Background: Changes in children's daily life, including reduced physical activity and increased digital device usage due to COVID-19, have become a global issue and many are concerned about their potential impact on children's development, especially executive function (EF) development. This study investigates associations between children's daily physical/digital activities and cognitive abilities, particularly EF, that have significant impact on their social, emotional, and academic adjustment.

Methods: Using data from the Generation Alpha Digital Daily Survey (ADDs), Korea, a total of 181

healthy children aged 9-10 years (48% girls) were included in the study. Children's EF measures included cognitive flexibility (Wisconsin Card Sorting Test, WCST), inhibition (Stroop test), and divided attention (Trail Making Test-B, TMT-B), using a computerized neuropsychological test battery. Children's total volume of moderate-to-vigorous physical activity (MVPA) and time spent online per week were assessed using a self-reported questionnaire. **Results:** MVPA was positively associated with cognitive flexibility as measured by the WCST's perseverative errors ($r=0.24$, $p<0.05$), only in girls, while there was no significant association between MVPA and any EF task measured in boys. Gender differences were also found in the relationship between digital activity and performance on the EF tasks. Girls' inhibition was negatively associated with time spent playing online games ($r=-0.26$, $p<0.05$) and streaming a video ($r=-0.35$, $p<0.01$). Boys' attention, especially sustained (WCST non-perseverative errors, $r=-0.28$, $p<0.05$) and divided attention (TMT-B, $r=-0.24$, $p<0.05$) was negatively associated with the time spent online on weekends. **Conclusions:** This study suggests that MVPA and EF in children may be closely linked, and that the more time they spend online (recreational, screen-based sedentary behavior like games), the worse they perform on EF tasks. It also stresses the importance of understanding domain-specific gender differences in the association between physical and digital activity and EF in children. **Acknowledgments:** This work was supported by the Ministry of Education of the Republic of Korea and the National Research Foundation of Korea (NRF-2021s1a3a2a03088949).

No. 25

Risk for Substance Use Disorders in Adulthood in Pediatric Bipolar Disorder Compared to ADHD and Healthy Controls in a Prospective Cohort

Poster Presenter: Hetal Patel

Co-Authors: Rebecca Tillman, Alecia Vogel

SUMMARY:

Background: Bipolar disorder is associated with significant psychosocial impairment and often presents with comorbid psychiatric disorders, including substance use disorders, adding negative

physical, mental, cognitive, and interpersonal ramifications¹⁻³. The positive association with bipolar disorder and substance use disorders is well-studied in adult populations. The directionality of this relationship is less clear. This prospective study analyzed the longitudinal associations between pediatric onset bipolar disorder (PBD) and substance use disorder (SUD) from adolescence to adulthood.

Methods: Participants were recruited from outpatient primary care and mental health clinics and included healthy controls, participants with ADHD, and participants with pediatric bipolar disorder (as defined by Geller et al.) from 1995-1999. Psychopathology and substance use were assessed at up to 11 waves, occurring at intervals from 6 months to 2 years over 12 years from both parent and child informants using the Washington University in St. Louis Kiddie Schedule for Affective Disorders and Schizophrenia (WASH-U-KSADS). Data from 209 participants were included in analyses (PBD N=102 ADHD N=42, control N=65). Logistic regressions were used to assess for the effect of pediatric bipolar, ADHD and no disorder on risk for SUD in early adulthood. We also examined effect of adolescent SUD on risk for episodes of mania in early adulthood. Covariates included SES, BD by age 16, and family history of bipolar disorder or depression in models of BD and family history of SUD, SES, and SUD by age 16 in models predicting later SUD.

Results: PBD diagnosis by age 16 was positively associated with having SUD in adulthood compared to the control group (OR 5.71, 95% CI 2.15 – 15.20, $p=0.0005$) and compared to the ADHD group (OR 3.74, 95% CI 1.35 – 10.37, $p=0.0112$). When only considering SUD diagnoses at the final assessment as the dependent variable wave (ages 18.11-28.79), PBD subjects were at increased odds of having SUD compared to healthy subjects (OR 4.89, 95% CI 1.36 – 17.57, $p=0.0151$) but not compared to ADHD subjects (OR 3.34, 95% CI 0.92 – 12.12, $p=0.0663$). Adolescent SUD diagnosis was not associated with a diagnosis of mania in adulthood compared to those without adolescent SUD ($p=0.5763$). Comorbid adolescent substance use (ages 13.67-17.92) in subjects with PBD was not associated with persistence of mania into adulthood ($p=0.67$).

Conclusion: PBD was strongly associated with increased odds of SUD in adulthood when compared to participants with ADHD without BD and healthy

controls. Adolescent SUD was not associated with increased odds of having mania in adulthood or with the persistence of manic episodes from childhood into adulthood. These results suggest that mood disturbance precedes SUD. Findings also suggest that comorbid adolescent SUD in PBD does not predict persistence of mania into adulthood.

No. 26

Implementing the Institute for Healthcare Improvement Model to Integrate Behavioral Health and HIV Care: Outcomes in 17 Healthcare Settings

Poster Presenter: Karen McKinnon, M.A.

Co-Authors: Francine Cournos, M.D., Daria Boccher-Lattimore, D.P.H., Adam Thompson, B.A.

SUMMARY:

Psychiatrist time is a scarce resource in HIV settings. Using the Institute for Healthcare Improvement's Breakthrough Series model, with the enhancement of practice facilitation coaching, the New Jersey Behavioral Health and Primary Care HIV Integration Project (BHIP) implemented a four-year learning collaborative that provided a structured process through which Ryan White HIV/AIDS Program-funded agencies implemented systems-level changes to deepen integration of behavioral health and HIV primary care services for people with HIV. Behavioral health (BH) conditions such as depression, anxiety, and substance use disorders disproportionately affect people with HIV regardless of race, ethnicity, gender identity, or sexual orientation making this a critical area of focus for improving patient- and population-level outcomes such as viral load suppression and retention in care. During the initiative, HIV service providers statewide engaged with one another and a range of experts (academic researchers, clinical behavioral health practitioners, practice facilitation coaches, and content experts including people with lived experience) to test and implement strategies and interventions to integrate behavioral health and HIV primary care at the systems-level. The learning collaborative included federally qualified health centers, outpatient ambulatory clinics, and community-based organizations. Gaps in services and processes were identified by all BHIP sites as points where tests of change could have the greatest impact on the

Combined HIV-BH Care Continuum outcomes. Over four years of data submissions including the final project months which coincided with the COVID shutdown, depression screening with the PHQ-9 increased from 71% to 78%; substance use disorder screening using a validated tool increased from 64% to 78%; follow-up on positive BH screens increased from 42% to 80%; retention in behavioral care suffered during COVID, falling from 71% to 53%; yet viral suppression increased from 82% to 85%. Lessons learned, particularly for settings in which no increase in funding for BH specialty care was possible, include the need for greater task-shifting and referral network development, as well as the need for performance measurement precision and data system enhancements to identify BH needs and strengthen on-site services. Best practices were shared among Learning Collaborative members, strengthening processes, policies, and procedures for participating sites, which is, itself, a best practice. Final program results, successes, and challenges have implications for wider application nationwide.

No. 27

Sexual Health Services in Outpatient Mental Healthcare Settings in New York: Findings From a Statewide Survey of Practices and Gaps

Poster Presenter: Karen McKinnon, M.A.

Co-Author: Francine Cournos, M.D.

SUMMARY:

A recovery orientation has prompted clinicians and care systems to re-think how they address sexual behavior and sexual health among people with serious mental illness (SMI), providing an opportunity for mental health organizations to assess unmet need and improve access to these services. Accessible care is critical to controlling sexually transmitted infections and is an equity and social justice issue for populations subject to unfair distributions of healthcare. Although the vast majority of people in care for SMI consider a supportive relationship that is emotionally or sexually intimate to be a key facilitator and indicator of recovery, only a small minority are actually in such a relationship and numerous barriers to intimate relationships have been described. Mental health treatment programs may, themselves, be barriers to

healthy sexual relationships; the extent to which they are offering even basic sexual health assessments or education for their patients is not well described. We surveyed all licensed outpatient mental health programs in New York to examine sexual health and related services being delivered; service setting characteristics; and training needs of service providers. A majority of agencies (n=65, 49.2%) served more than 1000 patients, whereas 22 (16.7%) served 200 or fewer. Most agencies (n=81, 81.8%) reported that sexual health services were essential or very important for their patients. Sexual health services showed significant differences by geographic location for sexually transmitted infection (STI) screenings, sexual health education, condom distribution, and barriers to condom distribution. Across 132 settings, gaps in sexual health services were observed, particularly in processes and procedures for knowing whether patients were sexually active, engaging in sexual behaviors that put their health at risk, and in need of HIV testing services and pre-exposure prophylaxis. Staff training in sexual health services delivery and the distribution of condoms are critically needed to ensure the health and recovery of patients in community mental healthcare. To overcome the current state of healthcare—that where you live determines how much and what kind of healthcare you receive—we must focus on improving both quality and access with respect to sexual health services available to people with SMI. To do so requires building additional evidence about the sexual health service needs of a population that is historically overlooked and remains underserved.

No. 28

Pediatric Bipolar Disorder: A Neurocognitive Evaluation

Poster Presenter: Maria Paula Maziero, M.D.

Co-Authors: Antonio Teixeira, M.D., Ph.D., M.Sc.,

Thomas Meyer, Ph.D., Cesar Soutullo, M.D., Ph.D.,

Jair Soares, M.D.

SUMMARY:

Introduction: There has been a recent-increased interest in cognitive performance in pediatric bipolar disorder (BD). In a recent meta-analysis, euthymic youths with BD exhibit significant cognitive

dysfunction in verbal learning, memory and working memory domains (WM) (1). However, fluctuation between the mood states (2) may affect cognitive function. Also, it has been reported that BD patients have above average IQ and general intellectual functioning (3). Objective: To compare the neurocognitive performance between health controls (HC), Bipolar Disorder I (BD I) and other Bipolar Spectrum disorders (BD Spectrum) and explore its correlation with clinical variables. Methods: We compared the neurocognitive performance between HC (n=43), BD I (n=48) and BD Spectrum (n=46) using the Wide Range Achievement Test (WRAT IV), Wechsler Intelligence Scale for Children (WISC-IV) and Wechsler Abbreviated Scale of Intelligence (WASI II) using ANCOVA, correcting the results for age, sex, and mood state. Also, we correlated the neurocognitive evaluation and depressive and manic symptoms (Children Depression Rating Scale and Young Mania Rating Scale, respectively). Results: The BD group differed on the math computation, digit span, processing speed, and WM. There was a negative correlation between depressive symptoms and IQ, processing speed, WM, math computation, vocabulary, digit span, letter-number sequencing and coding performance. Manic symptoms were negatively correlated with IQ, processing speed, WM, symbol search, coding, letter-number sequencing, digit span and vocabulary. Conclusion: Patients with Pediatric BD performed worse compared with HC in processing speed and WM. We found strong and negative correlations between the neurocognitive assessment and the mood states. These data indicate that clinical variables may affect cognitive function.

No. 29

Response of Psychosis to Benzodiazepines: The Strange Case of Catatonia

Poster Presenter: Timothy Moore

Co-Authors: Paulina Kaiser, Tamara Almeyda, Donna Tsai, Charlotte Yasinski

SUMMARY:

Catatonia is a syndrome involving the disruption of movement and involuntary behaviors. It has many presentations and can be mercurial even within the same episode. In addition, it can be a feature of

different underlying diagnoses including mood disorders, psychotic disorders and even medical disorders, while also postulated at times to be a disorder in and of itself (Shorter 2018). The clinical and nosological overlap can also lead to overlap in treatment, specifically for psychosis. Although textbooks separate psychotic symptoms (delusions, hallucinations, thought disorder) from catatonic symptoms, they co-occur. Their separation may be more of a historical than a clinical distinction. It is not clear if they respond to the same or to different treatments. The role of antipsychotics remains unclear and complicated by semantic tautology. There is a risk of worsening of the catatonic symptoms, and a risk of precipitating NMS. On the other hand, there is clear evidence of their efficacy in managing psychotic symptoms in acute schizophrenia and mania with psychotic features. This study aimed to look at this clinical conundrum by collecting data on how patients with catatonia were being treated in an inpatient setting. One of the authors collected data on all cases of catatonia he came across from 2008-2014. This included 39 catatonic patients. The treatments of these patients were stratified into three different categories: the first group used antipsychotics only, the second group used benzodiazepines (BZD) and/or electroconvulsive therapy (ECT) with antipsychotics, and the third group used BZDs and/or ECT without antipsychotics. Scores on admission from the Bush Francis Catatonia Rating Scale (BFCRS) (Bush 1996) and the Positive and Negative Syndrome Scale (PANSS; a measure of psychotic symptoms) (Kay 1987) were compared with the scores on these two scales that were obtained at discharge. Results showed that the antipsychotic-only group demonstrated significantly higher BFCRS scores at discharge than the group receiving both antipsychotics and BZDs or ECT, $p = 0.022$, and than the group receiving BZDs and ECT, $p < 0.001$. The group receiving BZDs and ECT had significantly lower PANSS scores at discharge than the group receiving antipsychotics alone, $p < .001$, and than the group receiving antipsychotics plus BZDs or ECT, $p < .001$. All scores on BFCRS and PANSS were significantly decreased from admission to discharge $F(1,86) = 128.29, p < .001$. Our data indicates that patients treated with antipsychotics showed less improvement on traditional catatonic symptoms (as

measured by BFCRS) as well as less improvement on symptoms of psychosis (as measured by PANSS).

No. 30

Individual Patient Data Meta Analysis of Antidepressants Versus Lithium for Bipolar II Disorder

Poster Presenter: Colin Xu, Ph.D.

Co-Author: Jay Amsterdam

SUMMARY:

Background – Few studies have examined antidepressant monotherapy of bipolar II depression. Consequently, no meta-analyses of antidepressant monotherapy of bipolar II disorder exist to inform future guidelines on the relative safety and effectiveness of antidepressant monotherapy in bipolar II depression. **Methods** – Eight prospective trials of antidepressant monotherapy of bipolar II depression were identified from a systematic search of the published literature. An Individual patient-level data (IPD) meta-analysis was conducted on four trials where IPD were available and where patients received either antidepressant and/or lithium monotherapy (total n=393). Hierarchical log-linear growth models were used to analyze the primary outcome of change over time in Hamilton Rating Scale for Depression (HRSD) scores, and Secondary outcomes of Clinical Global Impressions severity (CGI/S) and change (CGI/C) scores, and Young Mania Rating (YMR) scores. **Results** – Relative to lithium monotherapy, antidepressant monotherapy demonstrated significantly greater symptom reduction on HRSD scores across time ($b=-2.33$, $t=-6.68$, $p<0.0001$), significantly greater symptom reduction on the CGI/S across time ($b=-0.414$, $t=-6.32$, $p<0.001$), and a significant improvement in CGI/C across time ($b=-0.47$, $t=-7.43$, $p<0.0001$). No differences were observed in change over time for YMR scores between antidepressant and lithium monotherapy ($b=0.06$, $t=0.49$, $p=0.62$). **Conclusion** - Recommendations drawn from this IPD meta-analysis of prospective bipolar II depression trials suggest a divergence from current recommendations of evidence-based guidelines for treating bipolar II depression (i.e., use of combined therapy with mood stabilizer plus antidepressant). Antidepressant monotherapy may provide superior short-term

benefit for bipolar II depression, without clinically meaningful, treatment-emergent hypomanic symptoms, relative to lithium.

No. 31

Traditional and Biomedical Care Pathways for Mental Well-Being in Rural Nepal

Poster Presenter: Tony V. Pham, M.D.

Co-Author: Rishav Koirala

SUMMARY:

Background: There is increasing access to mental health services in biomedical settings (e.g., primary care and specialty clinics) in low- and middle-income countries. Traditional healing continues to be widely available and used in these settings as well. Our goal was to explore how the general public, traditional healers, and biomedical clinicians perceive the different types of services and make decisions regarding using one or both types of care. **Methods:** We conducted in-depth interviews using a pilot tested semi-structured protocol around the subjects of belief, traditional healers, and seeking care. We conducted 124 interviews comprising 40 traditional healers, 79 general community members, and five physicians. We then performed qualitative analyses according to a grounded theoretical approach. **Results:** A majority of the participants endorsed belief in both supernatural and medical causes of illness and sought care exclusively from healers, medical practitioners, and/or both. Our findings also revealed several pathways and barriers to care that were contingent upon patient-, traditional healer-, and medical practitioner-specific attitudes. Notably, a subset of community members duplicated care across multiple, equally-qualified medical providers before seeing a traditional healer and vice versa. In view of this, the majority of our participants stressed the importance of an efficient, medically plural society. Though participants desired a more collaborative model, no consistent proposal emerged on how to bridge traditional and biomedical practices. Instead, participants offered suggestions which comprised three broad categories: (1) biomedical training of traditional healers, (2) two-way referrals between traditional and biomedical providers, and (3) open-dialogue to foster mutual understanding among traditional and biomedical

providers. Conclusion: Participants offered several approaches to collaboration between medical providers and traditional healers, however if we compare it to the history of previous attempts, education and understanding between both fields may be the most viable option in low- and middle-income contexts such as Nepal. Further research should expand and investigate opportunities for collaborative learning and/or care across not only Nepal, but other countries with a history of traditional and complimentary medicine.

No. 32

Prevalence of Post Covid-19 Psychiatric Symptoms Among Sample of Recovered Patients

Poster Presenter: Mohammed M. Hamouda, M.B.B.S.

SUMMARY:

ABSTRACT Background; Coronavirus disease (COVID-19) is a new strain that was discovered in 2019 and has not been previously recognized in humans. Common signs of infection include respiratory symptoms, fever, cough, shortness of breath, and difficulty breathing. Aim and objectives; to assess the prevalence of post covid19 psychiatric symptoms among sample of recovered patients, Subjects and methods; this case-control study was conducted in Al-Azhar University Hospitals. This study was conducted on 132 cases. All patients were divided into 2 groups: patients group included 66 previously infected COVID-19 patients and 66 cases as control group, Result; There was a statistically significant (p -value = 0.001) increased percentage of major depressive episode in case group after infection (19 patients, 28.8%) when compared with the group before infection (4 patients, 6%). Statistically significant (p -value = 0.001) increased percentage of Persistent depressive disorder in case group after infection (10 patients, 15.2%) when compared with the group before infection (0 patients, 0%). Highly statistically significant (p -value < 0.001) increased percentage of generalized anxiety disorder in case group after infection (27 patients, 40.9%) when compared with the group before infection (3 patients, 4.5%). Highly statistically significant (p -value < 0.001) increased percentage of insomnia in case group after infection (11 patients, 16.7%) when compared with the group before infection (0

patients, 0%). No statistically significant difference (p -value > 0.05) between case group before and after infection as regard manic or hypomanic episode, Panic disorder, OCD, PTSD and psychosis spectrum. INTRODUCTION Lower respiratory tract infections remain the infectious diseases with the highest mortality rate globally. In December 2019, a highly contagious acute respiratory syndrome caused by a novel coronavirus appeared in Wuhan, China. On March 11, 2020, the World Health Organization declared COVID-19 a pandemic.¹ Coronavirus disease (COVID-19) is a new strain that was discovered in 2019 and has not been previously recognized in humans. Common signs of infection include respiratory symptoms, fever, cough, shortness of breath, and difficulty breathing. In more severe cases, infection can cause pneumonia, severe acute respiratory syndrome, kidney failure, and even death.² Determinants of mental health and mental disorders are not limited to individual human characteristics, such as their ability to manage their own thoughts, emotions, behavior, and interactions with others, but also include social, cultural, economic, political, and environmental factors, such as national policies, social security, living standards, working conditions, and community support. Factors leading to these disorders include: genetics, nutrition, exposure to perinatal infections, and exposure to environmental hazards, such as deadly viruses.³ With the persistence and increasing severity of these pressures, and the inability to face them effectively and use negative coping methods, the individual reaches the stage of exhaustion in which he is exposed to physical diseases and psychological problems. The results of several studies revealed a high rate of psychological problems in this era, as these results indicated that more than a third of the world's population suffers from various forms of psychological disorders and problems.⁴ Fear is a well-known but common response to infectious disease outbreaks and people react in many individual ways to the perceived threat. Hypervigilance, for example, can arise from fear and anxiety and, in severe cases, lead to post-traumatic stress disorder (PTSD) and/or depression. ⁵ Fear of the unknown, in this case, the spread of disease and its impact on people, health, hospitals, and the economy, for example, causes anxiety in healthy individuals as well as those with pre-existing

mental health conditions.⁶ Aim and objectives was to assess the prevalence of post covid19 psychiatric symptoms among sample of recovered patients

SUBJECTS AND METHODS This study was case control study conducted at 6 months duration from December 2021 to May 2022 at Al-Azhar University Hospitals on sample of patients who were admitted at quarantine sections within 6 months of discharge. At first, clearance was obtained from ethical committee of Faculty of Medicine, Al-Azhar University, Cairo, Egypt, and then phone numbers of patients who were admitted at quarantine sections was obtained through permission of administration of Al-Hussein University Hospital and Sayed Gala University Hospital. We contacted patients on their phone numbers and prepared for interview in hospital. Participants in case group were 66, 33 males and 33 females, with mean age 40.3, 22 single and 44 married. In case group, there were 43 patients working at areas of high degree of physical contact such as health care facilities, education, childcare, food and necessary goods. 23 of case group lived in urban areas, 12 in rural areas, and 30 in slums. 8 of case group lived in places with crowding index < 1/room, 17 lived in places with crowding index 1-1.5/room, 14 lived in places with crowding index >1.5/room. While participants in control group were 66, 33 males and 33 females, with mean age 39.8, 21 single and 45 married. In control group, there were 14 patients working at areas of high degree of physical contact such as health care facilities, education, childcare, food and necessary goods. 29 of control group lived in urban areas, 30 in rural areas, and 7 in slums. 23 of control group lived in places with crowding index < 1/room, 28 lived in places with crowding index 1-1.5/room, 15 lived in places with crowding index >1.5/room.

Inclusion criteria of case group: Age: from age 18 to 60 years, Sex: both sexes, acceptance: acceptance of participants in this study by obtaining written consent, patients who got covid-19 infection within last 6 months, patients without history of psychiatric disorder before infection and patients without history organic neurological disorders like ICH due to brain tumors, vascular malformations, brain surgery or infections. **Exclusion criteria of case group:** Age: younger than 18 or older than 60, refusal to participate in this study, patients who got infection more than 6 month ago, patients with history of

psychiatric disorder before infection and patients with history organic neurological disorders like ICH due to brain tumors, vascular malformations, brain surgery or infections. **Inclusion criteria of control group:** Age: from age 18 to 60 years, sex: both sexes, acceptance: acceptance of participants in this study by obtaining written consent, patients without history of COVID-19 infection or sever flu-like symptoms that acquired home stay or hospital admission, patients without history of psychiatric disorder before infection and patients without history organic neurological disorders like ICH due to brain tumors, vascular malformations, brain surgery or infections. **Exclusion criteria of control group:** Age: younger than 18 or older than 60, refusal to participate in this study, patients with history of COVID-19 infection or sever flu-like symptoms that acquired home stay or hospital admission, patients with history of psychiatric disorder before infection and patients with history organic neurological disorders like ICH due to brain tumors, vascular malformations, brain surgery or infections

Methods: all subjects were submitted to two types of tools: **Diagnosis of COVID-19:** all patients were diagnosed as COVID-19 infection by: History and examination, laboratory tests: CBC, ESR, CRP, LDH, Serum ferritin, d-dimer, imaging: CT chest, as all participants in case group were moderate to severe infection and PCR **Diagnosis of psychiatric conditions:** all patients were subjected to: Clinical interview; including history from patients and informants and mental state examination (MSE). Structured Clinical Interview for DSM (SCID-I): the Arabic version of the SCID-I used in this study was translated and validated through previous research conducted by in the Institute of Psychiatry, Ain Shams University.⁷ **Statistical analysis:** Data were analyzed using Statistical Program for Social Science (SPSS) version 24. The following tests were done: Mann Whitney U test (MW): when comparing between two means (for abnormally distributed data). Chi-square test: was used when comparing between non-parametric data. Probability (P-value): P-value < 0.05 was considered significant. P-value < 0.001 was considered as highly significant. P-value > 0.05 was considered insignificant

RESULTS

Subject (N = 66)	Control (N = 66)	Stat. test	P-value
Age (years)	Mean 40.3	39.8	MW = 120 0.872NS ±SD 9.1 10.9
Sex	Male 33 50%	33 50%	X ² = 0.0 1.0 NS
Female	33 50%	33 50%	Marital status Single 22

33.3% 21 31.8% $X^2 = 0.03$ 0.852 NS Married 44
66.7% 45 68.2% Occupation High degree of physical
contact 43 65.2% 10 15.2% $X^2 = 34.3 < 0.001$ HS
Educational level Secondary school 16 24.2% 25
37.9% $X^2 = 2.86$ 0.905 NS University 50 75.8% 41
62.1% Residence Urban areas 23 34.8% 29 43.9% X^2
 $= 22.6 < 0.001$ HS Rural areas 12 18.2% 30 45.5%
Slums 30 45.5% 7 10.6% Crowding index $< 1/\text{room}$ 8
12.1% 23 34.8% $X^2 = 22.01 < 0.001$ HS 1-1.5/room 17
25.8% 28 42.4% $> 1.5/\text{room}$ 41 62.1% 15 22.7% MW:
Mann Whitney U test X^2 : Chi-square test NS: p-value
 > 0.05 is considered non-significant HS: p-value $<$
0.001 is considered highly significant. Table (1):
comparison of demographic data between studied
groups There was no statistically significant
difference (p-value > 0.05) between studied groups
(case and control) as regard age, sex, marital status
and educational level. There was highly statistically
significant (p-value < 0.001) increased percentage of
working at areas of high degree of physical contact in
case group (43 patients, 65.2%) when compared with
control group (10 patients, 15.2%). Subject (N = 66)
Control (N = 66) X^2 P-value Depressive episode 32
48.5% 26 39.4% 1.1 0.292 NS Manic or Hypomanic
episode 3 4.5% 2 3% 0.2 0.648 NS Dysthymic
disorder 34 51.5% 24 36.4% 3.07 0.079 NS Panic
disorder 8 12.1% 6 9.1% 0.01 0.914 NS OCD 13 19.7%
18 27.3% 1.05 0.304 NS PTSD 10 15.2% 8 12.1% 0.68
0.408 NS Generalized anxiety disorder 37 56.1% 10
15.2% 24.08 < 0.001 HS Psychosis spectrum 0 0% 0
0% ----- NS: p-value > 0.05 is considered non-
significant S: p-value < 0.05 is considered non-
significant X^2 : Chi-square test HS: p-value < 0.001 is
considered highly significant Table (2): comparison of
SCID-I Questionnaire between studied groups There
was highly statistically significant (p-value < 0.001)
increased percentage of generalized anxiety disorder
in case group (37 patients, 56.1%) when compared
with control group (10 patients, 15.2%). Before
infection (N = 66) After infection (N = 66) X^2 P-value
Major depressive episode 4 6% 19 28.8% 10.3 0.001
S Manic or Hypomanic episode 0 0% 2 3% 2.03 0.154
NS Persistent depressive disorder 0 0% 10 15.2%
10.8 0.001 S Panic disorder 2 3% 5 7.6% 1.36 0.24 NS
OCD 1 1.5% 4 6.1% 1.87 0.172 NS PTSD 1 1.5% 5
7.6% 1.57 0.21 NS Generalized anxiety disorder 3
4.5% 27 40.9% 24.8 < 0.001 HS Insomnia 0 0% 11
16.7% 12 < 0.001 HS Psychosis spectrum 0 0% 3 4.5%
3.06 0.079 NS S: p-value < 0.05 is considered non-

significant X^2 : Chi-square test HS: p-value < 0.001 is
considered highly significant Table (3): comparison of
clinical interview between case group before and
after infection There was a statistically significant (p-
value = 0.001) increased percentage of major
depressive episode in case group after infection (19
patients, 28.8%) when compared with the group
before infection (4 patients, 6%). Statistically
significant (p-value = 0.001) increased percentage of
Persistent depressive disorder in case group after
infection (10 patients, 15.2%) when compared with
the group before infection (0 patients, 0%). Highly
statistically significant (p-value < 0.001) increased
percentage of generalized anxiety disorder in case
group after infection (27 patients, 40.9%) when
compared with the group before infection (3
patients, 4.5%). Highly statistically significant (p-
value < 0.001) increased percentage of insomnia in
case group after infection (11 patients, 16.7%) when
compared with the group before infection (0
patients, 0%). No statistically significant difference
(p-value > 0.05) between case group before and after
infection as regard manic or hypomanic episode,
Panic disorder, OCD, PTSD and psychosis spectrum.
DISCUSSION Previous studies found significant levels
of psychological distress, anger, hopelessness,
depression, fear of contagion and, anxiety in
quarantined persons. 8 Moreover, the long-term
effects of quarantine on mental-health were also
reported three years after SARS outbreak. 9 Similar
results were found in hospital staff during the 2003
SARS outbreak and the current COVID-19. 10 The
main aim of this study was to assess the prevalence
of post covid psychiatric symptoms among sample of
recovered patients. The present study showed that
there was no statistically significant difference (p-
value > 0.05) between studied groups (case and
control) as regard age, sex and marital status. In
agreement with the present study Xiong et al., 11
reported that the median (IQR) age of the 538
COVID-19 survivors was 52.0 (41.0-62.0) years,
ranging from 22 to 79 years; 293 patients (54.5%)
were female. The median (IQR) age of the 184
patients in the comparison group was 50.0 (37.0-
61.0) years, ranging from 20 to 71 years, and 88
patients (47.8%) were female. The sex ratio, age
distribution and comorbidity between the two
cohorts showed no significant difference (all p $>$
0.05). In agreement with our study, the systematic

review and meta-analysis by Rogers et al., 8 reported that there were no significant association between psychiatric and neuropsychiatric outcomes in covid-19 with age and sex. Also, Ezzelregal et al., 12 reported no significant association between sex and the incidence of post-COVID depression. But older age was correlated with depression severity. The current study showed that there was highly statistically significant (p -value < 0.001) increased percentage of working at areas of high degree of physical contact in case group (43 patients, 65.2%) when compared with control group (10 patients, 15.2%). These areas include health care facilities, education, childcare, food and necessary goods. Also, there was highly statistically significant difference (p -value < 0.001) between studied groups (case and control) as regard residence and crowding index. These findings are consistent with studies investigating COVID-19 transmissibility which found transmission to be greater in indoor congregate settings, such as jails and buses. These settings share similar characteristics with overcrowded housing, including prolonged time spent with the same group of individuals, minimal ventilation, and multiple individuals occupying a limited space.¹³ Our results showed highly statistically significant (p -value < 0.001) increased percentage of working at areas of high degree of physical contact. These areas include health care facilities, education, childcare, food and necessary goods. In agreement, American study revealed that both healthcare practitioner and technical occupations, and healthcare support occupations have more than 90% of workers exposed more than once a month, and more than 75% of workers exposed more than once a week.¹⁴ Additionally, medical support staff, social care and transport workers had the highest risk of severe COVID-19 infection.¹⁵ Comparison of SCID Questionnaire between studied groups, showed that there was highly statistically significant (p -value < 0.001) increased percentage of generalized anxiety disorder in case group (37 patients, 56.1%) when compared with control group (10 patients, 15.2%). No statistically significant difference (p -value > 0.05) between studied groups (case and control) as regard SCID Questionnaire (depressive episode, Manic Hypomanic episode, Dysthymic disorder, Panic disorder, OCD and PTSD, psychosis spectrum). There was a statistically significant (p -value = 0.001)

increased percentage of major depressive episode in case group after infection (19 patients, 28.8%) when compared with the group before infection (4 patients, 6%). Statistically significant (p -value = 0.001) increased percentage of Persistent depressive disorder in case group after infection (10 patients, 15.2%) when compared with the group before infection (0 patients, 0%). Highly statistically significant (p -value < 0.001) increased percentage of generalized anxiety disorder in case group after infection (27 patients, 40.9%) when compared with the group before infection (3 patients, 4.5%). Highly statistically significant (p -value < 0.001) increased percentage of insomnia in case group after infection (11 patients, 16.7%) when compared with the group before infection (0 patients, 0%). No statistically significant difference (p -value > 0.05) between case group before and after infection as regard manic or hypomanic episode, Panic disorder, OCD, PTSD and psychosis spectrum. The study by Ezzelregal et al., 12 reported that regarding frequency of post-COVID depression among study participants, Beck depression inventory score showed that 59 (57.8%) participants had no depression, 24 (23.5%) had mild depression, 16 (15.7%) had moderate depression, and only 3 (2.9%) participants had severe depression. This result congruent with Xie et al., 16 who found that the COVID-19 patients presented nearly all the psychiatric symptoms of COVID-19 were mild-to-medium during very early recovery and concluded that under the stress of respiratory syndrome, the survivors are easy to get the harmful psychology symptoms. A recent systemic review and meta-analysis by Rogers et al., 8 reported that survivors of severe coronavirus infection suffered from depression (10.5%), insomnia (12.1%), anxiety (12.3%), memory impairment (18.9%), fatigue (19.3%), and irritability (12.8%) during the post-illness stage. In addition to these findings, Oh et al., 17 found that the risk of depression in the COVID-19 survivors was 3.34-fold higher than that in the control population. Ettman et al. 18 results showed that 20% of U.S adults had persistent depressive symptoms. However, limited studies were compared the psychological problems between COVID-19 survivors versus healthy controls, no studies have compared it using SCID Questionnaire. Also, in agreement with the present study Xiong et al., 11 reported that there was significantly higher

incidence of Somnipathy, Depression, Anxiety and Dysphoria among COVID-19 survivors in comparison to healthy controls. As well, Park et al., 19 reported that the prevalence of mental illness was higher in the COVID-19 group (738/6148, 12.0%) than in the control group (19 524/254 735, 7.7%, $P < 0.001$). Among mental illnesses, a higher prevalence of mood disorders, anxiety and stress-related disorders, and affective psychotic disorders were associated with the survivors. **CONCLUSION** In conclusion, a wide spectrum of psychiatric symptoms occurs in COVID-19 patients. Insomnia, Depression and Anxiety were significantly higher in post-COVID-19 patients. These findings suggest the urgent need of patients for extensive mental health services and psychological crisis intervention during the acute stage of COVID-19.

No. 33

Readmission Due to Cardiovascular Events After Initial Intake of SSRI or SNRI on Newly Diagnosed Patients With Depressive Disorders

Poster Presenter: Jessica Volina Kroin, M.D., M.S.

Co-Authors: Ivan Pagan Colon, M.D., Sara Khan, Clara Alvarez Villalba, Shivani Kaushal

SUMMARY:

Background Depressive disorders are a leading cause of disability worldwide. Research indicates that there is a high comorbidity between cardiovascular disease and depressive disorders. Studies have shown that serotonin reuptake inhibitors (SSRIs) and serotonin norepinephrine inhibitors (SNRIs) exert both beneficial and deleterious effects on the cardiovascular system. Considering the high prevalence of depressive disorders in patients with cardiovascular diseases, and the potential involvement of SSRIs and SNRIs in cardiovascular events, continued assessment of these medications is needed to optimize care for the many patients living with both. In this study, the authors aim to investigate if there is a relationship between the initial use of SSRI or SNRI on patients and hospital readmission due to cardiac events. **Methods** In this retrospective cohort study, the HCA Healthcare Database was utilized to obtain de-identified data of patients newly diagnosed with a depressive disorder who were initiated on an SSRI or SNRI. The patient

data was analyzed to determine the presence of readmission due to cardiac events within 30, 60, or 90 days of being discharged on SSRIs or SNRIs. Logistic regression was performed to determine whether there is a relationship between SSRIs or SNRIs and readmission rates due to cardiac events. Variables such as age, sex, race, marriage status, and specific SSRI or SNRI used were studied. **Results** After data was obtained and evaluated via statistical analysis, the variables noted 90-day readmission rate for cardiac events was significant for patients started on duloxetine ($p=0.0440$); that older age ($p < 0.0001$) and male sex ($p < 0.0001$) were each associated with an increased risk of 90-day readmission for cardiac events **Conclusion** Among patients initiated on SSRIs or SNRIs, it was found that duloxetine, older age, and male sex each individually led to significantly higher 90-day readmission rates for cardiac events. These results support the importance of monitoring patients started on SSRI or SNRI, with particularly consideration with cardiovascular events.

No. 34

Experiences of Teens With Critically Ill Parents: Describing Phenomena

Poster Presenter: Maya Barr, A.B.

Co-Authors: Varun K. Thvar, Nina Vasan, M.D., M.B.A., David Dupee, M.D., M.B.A.

SUMMARY:

Background: Critical illness of an adult may have profound mental health impacts on the lives of their loved ones and on their children. For teenagers with a critically ill parent, these impacts may have unique impacts on psychosocial functioning, mental health, and development. To illuminate such impacts, we conducted a descriptive study. **Methods:** In this study, we conducted group and individual interviews with teenagers of a critically ill parent ($n = 9$). Using a Three-Coding-Framework, themes describing the teenager's lived experiences were examined. **Results:** Four themes emerged. The first theme was parental health interference on teenagers which captured feelings of anxiety about their parent's mortality and of increased genetic likelihood of themselves getting sick as well as behavioral interference such as parents being unable to complete duties previously done (e.g., cooking,

attending school pickups, going to work) and the teenager engaging in parentification behavior to buffer these losses. The second theme to emerge was emotional experience and processing which marked anxiety as the most common and frequent emotion experienced, followed by acceptance. Participants also described distraction and secrecy as most frequent and useful ways of coping with the feeling of anxiety. The third theme to emerge was changes in relationships which captured changes in intimacy and disclosure in important relationships in the teenager's life during moments of their parent's acute illness (e.g., increasing intimacy with others, strengthening or weakening relationships with parents, depending on the secrecy of the illness). The final theme to emerge was information and secrecy which captured participant's perceptions of how much health information was helpful versus harmful to know about their critically ill parent. For some participants, this theme also captured their experience of learning about the diagnosis, if it occurred before they were fully aware. **Conclusion:** That experience of having a critically ill parent on teenage wellbeing varies by situation. The fallout effects of parent health can be encompassing situationally, logistically, emotionally, and relationally. Many participants in this study highlighted shifts in their family dynamic (e.g., changing roles or needing to assume more responsibility). Importantly, attention must be paid to how teenagers cope with the emotions experienced during times of critical illness of a parent. Having a critically ill parent may present a unique situation as teenagers are in the process of developing emotional processing skills, experiencing changing family dynamics, and experiencing increased anxiety. This study was supported by the Department of Psychiatry and Behavioral Sciences of Stanford Medicine.

No. 35

Experiences of Teenagers With Critically Ill Parents: Describing Phenomena

Poster Presenter: Maya Barr, A.B.

Co-Authors: Varun K. Thvar, Aishwarya Thakur, M.D., David Dupee, M.D., M.B.A., Nina Vasan, M.D., M.B.A.

SUMMARY:

Background: Critical illness of an adult may have profound mental health impacts on the lives of their loved ones and on their children. For teenagers with a critically ill parent, these impacts may have unique impacts on psychosocial functioning, mental health, and development. To illuminate such impacts, we conducted a descriptive study. **Methods:** In this study, we conducted group and individual interviews with teenagers of a critically ill parent (n = 9). Using a Three-Coding-Framework, themes describing the teenager's lived experiences were examined.

Results: Four themes emerged. The first theme was parental health interference on teenagers which captured feelings of anxiety about their parent's mortality and of increased genetic likelihood of themselves getting sick as well as behavioral interference such as parents being unable to complete duties previously done (e.g., cooking, attending school pickups, going to work) and the teenager engaging in parentification behavior to buffer these losses. The second theme to emerge was emotional experience and processing which marked anxiety as the most common and frequent emotion experienced, followed by acceptance. Participants also described distraction and secrecy as most frequent and useful ways of coping with the feeling of anxiety. The third theme to emerge was changes in relationships which captured changes in intimacy and disclosure in important relationships in the teenager's life during moments of their parent's acute illness (e.g., increasing intimacy with others, strengthening or weakening relationships with parents, depending on the secrecy of the illness). The final theme to emerge was information and secrecy which captured participant's perceptions of how much health information was helpful versus harmful to know about their critically ill parent. For some participants, this theme also captured their experience of learning about the diagnosis, if it occurred before they were fully aware. **Conclusion:** That experience of having a critically ill parent on teenage wellbeing varies by situation. The fallout effects of parent health can be encompassing situationally, logistically, emotionally, and relationally. Many participants in this study highlighted shifts in their family dynamic (e.g., changing roles or needing to assume more responsibility). Importantly, attention must be paid

to how teenagers cope with the emotions experienced during times of critical illness of a parent. Having a critically ill parent may present a unique situation as teenagers are in the process of developing emotional processing skills, experiencing changing family dynamics, and experiencing increased anxiety. This study was supported by the Department of Psychiatry and Behavioral Sciences of Stanford Medicine.

No. 36
Gut Dysbiosis and Blood-Brain Barrier Permeability in Schizophrenia

Poster Presenter: Annamarie Michele Nocera
Co-Author: Henry A. Nasrallah, M.D.

SUMMARY:

Background: The gut microbiome and the blood-brain barrier (BBB) represent two emerging areas of psychosis research. The gut microbiome and BBB are both disrupted in first episode psychosis and chronic schizophrenia.¹⁻³ In the gut, dysbiosis contributes to inflammation and a leaky gut-epithelial barrier.⁴ A permeable BBB may then permit inflammatory metabolites into the brain—a potential neurobiologic precursor of psychosis. Despite numerous modes of interaction, the gut microbiome and BBB have largely been separate areas of psychosis research. However, an integrated view of these topics will likely lead to important clinical implications in understanding the pathogenesis of schizophrenia. **Methods:** We conducted a literature review using specific keywords including schizophrenia, psychosis, microbiome, dysbiosis, gut-epithelial barrier, and blood-brain barrier, to identify controlled studies published on PubMed. We focused on studies that highlight the relationship between the gut microbiome and BBB in the development or progression of schizophrenia. **Results:** Multiple themes emerged in this search including **1)** co-occurrence of microbiome colonization, BBB formation, and environmental risk factors for schizophrenia, **2)** genetic risk factors for schizophrenia affecting epithelial barrier integrity in both the gut and brain, **3)** the role of psychosis-associated inflammation in the perpetuation of these disturbances, and **4)** the potentially restorative effects of atypical antipsychotics on the gut

microbiome and BBB. **Discussion:** The evolving literature on psychosis, the gut microbiome, and the blood-brain barrier reveal several pathways of interaction, with important implications in understanding the neurobiology of schizophrenia. Further well-powered studies, correlating specific gut microbiota alterations and blood brain-barrier dysfunction, are needed.

No. 37
Can People With Schizophrenia Form a Working Alliance With a Digital Therapeutic App: A Pilot Study

Poster Presenter: Uma Vaidyanathan
Co-Authors: Cassandra Snipes, Shaheen E. Lakhan, Cornelia Dorner-Ciossek, Tim Campellone

SUMMARY:

Background A key element of positive clinical outcomes in psychotherapy is the working alliance between the patient and their therapist. Digital therapeutics (DTx) or software with evidence of safety and efficacy in preventing, treating, or managing disease, including apps for therapy, have been steadily increasing in the past few years. To date, the question of whether patients can form an effective therapeutic digital working alliance (DWA) with a mobile app has yielded mixed evidence. The therapeutic alliance influences treatment outcomes in schizophrenia, but it is unclear whether this clinical population will form an effective therapeutic DWA with a mobile app. This question is of particular importance as there is a strong unmet need for therapy in schizophrenia, including for experiential negative symptoms (ENS). DTx, if proven efficacious with an effective DWA, can increase access to treatment and enable patients to take on a more active role in their own therapeutic journeys. **Methods** Forty-nine (49) participants with a range of ENS used a beta version of a digital therapeutic in a 3-week single arm study. DWA was assessed via the mobile Agnew Relationship Measure (mARM) each week, while negative symptoms (Clinical Assessment Interview for Negative Symptoms Motivation and Pleasure Scale [CAINS-MAP]) were assessed at baseline. App engagement and lesson completion were measured throughout the study. **Results** mARM total and subscale scores showed a positive DWA

was established after one week of use [median: 5.16, SD: 0.7] and maintained over 3 weeks [median: 5.18, SD: 0.8]. More critically, mARM scores were positively correlated with overall engagement (number of sessions) [$r^2 = 0.4$, $p = 0.01$]. There was also a trend towards an inverse relationship between mARM and CAINS-MAP. However, there was no relationship between CAINS-MAP and lesson completion. **Conclusions** Patients with negative symptoms of schizophrenia are able to form an effective DWA with a digital therapeutic. Similar to face-to-face therapy, the strength of the relationship with the app is directly associated with lesson completion. Interestingly, though there was a trend towards weaker DWA in those patients with greater ENS, this relationship did not appear to impact lesson completion. These findings showcase the potential of digital therapeutics with effective DWA in treating even severe mental disorders such as schizophrenia. This study was funded by Boehringer Ingelheim International GmbH and Click Therapeutics Inc.

No. 38

Pica and Coprophagia in Schizophrenia: A Case Report

Poster Presenter: Juliana Vanderburg

Co-Authors: Alia Warner, Alexandra Nicole Duran, Lauren Mordukhaev, M.D.

SUMMARY:

Background: Little research has addressed maladaptive eating behaviors in patients with schizophrenia¹. Pica, the eating of nonfood items, and coprophagia, the consumption of feces, occur at higher rates in the early stages of schizophrenia²; however, etiology of pica is poorly understood³. Understanding primary precipitants of pica in patients with schizophrenia is integral for providing effective treatment¹. We present a case study on interprofessional collaboration to ascertain differential diagnosis of a patient exhibiting symptoms of psychosis, pica/coprophagia, and obsessive-compulsive disorder (OCD). A 22-year-old Hispanic male involuntarily presented to an inpatient facility. His family reported that for 6 months prior to admission, he did not attend to ADLs, began consuming nonfood items (skin, feces, and plastic,

metallics), and evidenced visual hallucinations. While hospitalized, he maintained similar behavior. He frequently went to the bathroom to consume his feces and urine, sometimes masturbating prior to defecating. If disrupted, he sometimes became physically aggressive and persisted his behavior, often requiring emergency medication (12 times) and/or seclusion (5 times). He reported odd beliefs related to nutrition, believing that the consumption of nonfood items would better his health. At times, he compulsively rubbed hand sanitizer on his face and body. **Methods and Results:** He was trialed on olanzapine, haloperidol, lorazepam, and ultimately paliperidone to address agitation and psychosis. Medical rule-outs for his behavior included cognitive impairment, seizure, CNS lesion, and substance/alcohol use. He was referred to psychology for a psychodiagnostics evaluation to determine primary diagnosis given symptoms of psychosis, OCD, and pica. Intellectual disability was not considered given adequate academic achievement and functioning prior to onset. Psychology conducted a semi-structured interview and the Structured Clinical Interview for DSM-5 (SCID-5). Findings indicated absence of mood episodes and OCD. His history revealed several risk factors for schizophrenia and progression of illness was typical of schizophrenia. His pica behaviors declined following implementation of a consistent regimen of paliperidone per court ordered medication petition. **Conclusions:** Through interprofessional collaboration, diagnoses of schizophrenia and pica were determined based on symptomatology, response to treatment, and psychological assessment, with the caveat that pica occurred mainly in the context of psychosis. He steadily improved with antipsychotic medication and was discharged 34 days following admission. Recommendations post-discharge included continued medication management and evidence-based psychosocial interventions for schizophrenia. The case study illustrates the importance of accurate diagnostics and the power of interprofessional collaboration in providing psychiatric care.

No. 39

Emotional Recognition Deficits in Remitted Schizophrenia and Euthymic Bipolar I Disorder

Poster Presenter: Seunghee Won

SUMMARY:

Background Facial emotion recognition (FER) is an important task associated with social cognition because facial expression is a significant source of non-verbal information that guides interpersonal relationships.(1) Increasing evidence suggests that schizophrenia(2) and bipolar disorder(3) patients present deficits in FER. This study aimed to compare that differences in type and degree of the defect in FER with schizophrenia, bipolar I disorder to provide a basis for early diagnosis and providing time-appropriate therapeutic approach for these psychiatric illness. **Methods** Three groups were included in this study: remitted patients with schizophrenia (n=83), patients in euthymic states of bipolar I disorder (n=71), and healthy controls (n=56) who were matched for age, sex, years of education. FER deficits using the following eight standardized expressions: happy, fearful, disgusted, angry, sad, contemptuous, surprised, and neutral. Accuracy (commission error rates), correct response times of each trial were calculated. **Results** The mean scores of the Brief Psychiatric Rating Scale ($P<0.01$), the Montgomery-Åsberg Depression Rating Scale ($P<0.01$) were significantly higher in the Schizophrenia group than those in other groups, and the mean scores of the Young Mania Rating Scale ($P<0.05$) were significantly higher in the Schizophrenia group compared with that in the healthy controls. It is noteworthy that the values of all three indicators lay within the significant clinical cut-off levels. The overall intelligence scores was significantly lower in the Schizophrenia and Bipolar disorder groups than that in the HC group ($P<0.01$). There was poorer accuracy in the recognition of sad ($P<0.01$), and contempt emotion ($P<0.01$) in the two patient groups. The response times for the recognition of contempt ($P<0.05$) was delayed in the two patients groups ,and that for happy($P<0.05$), sad ($P<0.01$), fearful ($P<0.05$) were delayed in the Bipolar disorder group, and, that for neutral emotion($P<0.05$) was delayed in the Schizophrenia group. **Discussion** These finds suggest that the patients with schizophrenia and bipolar I disorder have a defects in the perception and response of specific emotions in the remitted states. Therefore, it is thought that a defects in facial recognition should be considered in the process of assessing and

treating patients with bipolar I disorder as well as those with schizophrenia. This study was supported by a grant from the Kyungpook National University Research Fund (2021).

No. 40

Safety of Antipsychotic Long Acting Injectable Use During Pregnancy: A Review With Considerations for Clinical Practice

Poster Presenter: Gary Wu, M.D.

Co-Authors: Ghulam Mujtaba, M.D., Jackie Rajani, M.D., Nishaan Nagarakanti, D.O.

SUMMARY:

Background: Antipsychotic long acting injectables (LAI) have been around since 1966 when fluphenazine enanthate was first introduced. There is currently limited data on the safety of oral antipsychotic use in pregnancy, but even scarcer evidence on safety of antipsychotic LAI use during pregnancy. Per FDA pregnancy categories, all antipsychotic LAI's fall under Category C (not enough adequate human trials to confirm safety). This review aims to look in the literature for potential adverse outcomes of LAI use during pregnancy and to offer considerations for antipsychotic LAI treatment during pregnancy and in the postpartum period. **Methods:** PubMed and Embase were queried for articles with key terms including: antipsychotic, long acting injectable, and pregnancy. Inclusion criteria included pregnant mothers with a confirmed diagnosis of schizophrenia, schizoaffective disorder, or bipolar disorder, and were treated with either a first generation (FGA) or second generation (SGA) LAI. Primary endpoint was adverse outcomes of LAI use during pregnancy on mother and baby. Secondary endpoint looked at differences between FGA and SGA LAI use. **Results:** Pregnant mothers generally tolerated LAI well without the need for discontinuation, however, there was an increased risk for gestational diabetes mellitus, weight gain, and dyslipidemia with LAI use as a class effect. There were no observable differences between FGA and SGA LAI use, but aripiprazole was shown to present with a better metabolic profile when compared to other SGA LAI's. Congenital malformations were noted in mothers with LAI use including incidences of cardiovascular defects, undescended testes,

meningocele, and hip dysplasia. However, the absolute risk of congenital malformations is not greater than that of the general population. There were no significant differences in the development of side effects, severity of side effects, or increased risk for congenital malformations among primiparous versus multiparous mothers who used LAI's. There was also no evidence to support a relationship between trimester exposure and adverse outcomes. Antipsychotics were observed to be excreted in breastmilk, but for infants who breastfed, there were undetectable levels of antipsychotics in infant plasma at 6 weeks postpartum. **Conclusion:** Pregnancy is a time of physiological and psychologic upheaval for women. Based on current evidence, the risks of antipsychotic LAI use are not statistically significant to prevent use or to warrant discontinuation in eligible pregnant mothers. It is important to discuss with the patient about prior risk factors such as history of diabetes mellitus, hypertension, or other prior pregnancy complications before considering treatment with an antipsychotic LAI due to potential worsening of metabolic measures. Another consideration is whether a patient would like to breastfeed as different antipsychotics can affect lactation levels due to dopamine antagonism or partial agonism.

No. 41

Antipsychotic Use in California Nursing Homes Increased During the Covid-19 Pandemic

Poster Presenter: Lauren Dugan

Co-Authors: Jodie Horowitz, Saba Ahmed, Tyler Canetto, David Seigler, M.D.

SUMMARY:

Introduction: Antipsychotic (AP) medications are often used inappropriately to manage behavioral and psychological problems among nursing home residents. The Center for Medicare and Medicaid Services (CMS) National Partnership was launched in an effort to reduce AP use. However, rates remain high and nursing homes are not required to report use among residents with schizophrenia, Tourette's, or Huntington's. Previous research has suggested that this auditing exemption has led to over-diagnosing of these excluded conditions, namely schizophrenia, to maintain low reported rates of AP

usage. The COVID-19 pandemic has brought unprecedented challenges to nursing homes, and this study aims to analyze changes among relevant pharmaceutical and diagnostic measures within short- and long-term California nursing homes during the pandemic. **Methods:** Data were retrieved from the Minimum Data Set 3.0 Public Reports of the CMS from Quarter 3 of 2018 to Quarter 2 of 2022. Time periods were defined as *Pre-COVID* (2018 Q3-2020 Q1), *Early-COVID* (2020 Q1-2020 Q4), and *Late-COVID* (2020 Q4-2022 Q2). Pharmaceutical variables of interest included prescription rates of APs, antianxiety, antidepressants, and hypnotics. Diagnostic rates of Alzheimer's, dementia, psychotic disorder, and exempt diagnoses (schizophrenia, Tourette's, or Huntington's) were also included. Linear regression t-test analysis was performed to examine the differences in the rates of change of antipsychotic prescriptions and selected diagnoses between the three time periods. **Results:** The rate of AP usage accelerated significantly during *Early-COVID* compared to *Pre-* and *Late-COVID* times (both $p < 0.002$). There was a significant slowing of AP use during *Late-COVID* compared to *Pre-COVID*, however rates of AP use remain high (22.65%). Compared to *Pre-COVID* rates, the *Early-COVID* rates of antianxiety and antidepressant use significantly increased along with rates of schizophrenia (all $p < 0.005$) while rates of hypnotics use and Alzheimer's decreased (both $p < 0.05$). Compared to *Late-COVID*, the *Early-COVID* period showed significantly higher increases in the rates of antidepressants, Huntington's, and schizophrenia (all $p < 0.0005$). There were no significant differences in the rates of Tourette's, dementia, psychotic disorder, or psychosis-related hallucinations or delusions across any of the three timepoints. **Conclusion:** Nursing home residents in California were prescribed antipsychotics more frequently during the height of the COVID-19 pandemic response. Although data suggest a slowing of antipsychotic usage, there is no indication of an active reversal to pre-pandemic prescription rates. Nearly 19% of California nursing home patients are currently considered to have schizophrenia, much higher than the national average (11.4%). Results from this preliminary study may help inform future studies, policies, or funding allocations to nursing homes to improve residents' quality of care.

No. 42

Treatment Without Consent in Adult Psychiatry Inpatient Units: A Retrospective Study on Predictive Factors

Poster Presenter: Giulia Meroni

SUMMARY:

Background The use of coercion is one of the most important ethical and clinical challenges in psychiatry. It can be deleterious for patients and stressful for caregivers. Procedures involving forced medication are very different among countries. In Switzerland, forced medication can be applied in case of emergency (Art. 435 of the Civil Code) or over a longer period of time in case of endangerment of others or oneself in case of persistent refusal (Art. 434 Civil Code). Many studies focus on coercion, but only a few target the use of forced medication. The aim of this study is to analyze the specific administration of medication without consent regulated by the Article 434 of the Swiss Civil Code. **Methods** Forced medication prescriptions were retrospectively analyzed between 2018 and 2021 in the adult psychiatry division of the Geneva University Hospitals. The prescription of a medication under Article 434 was defined as the main (dependent) outcome variable. We considered the following clinical and socio-demographic data: age, gender, main diagnosis and Health of the Nation Outcome Scales (HoNOS) score. For descriptive analyses, T-test and Pearson's chi-square test were used to respectively compare continuous and categorical variables. A binary logistic regression was performed in order to analyze the factors influencing the use of involuntary medication. **Results** Seventy one out of 4326 inpatients (1.64%) received a treatment according to article 434 during their hospitalization. This measure of coercion was associated with the following factors: female gender and diagnosis of psychotic disorder. HoNOS global scores at admission were not significantly different in the forced medication group and in the control group. However, HoNOS item 1 score (aggressive behavior) was significantly lower for the involuntary treatment group. **Conclusion** Female patients suffering from psychosis are more at risk of receiving an involuntary and repeated medication under article 434 of the Swiss Civil Code during their hospital stay. The risk of self-endangerment

(deterioration in psychosocial functioning or behavioral disorganization) is the main reason of this medical decision. This treatment concerns a specific subgroup of inpatients and it could be related to positive and negative symptoms of psychotic disorders. As a matter of fact, psychotic denial, poor insight and a different perception of reality may induce patients to neglect themselves. Other risk factors should be further investigated in order to support our hypothesis. Future prospective studies should focus on the perception of patients about this type of coercion in order to prevent it and improve the adherence to care. Follow up after discharge might be useful in order to evaluate if a long-term benefit in this measure of coercion is possible.

No. 43

Interdisciplinary High Acuity Patient Huddles Initiated to Decrease Staff Injuries

Poster Presenter: Ashley Alexander, M.S.N., R.N.

Co-Author: Charles Glawe

SUMMARY:

Background Emergency Department and psychiatric caregivers, such as psychiatrists, nurses, counselors, and therapists, are at increased risks for injury (Bizzarri, et al, 2020; Larson, et al, 2019; Roppolo, et al, 2020). The Psychiatric Crisis Department (PCD) at Nationwide Children's Hospital was created in 2020 as an emergency center for pediatric psychiatric needs and it was identified that staff were at risk for patient violence (Bizzarri, et al, 2020; Roppolo, et al, 2020). In an effort to reduce staff injuries, the PCD instituted High Acuity Patient Huddles. Utilizing the 5P hand-off basis, the huddle covers the most important information related to escalations and past patient aggression. These huddles include participation by the psychiatrist, pediatrician, clinical lead supervisor of the counseling team, and the nursing team (registered nurses, mental health specialists, and patient care assistants). Led by the charge nurse, this huddle communicates patient demographics, relevant diagnoses, and history of aggression/escalations to staff. It also discusses the behavior support plan, what personal protective equipment is indicated, and the team's plan to ensure that the patient has the safest visit. At times the plan may include the physical room the patient

will be, adjustments to their care, safety precautions, and possible medications that may be indicated. All members of the interdisciplinary team share relevant knowledge related to the patient and what may have been successful in the past. If an unknown, reportedly combative patient is arriving by a community partner, a huddle may still occur, but instead of discussing the patient's past and known information, the team focuses on a proposed plan, which may change depending on the patient's presentation upon arrival. This huddle provides pertinent information regarding known risks related to a specific patient and their caregivers to all staff caring for the patient, ensures team members are aware of what de-escalation methods work well for the patient, and the plan for the patient's visit. This also allows the patient to receive the best care in the Psychiatric Crisis Department. Results There was a reduction in the number of days away, restricted and time (DART) away per 1,000 admissions from 0.66 to 0.30 before and after implementation of the huddle and from 5.20 to 3.17 per 200,000 hours worked. There was a reduction in OSHA-reportable injuries from 1.1 to 0.30 per 1,000 admissions and 8.67 to 3.17 per 200,000 hours worked. Results did not achieve statistical significance but suggest that patient huddles can reduce employee injuries and should be evaluated in larger sample across settings).

No. 44

National Trends in Mental Health-Related Emergency Department Visits Among Children, Adolescents, and Young Adults, 2011-2020

*Poster Presenter: Tanner Bommersbach, M.D., M.P.H.
Co-Authors: Alastair John Stewart McKean, M.D.,
Mark Olfson, Taeho Greg Rhee, Ph.D.*

SUMMARY:

Background: There has been increasing concern about the burden of mental health (MH) problems among youth, especially since the COVID-19 pandemic. Trends in MH-related emergency department (ED) visits are an important indicator of unmet outpatient MH needs. This study sought to estimate annual nationally-representative trends in MH ED visits among US children, adolescents, and young adults between 2011-2020. **Methods:** Data from the 2011-2020 National Hospital Ambulatory

Medical Care Survey (NHAMCS) were used to examine MH-related ED visits for youth ages 6 to 24 years old (unweighted=49,515). MH ED visits included visits related to psychiatric or substance use disorders and were identified by either 1) International Classification of Diseases-9th Revision, Clinical Modification (ICD-9-CM) (2011-2015) and ICD-10-CM (2016-2020) discharge diagnosis codes or 2) reason-for-visit (RFV) codes. We estimated the annual proportion of MH-related pediatric ED visits from 2011-2020. Subgroup analyses were performed by demographics and broad psychiatric diagnoses. Multivariate-adjusted logistic regression analyses estimated factors independently associated with MH ED visits controlling for period effects. **Results:** From 2011 to 2020, the weighted number of pediatric MH visits increased from 4.8 million, or 7.7% of all pediatric ED visits, to 7.5 million, or 13.1% of all pediatric ED visits (adjusted odds ratio [aOR], 2.02; 95% confidence interval [CI], 1.70-2.41; $p<0.001$). Significant linearly increasing trends were seen among children, adolescents, and young adults, with the greatest increase among adolescents, and across sex and race/ethnicity. While all types of MH visits significantly increased, suicide-related visits demonstrated the greatest increase, from 0.9% to 4.2% of all pediatric ED visits (aOR, 5.41; 95% CI, 4.05-7.23; $p<0.001$). Despite the rise in MH ED visits, there was no significant change in MH visit characteristics, including the percent seen by a MH professional (<20% of all pediatric MH visits) or the urgency or length of visits. **Conclusions:** Over the last ten years, while the total number of pediatric and young adult ED visits has remained relatively stable, the proportion of visits for MH reasons has approximately doubled, including a five-fold increase in suicide-related visits. These findings underscore an urgent need to improve crisis and emergency MH service capacity for children, adolescents, and young adults, especially those experiencing suicidal symptoms.

No. 45

Self Harm Among High-Risk Gender Expansive and Cisgender Adolescents: Associations Between Family Conflict and Emotion Regulation

*Poster Presenter: Meg Wallace
Co-Authors: Sophia Siciliano, William Booker,
Christina Chick, Ph.D., Rachael Negron*

SUMMARY:

Background: Suicide is the 2nd leading cause of death in 10-14 year-olds, and the 3rd leading cause of death in 15-24 year-olds (CDC, 2020). The prevalence of suicidal ideation (SI) and suicide attempts (SA) among youth have increased from 2009-2019: in 2019, 18.8% of high school students in the US seriously considered attempting suicide and 8.9% made an SA (Ivey-Stephenson et al., 2020). Specific populations hold higher risk for self-harm (SH; defined as any self-injurious behavior, with or without intent to die), including gender expansive (GE) youth - individuals whose sex assigned at birth does not fully align with their gender identity (Daniolos et al, 2018). GE youth have higher rates of SH with lifetime prevalence of SI between 45-95% and SA between 26-56% (Atteberry-Ash et al., 2021). We will describe differences in family functioning between cisgender and GE youth at high risk for suicide. Family conflict is a risk factor for SA in adolescents (Yang et al., 2021) and among GE youth, 57% of trans youth from rejecting families had SA(s), compared to 4% of trans youth from families who accepted their gender identity (Matsuno, 2019). Challenges with emotion regulation are associated with SH (Colmenero-Navarrete et al., 2021) and may link family functioning and SH. **Methods:** The study sample includes at least 30 youths, ages 13-18, at least 10 whom self-identified under the GE umbrella (e.g., "transgender male"). Participants are enrolled in an IOP DBT treatment due to recent SH and are participating in an ongoing randomized controlled trial of a DBT-based parenting intervention. Youth and parents complete several self-report measures, including a demographic questionnaire (gender identity, race, etc.), the McMaster Family Assessment Device (FAD; Epstein et al., 1983), the Conflict Behavior Questionnaire (CBQ; Prinz et al., 1979), and the Difficulties in Emotion Regulation Scale (DERS; Gratz & Roemer, 2004), which will be the dependent measures examined in this study. **Statistical Plan/Results:** Data is currently being collected and will be finalized prior to poster presentation. Because of the small sample size and difficulty of accurately measuring the normality of the distribution in such a small sample, nonparametric tests (Wilcoxon Signed-Rank Tests and Spearman correlations) will be used. Accordingly, medians and interquartile ranges will be

presented as measures of central tendency and variability. All analyses conducted on youth data will be considered to be exploratory and provided for descriptive purposes only. **Conclusion:** The findings will help provide a nuanced understanding of the relationship between gender identity and family functioning and inform clinical intervention and future research directions - a critical topic given the high rates of SH among GE youth.

No. 46**The Effects of MDMA-Assisted Therapy on Self Experience in Participants With Severe PTSD: Findings From the Placebo-Controlled Phase 3 Mapp1 Study**

Poster Presenter: Julie Wang

Lead Author: Bessel Van Der Kolk

Co-Authors: Rachel Yehuda, Charlotte Harrison, Berra Yazar-Klosinski

SUMMARY:

Introduction: There has been a resurgence of interest in the therapeutic potential of psychedelic substances such as 3,4-methylenedioxymethamphetamine (MDMA). Primary findings from MAPP1, a randomized, double-blind, placebo-controlled, multi-site Phase 3 clinical trial of participants with severe PTSD (NCT03537014) indicated that MDMA-assisted therapy (MDMA-AT) induced significant and robust attenuation in the Clinician-Administered PTSD Scale for DSM-5 compared with placebo-AT. The current exploratory analysis evaluated results of 3 additional transdiagnostic outcome measures collected during this study related to participants' self-experience. **Methods:** Participants with severe PTSD were randomized 1:1 to receive manualized therapy with either MDMA or placebo with 3 experimental as well as 3 preparatory and 9 integrative therapy sessions. In each of the 3 experimental sessions, participants received an initial dose of MDMA HCl (80 mg to 120 mg) or placebo, and a supplemental half-dose 1.5 to 2.5 hours later (40 mg to 60 mg). Symptoms were measured at baseline and 2 months after the last experimental session using the 20-item Toronto Alexithymia Scale (TAS-20), the 26-item Self Compassion Scale (SCS), and the 63-item Inventory of Altered Self-Capacities (IASC). Models were fitted

to examine within-subjects and between group changes from baseline to follow-up in total TAS-20 scores, total SCS scores, and individual IASC factors adjusting for baseline scores, dissociative subtype, and accounting for multiple comparisons. **Results:** Overall, 90 participants were randomized and completed ≥ 1 experimental dosing session (MDMA-AT, $n=46$; placebo-AT, $n=44$); 84% (76/90) had histories of developmental trauma, and 88% (79/90) had suffered multiple traumas. There were no statistically significant differences between the MDMA-AT and placebo-AT groups across demographic and baseline variables. Follow-up data for the TAS-20, SCS, and IASC were missing for 8 participants; all available data were used in the analysis. Least Square Means (SE) change scores indicated that MDMA-AT facilitated significantly better improvement than placebo-AT on the TAS-20 (-12.85 [2.43] vs -1.51 [2.26]; $P<0.0006$), the SCS (1.36 [0.20] vs 0.23 [0.16]; $P<0.0001$), and the IASC factors of “idealization disillusionment” (-0.75 [0.21] vs -0.20 [0.17]; $P=0.05$), “susceptibility to influence” (-0.56 [0.15] vs 0.02 [0.15]; $P=0.0099$), and “affect skill deficit” (-1.60 [0.92] vs -0.84 [1.45]; $P=0.02$). **Conclusion:** Collectively, these findings suggest that MDMA-AT may improve transdiagnostic mental processes associated with poor treatment response and may be useful for identifying PTSD phenotypes that are more likely to respond to MDMA-AT. Psychotherapy alone may not sufficiently compensate for the debilitating effects of deficient self-experience for confronting and overcoming traumatic experiences.

No. 47

Exploring Link Between Adverse Childhood Experience (ACE) and Conduct Disorder in Young Offenders: A Literature Review

Poster Presenter: Pranita Mainali, M.D.

Co-Authors: Yash Bhattarai, Rajesh Kumar Mehta, M.D.

SUMMARY:

Objective: ACE is found to be more prevalent among young offenders in comparison to the general young population(1). The aim of the study is to explore the link between ACE and Conduct disorder (CD).

Methods: Search was conducted with the search

terms “Adverse Childhood Events”, “Childhood trauma”, “Childhood neglect”, “Sexual abuse”, “Physical abuse”, and “Conduct Disorder”, in PubMed, Google Scholar, and PsycINFO with total hits of 147 studies removing duplicates. 77 articles within the past 10 years were reviewed without any restriction to Geographic location. **Discussion:** Literature suggests a deficit in emotional regulation in children with early life stressors explained as Hypothalamic-pituitary-adrenal-axis dysregulation. Intense reaction to external stimuli is seen in populations with ACE resulting in impulsive Behavior, aggression, rule-breaking behavior (2), and early arrest. Literature suggests a positive association of CD with Physical Abuse (RRR=3.15) and sexual abuse (RRR=11.46) (3). Retrospective studies show an odd ratio (OR) of 3.57 with any type of maltreatment and OR of 3.90 with multiple maltreatment resulting in CD (4). This finding indicates a complex interplay between ACE, CD, and criminal behavior(5).

Conclusion: ACE in juvenile offenders is understudied and raises concern for multiple underlying mental health problems. More studies are warranted to understand the underlying pathology of childhood trauma and problematic behavior among the vulnerable population and reduce the risk of CD.

No. 48

Gnrh Agonist Therapy Induced Aggression in Children. a Case Report

Poster Presenter: Pranita Mainali, M.D.

Co-Authors: Mihika Nepal, Rahoul Gonsalves, M.D., Rajesh Kumar Mehta, M.D.

SUMMARY:

Background: Gonadotropin-releasing hormone agonists (GnRHa) are the mainstay of treatment for precocious puberty. Common treatment modalities include monthly intramuscular leuprolide or triptorelin injection, or a yearly histrelin sub-dermal implant. Although local reactions are common with these treatments, behavioral side effects have not been commonly cited in the literature. We describe a patient who displayed aggression while on GnRHa therapy with Supprelin (a histrelin implant). Case Report: An 8-year-old female patient presented to the psychiatry clinic via pediatrician referral for worsening anxiety, aggression, and violent behavior.

The patient was diagnosed with central precocious puberty and was subsequently started on Supprelin. 8 weeks after the implant, parents noticed worsening anxiety with behavioral problems such as screaming, kicking, and biting. Sertraline was initially started by the pediatrician for treatment with no response. After the second replacement of Supprelin, she continued to display extreme irritability, frequent meltdowns lasting for more than 2 hours, property destruction at home, and increased self-harming behavior. The patient required several physical restraints by the family for the safety of the patient and due to aggression towards the family. The patient also demonstrated worsening anxiety leading to her refusal to step out of the house and started co-sleeping with her parents. Parents also noticed that the patient started having difficulty with concentration and attention at school and home along with difficulty dealing with large groups. Neuropsychiatric testing was conducted which ruled out ADHD and ASD. TSH, MRI head, and neurological evaluation are normal. Sertraline was changed to escitalopram to treat her symptoms. Our current plan is to evaluate the patient's symptoms after the removal of the implant as the current symptoms are highly suggestive of behavioral side effects from her GnRH implant, Supprelin. Discussion: There have only been a few documented cases of behavioral changes in adults on GnRHa therapy(2, 3, 4, 5, 6), and the majority discuss the benefit of GnRHa for the treatment of aggression, very few cases report documented increase in behavioral and emotional lability. The symptoms documented range from waxing and waning levels of aggression, kicking, screaming, crying, and even biting other children with near immediate resolution of symptoms after the removal of the implants (1.) Conclusion: Even though the use of GnRHa has shown to be effective in the treatment of psychosis, hallucinations, and emotional lability, it might actually be a catalyst for a host of emotional and psychiatric disturbances as seen in our patient. This highlights the need for more research to be done in this area and a collaborative health professional approach to better understand and treat various impacts of GnRHa therapy.

No. 49

Do Virtual Court Hearings Favor Patient Freedom?

Poster Presenter: Kate Warren

Co-Author: Lakshmi Karamsetty

SUMMARY:

Background: Digital technology has shown to have an impact on the deliverance of mental health services.¹ In March 2020 the field of psychiatry was affected in many unpredictable ways due to the COVID-19 pandemic. One change that took place was the use of virtual appointments within the civil court system.² Treatment Over Objection (TOO) is one such process that occurs in inpatient psychiatric units. In order to obtain TOO status a mental health hygiene lawyer and hospital counsel testify whether a patient should or should not be court mandated to take medications based on an assessment of the patient's competency and the patient's best interests.³ Prior to the pandemic this process took place in person however, during the pandemic it became virtual in many NYC hospitals. The purpose of this research study is to compare the outcome of virtual court proceedings and if, due to this shift, patients are more likely to be discharged from an inpatient psychiatric unit despite a multidisciplinary team's recommendations for further treatment.

Methods: This study includes the review of all patients who were brought to mental hygiene court between 2018-2019 and 2021-2022, either for TOO or retention at Mount Sinai Beth Israel. Variables extracted included demographic information (age, gender, race), clinical information (ACT team or AOT), and outcomes of the court proceedings. Continuous variables were examined using t-tests, and categorical variables were compared using chi square tests (using Fisher's exact test when dictated by sample size). **Results:** We anticipate including 100 patients in the final analysis of this project. On an initial review of a subset of included patients, we found that approximately 60% of patients that attended court were Men, 50% were White, 20% were originally admitted on 9.27 (2-physician certification) legal status. 33% of patients had an ACT Team, and 20% had a history of AOT. The average age of patients was 47 (with a standard deviation of about 20 years). Over 85% of cases brought before the mental hygiene court were successful (treatment over objection/retention granted). When comparing

data before and after the COVID-19 pandemic, we found no difference in outcomes from the court ($p=1.0$), gender ($p=1.0$), race ($p=0.61$), age ($p=0.41$), original legal status of admission ($p=1.0$), percentage with an ACT Team ($p=0.10$), or patients with AOT ($p=0.20$). **Conclusions:** Although based on the initial analysis minimal difference is seen between both populations, it is possible a trend may be observed as the sample size increases. It is also possible that although there may not be a notable difference between in-person and virtual civil court hearings outcomes there may be a shift in patient attitudes with these proceedings impacting their view on mental health care. Further analysis and research are crucial to better understand the implementation of virtual mental health services on inpatient populations.

No. 50

Lactate and Lactate-to-Pyruvate Ratio as Peripheral Biomarkers of Treatment-Resistant Depression

Poster Presenter: Juliana De Figueiredo

Co-Authors: Joao De Quevedo, Giselli Scaini, Ph.D., M.Sc.

SUMMARY:

Major Depressive Disorder (MDD) affects roughly 264 million people worldwide, which translates to approximately 4.5% of the global population, being recognized by the World Health Organization (WHO) as one of the major causes of disability worldwide. Antidepressant medication or psychotherapy are common treatments for MDD; however, not all patients respond to treatment. Treatment-resistant depression (TRD) is a form of depression where standard medications tend to provide little to no relief. Mitochondria are organelles responsible, both directly and indirectly, for multiple cellular functions and signaling cascades, being considered a central platform in the execution of diverse cellular events. In this framework, it is particularly intriguing to think of the mitochondria as an active regulator of many of the biological phenomena involved in depression and the efficacy of or resistance to the most widely used pharmacological treatments. This study aims to evaluate biochemical markers associated with mitochondrial function in patients with MDD and TRD. In this interim analysis of an ongoing pilot

study, we included 17 healthy controls, 11 patients with MDD, and 14 patients with TRD. All subjects underwent a comprehensive clinical interview and diagnosis of MDD and TRD according to the DSM-V-TR. Depressive symptoms and functional status were assessed with the Montgomery Asberg Depression Scale (MADRS) and Global Assessment of Functioning (GAF). Quantitative analysis of lactate and pyruvate plasma levels was performed using commercial kits. One-Way ANCOVA, after controlling for age, gender, BMI, and ethnicity and race showed that TRD patients had higher lactate levels and lactate-to-pyruvate ratio when compared to healthy controls and MDD patients. Pyruvate levels were higher in TRD patients without controlling for confounders but did not hold statistical significance after the above covariates were added to the model. Moreover, we found that lactate and pyruvate levels, and lactate-to-pyruvate ratio predicted the severity of depressive symptoms. On the other hand, only lactate levels and lactate-to-pyruvate ratio predicted functional decline in our cohort. In summary, our findings corroborate previous studies and support the notion that mitochondrial dysfunction is integral to the pathogenesis of MDD and may play a role in clinical and functional outcomes. Although preliminary, our results suggest that the lactate levels and lactate-to-pyruvate ratio might serve as one of the diagnostic bases of TRD. However, in this preliminary study, we cannot rule out the possibility of a type I error since it is a cross-sectional study with a small sample size. Therefore, our results should be seen as exploratory and require replication and validation.

No. 51

Predictive CLIA Biomarkers of Treatment Response in Major Depressive Disorder

Poster Presenter: Molly Delzio

Co-Authors: Victor Reus, M.D., Owen Mark Wolkowitz, M.D.

SUMMARY:

Background: Finding appropriate SSRI treatment for Major Depressive Disorder (MDD) often involves a lengthy trial and error process with mixed results. The identification of biomarkers that predict MDD SSRI response could refine treatment methods and

even inform on the biology of MDD and on antidepressant mechanisms of action. Nonetheless, research on biomarkers in the context of MDD has produced inconsistent results. The present study investigated whether routine CLIA lab blood tests, which are commonly obtained in most patients, can serve as biomarkers associated with a diagnosis of MDD and SSRI treatment response. Methods: We analyzed blood sample data from 118 physically healthy, unmedicated participants with MDD (44.1% male, average age: 37.05 ± 12.67) and 92 controls (39.1% male, average age: 37.01 ± 12.99). Participants with MDD were treated with SSRIs over an 8-week period. Treatment response was defined as at least a 50% reduction in Hamilton Depression Rating Scale (HDRS) symptoms. Results: Unmedicated MDD participants did not differ meaningfully from controls on CLIA lab values. However, compared to SSRI Responders, MDD participants who did not respond to treatment had higher pre-treatment levels of cholesterol, LDL cholesterol, and red blood cells (RBCs) (all $p < 0.03$) and lower levels of mean corpuscular hemoglobin (MCH), mean corpuscular hemoglobin concentration (MCHC), and folate (all $p < 0.01$). Group differences remained significant after controlling for age, gender, BMI, and smoking history. After false discovery rate (FDR) analysis to correct for multiple comparisons, cholesterol, LDL cholesterol, and RBCs did not differ significantly in Non-responders and responders. Correlations between biomarker levels and change in depression symptoms over the 8-week treatment period supported these findings. A greater reduction in depression symptoms was associated with higher pre-treatment levels of MCH, MCHC, phosphorus, and folate (all $p < 0.05$) and lower levels of cholesterol, LDL cholesterol, and RBCs (all $p < 0.04$). Folate and phosphorus correlations were no longer significant after FDR analysis. Conclusion: Certain commonly measured blood biomarkers significantly predicted SSRI effectiveness in MDD. We replicated previous findings of low folate and high cholesterol associating with poor SSRI response and report novel data implicating altered hematological indices— notably decreased hemoglobin concentrations—in non-responders. These results, if replicated, may inform SSRI treatment protocols by highlighting the relevance of routine blood panels and may inform on physiological moderators of treatment response.

Further analyses will explore possible hematologic associations with inflammation and oxidative stress which may explain some of these findings.

No. 52

Safety and Efficacy of Zuranolone Repeat Treatment Using PHQ-9 Depression Severity in Patients With Major Depressive Disorder From the Shoreline Study

Poster Presenter: Theresa Vera

Co-Authors: Greg Mattingly, M.D., Andy Czysz, Lawrence Adams, James Doherty, Ph.D.

SUMMARY:

Introduction: Current treatment options for major depressive disorder (MDD) may be suboptimal for some patients due to slow time to effect and low rates of remission. Many patients with MDD on currently available antidepressants experience impaired functioning and diminished quality of life. Zuranolone (ZRN) is a positive allosteric modulator of synaptic and extrasynaptic GABAA receptors and a neuroactive steroid in development as an oral, once-daily, 14-day treatment for adults with MDD and postpartum depression. SHORELINE is an ongoing, open-label, longitudinal, Phase 3 study (NCT03864614) assessing safety and efficacy of episodic treatment with ZRN 30 and 50 mg in adults with MDD. Results from the patient-reported 9-item Patient Health Questionnaire (PHQ-9) assessed after initial and repeat treatment courses from SHORELINE for the 30-mg Cohort are reported. Methods: Eligible patients were aged 18–75 years with MDD and 17-item Hamilton Rating Scale for Depression total score (HAMD-17) ≥ 20 . HAMD-17 responders ($\geq 50\%$ reduction from baseline) at Day (D)15 of treatment period 1 were followed-up for ≤ 48 weeks. Patients continuing past D28 completed the PHQ-9 at baseline and every 2 weeks (scoring for depression severity: 0–4, minimal; 5–9, mild; 10–14, moderate; 15–19, moderately severe; and 20–27, severe). Patients with PHQ-9 ≥ 10 and HAMD-17 ≥ 20 were eligible for repeat treatment with ZRN 50 mg at $\geq D70$ of each study period. Results: Patients in the ZRN 30-mg Cohort ($n=725$) were mostly female (67.4%) with a baseline mean \pm SD HAMD-17 of 25.3 \pm 4.1. The baseline mean \pm SD PHQ-9 ($n=650$) was 17.3 \pm 5.2 (severity: minimal 0.3%, mild 8.8%, moderate 18.6%,

moderately severe 34.3%, and severe 38.0%). Mean±SD change from baseline (CFB) in PHQ-9 at D15 in treatment period 1 was -10.3±7.2 (severity: minimal 40.6%, mild 30.6%, moderate 15.9%, moderately severe 7.8%, and severe 5.1%, respectively). For initial responders, the mean CFB±SD PHQ-9 at D15 of treatment course 2 was -8.3±6.4 (n=249; severity: minimal 32.9%, mild 37.3%, moderate 18.1%, moderately severe 8.4%, severe 3.2%); for treatment course 3, -9.1±6.2 (n=137; severity: minimal 29.2%, mild 38.0%, moderate 15.3%, moderately severe 12.4%, severe 5.1%); for treatment course 4, -11.0±6.6 (n=91; severity: minimal, 34.1%, mild 37.4%, moderate 15.4%, moderately severe 6.6%, severe 6.6%); and treatment course 5, -10.8±7.6 (n=38; severity: minimal 36.8%, mild 26.3%, moderate 15.8%, moderately severe 10.5%, severe 10.5%), respectively. Incidence and severity of treatment-emergent adverse events (TEAEs) were highest in treatment courses 1 and 2; no new trends in TEAEs and no evidence for increased suicidal ideation were identified with any treatment course. Conclusions: Treatment with ZRN was generally well tolerated and led to improvements in self-reported depressive symptoms across all treatment courses. These results support further development of ZRN as an episodic treatment for MDD.

No. 53

Comparative Treatment Patterns Among Commercially Insured Patients With Major Depressive Disorder With Insomnia

Poster Presenter: Tiina Drissen

Lead Author: Maryia Zhdanova

Co-Authors: Porpong Boonmak, M.D., Ph.D.,

Hrishikesh Kale, Manish Kumar Jha, M.B.B.S.

SUMMARY:

BACKGROUND: Insomnia, a key symptom of major depressive disorder (MDD), is associated with increased severity, duration, and burden of MDD.^{1,2,3} To highlight unmet needs of patients with MDD and insomnia (MDDIS), this study compared treatment patterns of commercially insured patients with MDDIS to those with MDD without evidence of insomnia (other MDD) and those without MDD in the United States (US). **METHODS:** Adults with and

without MDD were selected from IBM® MarketScan® Commercial Database (01/2016-06/2021). Patients with MDD and insomnia diagnoses during the 1-year follow-up period starting on the first MDD diagnosis (index date) were included in the MDDIS cohort, while those without insomnia diagnoses or treatments were included in the other MDD cohort. Cohorts were exactly matched on index quarter and propensity score matched on demographics and Charlson Comorbidity Index. Treatment patterns based on pharmacy and medical claims were compared among cohorts during the follow-up period using Poisson regressions. **RESULTS:** The MDDIS cohort included 52,280 patients (mean age: 43.7 years; 67.3% female). Proportion of patients claiming =3 unique antidepressants was 19.9% in the MDDIS and 5.9% in the other MDD cohort (risk ratio [RR]: 3.37, p<0.001). The most common antidepressant class claimed in the MDDIS and other MDD cohorts was selective serotonin reuptake inhibitors, 62.4% and 54.9% respectively (RR: 1.14, p<0.001). Yet, trazodone, a sedating serotonin modulator, was the most claimed antidepressant in the MDDIS (32.6%) compared to 5.5% in the other MDD cohort (RR: 5.91, p<0.001). Tricyclic antidepressants were claimed more in the MDDIS (9.0%) than the other MDD (2.9%) cohorts (RR: 3.07, p<0.001). Furthermore, psychostimulants were also claimed more in the MDDIS (9.2%) compared to the other MDD (7.2%) cohorts (RR: 1.26, p<0.001). A larger proportion of MDDIS cohort (13.6%) had mental health-related hospitalization compared to the other MDD (8.5%) and non-MDD (0.4%) cohorts (RRs: 1.61, 31.22, respectively, all p<0.001). A larger proportion of MDDIS cohort (6.3%) had cardiovascular-related hospitalization compared to the other MDD (4.8%) and non-MDD (1.4%) cohorts (RRs: 1.32, 4.67, respectively, all p<0.001). Finally, a larger proportion of MDDIS cohort (5.5%) had metabolic-related hospitalization compared to the other MDD (4.5%) and non-MDD (1.5%) cohorts (RRs: 1.21, 3.73, respectively, all p<0.001). **CONCLUSION:** Among commercially insured patients in the US, MDDIS compared to other MDD is associated with higher use of antidepressants, particularly with sedative effect. Treatment profiles of patients with MDDIS may also reflect the need to balance conflicting goals of helping patients sleep at night and ameliorating day-time fatigue. Data on

hospitalizations suggest that burden of MDDIS extends beyond mental health and is associated with cardiovascular and metabolic disorders.

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No. 54

WITHDRAWN

No. 55

Depression Prevalence in Industries and Occupations: Considerations for Mitigating Disease Burden Within at-Risk Populations

Poster Presenter: Kyra Forrest

Co-Authors: Apsara Ravichandran, Lingjin Zheng

SUMMARY:

Objective: The objective is to discuss the prevalence of depression within various occupations and industries and find similarities that could guide further research and policies regarding mental health within the workplace. **Methods:** This study primarily referenced the Behavioral Risk Factor Surveillance System (BRFSS) of the Centers for Disease Control and Prevention 2013-2015 data. Data are collected from all 50 states, 3 U.S. territories, and the District of Columbia through a phone survey each year. **Results:** Regarding the prevalence of depression, the lowest adjusted prevalence for Industry were Animal Production at 7.51% [95% CI 5.91-9.49], Warehousing and Storage at 9.38% [95% CI 7.14-12.25], and Merchant wholesalers, nondurable goods at 10.22% [95% CI 7.81-13.27]. The highest adjusted prevalence for Industry were Petroleum and coal products manufacturing at 25% [95% CI 16.64-36.91], Private households at 25.36% [95% CI 20.47-30.97], and Museums, historical sites, and similar institutions at 23.3% [95% CI 16.33-32.11]. The lowest adjusted prevalence for Occupation were Firefighting and prevention workers at 2.58% [95% CI 1.31-5.01], Water transportation workers at 3.54% [95% CI 1.7-7.22], and Air transportation workers at 4.22% [95% CI 1.61-10.63]. The highest adjusted prevalence for Occupation are Communications equipment operators at 26.58% [95% CI 17.19-38.7], Entertainment attendants and related workers at 25.56% [95% CI 19.4-32.88], and Architects, surveyors, and cartographers at 23.2% [95% CI 16.58-31.46]. **Conclusion:** By recognizing the drastic

differences in the prevalence of depression between various industries and occupations, researchers can further identify possible factors and address them in at risk populations. Implications for the future: There is a great possibility for change in workforce policies, more efficient screening, timely treatment, spreading awareness, and general promotion of improved mental health within the workforce.

No. 56

Unique Community Educational Outreach Program: Mental Health Simulations for the State Police Cadets

Poster Presenter: Raman Baweja

Co-Authors: Christa Coleman, Susan Pazuchanics, Theresa Brosche, Alan Zulick

SUMMARY:

Background: Mental health is a growing concern in the United States and police officers are often the first to respond to mental health crises in the community settings. Police response to these situations requires training and practice in order to know how to reduce the level of force while maintaining safety-de-escalation strategies in an effort to maintain safety for all involved. There are only 23% counties in Pennsylvania have crisis intervention programs, this is crucial for the cadets to have experience and practice with de-escalation communication strategies in control settings. The purpose of this community outreach educational program is to offer active experimentation in addressing mental health crises related with psychiatric disorders through a simulation-based experiential learning for Pennsylvania State Police Cadets. **Methods:** The Department of Psychiatry and Behavioral Health collaborated with the simulation center, and State Police Academy leadership to develop the first simulation-based training for mental health crisis. A pilot of the simulation was held via webinar to set expectations for all members of the simulation. Five mental health crisis cases (psychotic symptoms, autism and limited communication, suicidal behaviors, manic symptoms and agitation) were portrayed by live actors with the assistance of visuals and sounds to assist in increasing the fidelity of the simulation. Each simulation lasted for 5-7 minutes followed by

debriefing sessions by faculty for around 25 minutes. To assist in engaging all of the cadets in the simulation, they were given an observational checklist for each case. The first Mental Health Simulation was held at the PA state police academy in October 2022 and included approximately 100 cadets. **Results:** The participants found the activity to be realistic and quite valuable. On the observation sheets, participants reported verbal and nonverbal communication techniques the “de-escalation actor” did well and what else could be done to improve their de-escalation efforts. In addition, the cadets also performed a “teach back session” to demonstrate they understood the material. This program was well received by the participants and as one participant reported, *“For me the significance was being able to provide education that truly may save the life of someone in a mental health crisis when law enforcement is involved.”* There were also suggestions to have stimulation in a more natural setting for example – aggressive youth with autism in woods. Cadets also reported that debriefing by content experts was very helpful to understand psychiatric disorders in addition to communication strategies. **Conclusions:** Police officers are often the first to respond to mental health crises in the community settings. Stimulation of mental health was well received by cadets as well as State Police Academy. Simulated mental health crises is an effective method to teach state police cadets the skill of de-escalation.

No. 57

Development and Effectiveness of Project Echo (Extension for Community Healthcare Outcomes) for Child Mental Health

Poster Presenter: Raman Baweja

Co-Authors: Jasmin Lagman, Nungshitombi

Chongtham, Meenal Pathak, Ailyn Diaz

SUMMARY:

Objectives: Although 20% of U.S. children and adolescents have diagnosable psychiatric disorders. Only a small fraction of them receives evaluation and treatment by child and adolescent psychiatrists. Primary care providers (PCPs) are the main provider for behavioral health. It is imperative to provide support to PCPs and other community mental health

providers to fill the gaps of unmet needs of child and adolescent mental health. We created a specialized Project ECHO (Extension for Community Healthcare Outcomes) for Child Mental Health (CMH), which aims to improve mental health care delivered by PCPs and other community mental health providers. **Methods:** Project ECHO is an established learning framework, allows specialists to form effective “telementoring” relationships with community providers. The learning hub of ECHO consists of content experts who educate and guide providers in the community, empowering them to manage complex cases through a combination of a brief didactic presentation and clinical case discussion. ECHO focuses on collaborative case management where the discussion of clinical cases is from the participants’ own practice therefore, allowing participant driven interaction, which enhances contextual learning. The CMH ECHO series was created, comprising 6 topics including anxiety and depressive disorders, attention deficit hyperactivity disorder, autism, safety assessment and medication management. The first cycle of this series consisted of 1-hour weekly sessions between September to November, 2022. **Results:** The CMH ECHO Series was well received with 105 participants registering for this series: various mental health providers, including primary care physicians (pediatricians and family medicine), nurse practitioners, registered nurses, case managements, social workers, therapists etc. Every session was well attended (participants range 21-45) and more than 95% participants reported an increase in their knowledge base, ability to provide care and sessions were relevant to their clinical practice. Around 83% reported the ECHO series has increased their capacity to treat children and adolescents with mental/behavioral health issues. Participants also provided written feedback *“Topics, resources and information provided have been very well received by this varied group and clearly information is being utilized”* about ECHO series. **Conclusions:** Youth mental health is in crisis in the U.S and there is extreme shortage of Child and Adolescent Psychiatrist. PCPs are the main provider for behavioral health in youth and there is a need for empowering them to manage more complex cases. Furthermore, there is also a need to involve behavioral health providers to learn about mental health resources in the community. The CMH ECHO

model is well received by mental health providers and reported improvement in their knowledge base and increased their ability to treat children and adolescents with mental/behavioral health issues.

No. 58

Utilization of Medication for Opioid Use Disorder for Hospitalized Patients at 5 New York City Public Hospitals With an Addiction Consultation Service

Poster Presenter: Yasna Rostam Abadi

Co-Authors: Carla King, Roopa Marcello, Charles Barron, Jennifer McNeely

SUMMARY:

Background: Medical hospitalization represents an important touchpoint for identifying and treating patients with opioid use disorder (OUD) [1]. Medication for OUD treatment (MOUD) is a key component of care for patients with OUD, which can reduce adverse outcomes during the hospital stay and increase engagement in post-discharge treatment [2]. The Consultation for Addiction Care and Treatment in Hospital (CATCH) program has been implemented in several New York City public hospitals to improve care for substance use disorders (SUD). CATCH is a multidisciplinary addiction consultation service for inpatients with SUD that can facilitate the initiation or continuation of MOUD for those with OUD. **Aims:** We aimed to describe the rate and correlates of MOUD utilization for hospitalized patients with opioid diagnoses during the first year of the CATCH program. **Methods:** Data were extracted from electronic health records for 5 municipal public hospitals with the CATCH program. Adult (18+ years) inpatient admissions with a length of stay of longer than one day, and diagnosis of OUD or opioid-related poisoning listed among the billing diagnoses, were eligible; those without medication orders data were excluded. A total of 711 admissions, representing 631 unique patients, were eligible for analysis. The data did not identify if patients received a CATCH consult. Cases with at least one order of buprenorphine, methadone, or naltrexone were classified as having received MOUD. Sex, age, race, and insurance were entered as fixed-effects into the mixed model logistic regression model, and the hospital was entered as a random-effect to account for clustering within hospitals.

Results: Patients in the sample were predominantly male (73.5%), with mean age (SD) of 50.8 (14.1) years, and identified as Black (27.6%), White (25.8%), and "Other" race or ethnicity (41.7%). Insurance was Medicaid (69.1%), Medicare (21.1%), and "other payor/uninsured" (9.8%). In total, 376 admissions (52.9%) had at least one MOUD ordered, with methadone being the most common (77.9%). Patients identified as White (OR=1.6; 95% CI: 1.0-2.4, p: 0.04) and "other" races (OR=1.7; 95% CI: 1.2-2.5, p=0.005) were more likely to receive MOUD during their hospital stay than those identified as Black. Patients with "other payors" were less likely to receive MOUD than those with Medicaid (OR=0.4; 95% CI: 0.2-0.7, p=0.001), but rates of MOUD for Medicare patients were not significantly different (OR=0.9, 95% CI: 0.5-1.4). **Conclusion:** A majority of hospitalized patients received MOUD. Yet even in hospitals with addiction consultation services, there may be room for improvement. Not all patients with OUD can receive a consultation, and barriers to providing MOUD may exist even for those who do. A more in-depth understanding of the drivers of racial disparities in treatment and other contextual, organizational, and population-specific barriers and facilitators contributing to hospital-based MOUD is needed [3].

No. 59

A Review of the Clinical Trials Derived From the Systematic Reviews of Psilocybin Use in Substance Use Disorders

Poster Presenter: Ritvij Satodiya, M.D.

Lead Author: Tapan Parikh

Co-Authors: Adam Bied, Maxwell Miller

SUMMARY:

Background: While psilocybin has been recognized for its psychedelic properties since antiquity, its therapeutic potential has only recently been considered. Barriers to scientific scrutiny have included its perceived adverse effects, its regulatory status, and an apparent lack of academics' interest. An increasing interest has emerged over the prior decade prompting reexamination of its therapeutic properties. This review aims to study the current evidence of psilocybin's effectiveness for the management of substance use disorders (SUD).

Method: Data Source- A comprehensive search of published systematic reviews on 'psilocybin' was conducted on PubMed from the inception till January 6, 2023. **Study Selection-** Systematic reviews published in English with human clinical trials. The authors screened each systematic review for extraction of studies of psilocybin as a treatment (or potential treatment) of SUD for this review. **Data Extraction-** A screening followed by a full-text analysis of extracted studies was conducted. Each eligible study was coded on study components pertinent to author information, study design, sample characteristics, interventions studied, treatment characteristics, and study outcomes. **Results:** The primary search generated 29 systemic reviews of which 14 were removed per exclusion criteria. Following title-abstract review, 15 articles were selected for full-text review of which 10 were considered for final review. Of the 10 clinical trials included, all were published between 2000 and 2020, none were RCTs, one was a retrospective self-report survey, 6 were online surveys, and 3 open label studies. Six of the studies identified a single, identifiable, diagnosis ((alcohol use disorder (AUD, 3 studies) nicotine use disorder (NUD, 3 studies)) and four studies included a variable and a complex reporting with no specific treatment diagnosis. The pooled sample was large (n = 2,996). Racial/ethnic demographics were not reported. Gender distribution was variable (35-86%) across the studies. Study summary of included reviews was not analyzable collectively. Key findings included: (1) Psilocybin may have role in AUD treatment and NUD; (2) Microdosing may be used as an indicator of intervention need; (3) Psilocybin augmentation of Motivational Enhancement Therapy showed positive effect on AUD; (4) A single study suggests self-reported reductions in cannabis, opioid, and stimulant misuse after taking a psychedelic drug in non-clinical setting. **Conclusion:** While some literature supports psilocybin as a potential treatment of SUD present evidence is lacking. There are no RCTs for its use in SUD, several studies were merely survey-based and overall evidence base is extremely poor. Psilocybin, as a scheduled substance, raises some concerns about induction of a SUD in an already vulnerable population. At present, psilocybin as a treatment for SUD appears to be in its

preliminary phase of existence when compared to its other uses.

No. 60

Innovative Solutions to Enhancing Stimulant Disorder Treatment Outcomes: Evaluating Associated Cognitive Impairment Improvements With Exercise

Poster Presenter: Enna Selmanovic

Co-Authors: Kathlene Tracy, Andrew Delgado

SUMMARY:

Objective: As we look to the future with creative solutions, stimulant use disorder interventions indicate the need for novel additions to usual treatments, such as exercise. Evidence indicates that physical exercise induces structural and functional modifications to the brain and spares age-related loss of brain tissue required for cognition. Stimulant users show signs of cognitive impairment and consequently, cognitive impairment in substance use disorder predicts treatment outcomes. To further investigate the role of exercise on cognitive performance during substance-use intervention, secondary analysis of cognitive testing publicly available data from the Stimulant Reduction Intervention using Dosed Exercise (STRIDE) randomized control trial was completed.

Methods: Using the Clinical Trials Network Archive, demographics, Stroop Color Word and self-report Timeline Follow Back data for 175 participants was acquired from the STRIDE Study. A linear mixed model was utilized to estimate effects at 0, 12 and 37 weeks for participants randomized into

either (1) Vigorous Intensity High Dose Exercise Augmentation or (2) Health Education Intervention Augmentation while undergoing standard substance use treatment.

Results: The linear mixed model demonstrated Stroop Color Word score improved over the course of the study at 37 weeks, $p = <0.001$, 95% CI [1.35, 3.98] although no significant improvement was noted after 12 weeks of study participation, $p = 0.348$, 95% CI [-0.68, 1.93]. Group assignment did not have an effect on Stroop Color Word scores, $p = 0.093$, 95% CI [-0.35 – 4.60].

Conclusions: Further research is needed investigating exercise used in conjunction with standard substance use interventions to explore impact on cognitive decline regularly seen in patients with stimulant use disorder. The use of additional neuropsychological measures that better characterize cognitive functioning over time may help fill gaps in understanding. In addition, health education intervention may also impact choices to be more active as improvements in cognition were seen in both conditions and should be further explored.

No. 61

Beyond the Classic 28-Day Rehab: Mindfulness and Self-Reflection as Core Elements of a Successful Addiction Treatment

Poster Presenter: Fauzia Zubair Arain, M.D.

Co-Authors: Arley Giraldo, Daniella Colombo, Kishan Shah, Petros Levounis, M.D., M.A.

SUMMARY:

Introduction: The COVID-19 pandemic and its disruption in healthcare resources escalated substance use disorders (SUDs) and other addictive behavioral disorders (2). The limitation in rehabilitative and virtual mental health services has added another layer of complexity for treatment. Reports of increasing patient admissions in rehabilitation units highlight the need for newer, condensed models consisting of both pharmacological treatments and therapeutic skills to address this crisis (1). **Objectives:** Introduce a highly structured SUD rehabilitation treatment model with mindfulness techniques proven in treatment of substance use disorders. While working with patients from minority backgrounds suffering from health disparities and trauma or when an addiction unit is unavailable, this model can serve particularly useful in helping residents, fellows, physicians, psychologists, and social workers be an effective part of their team. **Methods:** After a literature search on Pubmed, Psych Info, and Google Scholar, we selected 5 studies to formulate and present a comprehensive 28-day Substance Use Rehabilitation treatment model crafted at the East Orange Veteran’s Affair Medical Center’s Substance Use Residential Program, affiliated with University Hospital, where 65 patients were admitted to the facility from September-November 2022. Mindfulness training sessions, along with standard psychotherapy skills (DBT: Distress Tolerance, Emotion Regulation, Interpersonal Effectiveness), were used to enhance relapse prevention skills (3). Mindfulness-based interventions allow for improved inhibitory control over subcortical regions and historically rewarding behaviors that help mitigate the altered salience of cues seen in addiction (4). Standard medications were used to manage withdrawal symptoms, as well as common psychotropic medications for comorbid mental illnesses and substance-induced mood disorders. **Results:** Data collected by the Addiction Policy Forum surveyed 1,079 individuals with SUD reporting discontinuation in treatment due to the pandemic. Results showed 20% with increase in SUD, 5% reporting an overdose, 1% surviving a fatal overdose, and a large number have reporting increased challenges, specifically seeking in-person treatment. Our comprehensive model with

innovative techniques of medication sessions has shown improved adherence (83% attendance) during the SUD rehabilitation program to mitigate challenges brought on by the pandemic. Conclusion: Individual hospital systems have crafted creative ways to comprehensively treat SUD and mental health issues within a 28-day time frame. This multidisciplinary model with added mindfulness and meditation sessions has shown promise in treating a predominantly low socioeconomic and diverse community in the wake of the pandemic and can be easily adopted in collaboration with other institutions with a similarly high demand for SUD treatment and rehabilitation.

No. 62

Tranq Dope: Clinical Experience Managing Xylazine and Fentanyl Use in Philadelphia

Poster Presenter: Kerriann Shalvoy

Co-Authors: William Jangro, Erica Molaro

SUMMARY:

Xylazine, often referred to as “Tranq,” is a potent alpha-2 agonist initially developed for use in veterinary medicine for horse anesthesia. It was first found in the Philadelphia opioid supply in 2006 when it was then cut into a small subset of the opioid supply to extend the duration of the high from a single episode of opioid use (Wong 2008). Since that time, the prevalence of xylazine in the Philadelphia opioid supply has dramatically increased as the highly lethal fentanyl has replaced heroin as the predominant opioid used. Fentanyl has a shorter half life than heroin, which may explain why xylazine has become more commonly used to extend the opioid high from fentanyl as heroin has all but vanished from the illicit opioid supply. From 2015 to 2021, the number of opioid overdoses in the city of Philadelphia that involved xylazine annually increased from 15 to 434 (Soslow 2021). This reflects analysis of the illicit substance supply that shows xylazine is becoming far more prevalent, with 90% of opioid samples tested in Philadelphia in 2021 containing xylazine (Soslow 2021). Fentanyl cut with xylazine has recently begun to spread to surrounding areas and is likely to expand nationally (Hoffman 2023). It is essential for Philadelphia addiction treatment providers share their clinical experience

with this novel non-opioid substance which has created novel adverse effects and challenges among people with Opioid Use Disorder. Here we present three case vignettes that highlight the challenges in xylazine/fentanyl: 1) slowly healing peripheral xylazine wounds, 2) combined withdrawal syndrome marked by autonomic instability and 3) the absence of a reversal agent for xylazine overdose. In this poster, we share de-identified photos of the unique xylazine wounds. We also review the limited evidence base for treatment of xylazine-related morbidity and review rational clinical approaches that are currently used in the absence of extensive clinical research on xylazine treatment. Finally, we review the systems level challenges to management of the particularly deforming and slowly healing xylazine wounds, which has required rapid establishment of accessible wound care services in Philadelphia which will likely also be needed across the country as xylazine continues to infiltrate the national opioid supply.

No. 63

The New Hampshire Hospital Screening and Referral Algorithm (NHHSRA) for Substance Use in People With Serious Mental Illness

Poster Presenter: Corneliu Natanael Stanciu, M.D.

SUMMARY:

Objective: Substance use is a common co-occurrence among psychiatrically hospitalized adults, yet it is especially difficult to identify in those with serious mental illness. Existing screening instruments are not feasible for individuals with serious mental illness as they rely heavily on subjective self-report. This study aimed to develop and validate an objective substance use screening instrument for use in such population. **Methods:** Objective elements were extracted from existing substance use screening instruments and used to develop a new, data-driven referral tool, the New Hampshire Hospital screening-and-referral algorithm (NHHSRA). Descriptive statistics were employed to compare NHHSRA summed score and individual patient data elements in a convenience sample of patients who were referred to the Addiction Services by expert addiction psychiatrist evaluation, and those who were not. Pearson correlation coefficients and

logistic regression models assessed the association between patient referral and the overall NHHSRA score and individual items. The NHHSRA was then piloted in a smaller convenience sample of patients against the standard clinical-based identification for substance use treatment needs. Results: The instrument comprises of five objective items. These were tested in a sample of n=302 sequentially admitted adults with serious mental illness. Three of the items were significantly associated with likelihood of benefitting from referral for substance use interventions (Maximum Likelihood Estimate and standard deviation (SD) for positive non-THC toxicology screen or >0% blood alcohol = 3.61 (0.6); diagnosis of a substance use disorder = 4.89 (0.73); medication assisted treatment or relapse prevention = 2.78 (0.67)) and these were prioritized in building a decision tree algorithm. The area under the ROC curve for the NHHSRA was 0.96, indicating the NHHSRA has high overall sensitivity and the algorithm was capable of distinguishing between patients needing substance use intervention versus those who don't with 96% accuracy. In the pilot implementation study of another 20 patient admissions, the NHHSRA accurately identified 100% (n=6) of patients deemed to benefit from substance use interventions by expert addiction psychiatric evaluation. The standard clinical-based referral process identified only 33% (n=2) and erroneously identified another 4 for referral to substance use intervention that would not have been warranted. Conclusions: The NHHSRA holds promise in its ability to improve objective and timely identification of substance use in a seriously mentally ill inpatient population, helping to facilitate treatment.

No. 64

Avoiding the Chill Pill: Verbal De-Escalation Training for Psychiatric Residents in a Simulated Lab Setting

Poster Presenter: Natalie Jarahzadeh, M.D.

SUMMARY:

Simulated training has been shown to improve outcomes in acute psychiatric settings through promoting risk reduction and safety, strengthening of staff collaboration, especially psychiatric trainees by bringing about improvement in confidence and competence. Prevention-based models

recommended by the United States Preventive Task Force (USPTF) are the current standard of care (1) at most institutions and these guidelines lend reason to actively ensure the creation of a safe clinical and working environment designed to preemptively intervene, anticipate and alleviate the greatest risk for adverse outcomes. Recognizing the gap in trainee curricula at our Community Mental Health Center and promising results from simulation-based training studies, the Department of Psychiatry deemed it beneficial to develop a standardized training course aimed at training residents in de-escalating agitated patients and appropriately deploying more restrictive measures when needed. We will explore the impact our training course has on: knowledge, self-perceived preparation, comfort level with agitated patients and confidence level with agitated patients. We will also qualitatively explore calming and triggering behaviors used during a simulation with an agitated patient. The broader objectives of conducting this research project are: 1)?Understand the existing knowledge and skill gap when working with agitated patients. 2)?Discover advantages of using simulation-based learning over didactics only, to improve residence competence, preparedness, skill, and confidence. 3)?Identify appropriate measures and techniques to foster resident and patient safety through simulation. 4)?Develop solutions to implement verbal de-escalation training among residents/staff in various settings.

No. 65

Resident Led Workshop on Fertility Preservation and Family Planning in Residency Training

Poster Presenter: Martha Vargas, M.D.

Co-Authors: Stefana Morgan, M.D., Isaac Johnson, M.D., Rubi Luna, M.D.

SUMMARY:

Background: Family building, which is defined by some as growing one's family by the addition of children, is rarely discussed during medical training even though 1 in 4 female physicians face infertility challenges. The literature on family building in psychiatry residency is scant and there is no explicit family building curriculum during residency training. We thus designed a pilot workshop to promote family building and fertility education in our

academic residency program. **Methods:** A group of residents and faculty developed a 4-hour workshop to promote education on the topics of family planning and fertility. Content and speaker selection for this workshop were determined by input from trainees and faculty. The workshop was divided into 4 sessions: 1) a general lecture on fertility led by a fertility coach and reproductive endocrinologist, 2) a panel of resident parents sharing their experiences with parenting, 3) an interactive session with female senior faculty members sharing their motherhood path through academic medicine, and 4) LGBTQ-focused session led by former program directors to educate trainees on alternative family building paths. A sample of 64 resident physicians who attended the workshop were surveyed before the workshop to assess baseline understanding of family planning issues. A post-workshop survey was designed to evaluate the quality and value of the workshop and to identify future directions for curriculum development on physician reproductive health.

Results: The pre-workshop survey captured 48 responses by trainees and faculty. Average age of the respondents was 33 years old. 51% of pre-workshop survey responders identified as male, while 58% of post-workshop respondents identified as female. Most pre-workshop respondents reported they and/or their partner are currently delaying pregnancy due to career and financial constraints (64%), that they have not considered options for fertility preservation or discussed family planning goals during medical training. Nearly half of respondents agreed it is important for trainees to have the space to discuss this topic. Most attendees found the workshop to be valuable with 73% reporting satisfaction with the topics presented. We found evidence of changes in attitudes with more than half post-survey respondents reporting interest in learning about family planning and fertility during residency training, and 48% reporting motivation to advocate for policies like expanding parental leave and access to fertility preservation in residency.

Conclusions: Implementing a formal curriculum on family building has the potential to provide psychiatry trainees with the knowledge and space to make educated decisions about their own fertility and family planning goals while fostering a supportive family-friendly culture in our residency

that will improve the educational experience for all residents.

No. 66

Kios: A Smart Phone App for Self-Monitoring for Patients With Bipolar Disorder

Poster Presenter: Mehak Pahwa, M.D.

Lead Author: Rifaat El-Mallakh

Co-Author: Susan McElroy, M.D.

SUMMARY:

Objectives: This study examined the use of a self-monitoring/self-management smart phone application (app) for patients with bipolar disorder. The app was specifically designed with patient-centered computational software system based on concepts from nonlinear systems (chaos) theory. **Methods:** This was a randomized, active comparator study of use of the KIOS app compared to an existing free app that has high utilization rates known as eMoods, over 52 weeks, and performed in three academic centers. Patients were evaluated monthly utilizing the Bipolar Inventory of Symptoms Schedule (BISS). The primary outcome measure was persistence of using the app over the year of the study. **Results:** Patients assigned to KIOS persisted in the study longer than those assigned to eMoods; 57 patients (87.70%) in the KIOS group versus 42 (73.69%) in the eMoods group completed the study ($P = 0.03$). By 52 weeks, significantly more of KIOS group (84.4%) versus eMoods group (54%) entered data into their programs ($\chi^2=14.2$, $df=1$, $P = 0.0002$). Patient satisfaction for KIOS was greater ($F = 5.21$, $df = 1, 108$, $P = 0.025$) with a standardized effect size (Cohen's d) of 0.41. There was no difference in clinical outcome at the end of the study between the two groups. **Conclusions:** This is the first randomized comparison study comparing two apps for the self-monitoring/self-management of bipolar disorder. The study revealed greater patient satisfaction and greater adherence to a patient centered software program (KIOS) than a monitoring program that does not provide feedback (eMoods).

No. 67

Mood Changes After Tubal Ligation: A Case Report on the Importance of Interdisciplinary Collaboration

Poster Presenter: Amira Athanasios, M.D.

Co-Author: Deborah Winograd

SUMMARY:

We present the case of a 33 year old female with a past medical history of hyperlipidemia and bilateral tubal ligation done five months prior to presentation to the behavioral health clinic. Notably, the patient had no known past psychiatric history prior to presentation. The patient had been referred to behavioral health by her gynecologist for new onset mood changes. On psychiatric assessment, the patient noted increased anxiety and depression in the setting of hot flashes, dyspareunia, and irregular menses. Symptoms began about three months after laparoscopic tubal sterilization via bipolar coagulation, which was completed without complication. The patient's subsequent gynecological workup was negative including vitamin B12, thyroid hormone, follicle stimulating hormone (FSH), luteinizing hormone (LH), progesterone, and estradiol all within normal limits. From a psychiatric perspective, patient symptoms were consistent with generalized anxiety disorder and adjustment disorder with depressed mood. The patient was started on fluoxetine by psychiatry. With follow-up care, the patient's anxiety and depressive symptoms significantly improved while symptoms of hot flashes and amenorrhea persisted. In collaboration with gynecology, this multidisciplinary team argues the patient had mood and menstrual changes after surgery which is consistent with previously described post-tubal-ligation syndrome (PTLS). While PTLS has been debated clinically, literature shows an increased risk of menorrhagia and menstrual complaints after tubal ligation; however there are no documented cases of a new onset mood disorder following tubal ligation. The authors review the literature regarding PTLS, why the diagnosis is controversial within clinical practice, and discuss the importance of interdisciplinary collaboration in delivering comprehensive patient care.

No. 68

“You Guys Give Me Hope”: Addressing the Mental Health Needs of Covid-19 Survivors Through Virtual Psychotherapy Process Group

Poster Presenter: Melanie Dae

Lead Author: Merlin Ariefdjohan

Co-Author: Thida Thant

SUMMARY:

Background/Purpose: Recent studies indicated that individuals infected with COVID-19 could develop mental health issues even after they have recovered from the infection. Currently, there are limited specialized mental health support services for this patient population. This pilot study aimed to evaluate the feasibility and effectiveness of virtual process group psychotherapy in addressing the mental health needs of long-haul COVID patients.

Methods: A psychotherapy process group was piloted in an outpatient specialty clinic operating at an urban, teaching hospital. The group was co-facilitated by a supervising psychologist, a psychiatry resident, and a fourth-year medical student entering the field of psychiatry, but participants guided the topics and discussion process. Each session was approximately 1.5 hours long, occurred bi-weekly, and was held on a virtual platform. Patients could opt to attend as frequently as they wish. The (Hope) Future Scale (HFS) and the UCLA Loneliness Scale (UCLA-LS) were administered before participating in the first session (pre-evaluation), and after attending at least 6 group visits (post-evaluation) to evaluate participants' level of hope, and quality of connection with others, respectively. Participants were interviewed for additional perspectives on the impact of participating in the process group on their mental health. Scores were analyzed using descriptive and inferential statistics and qualitative responses were summarized as major themes.

Results: There were 22 sessions held in January 2021 to February 2022. Number of attendees per session ranged from 1 to 5 patients. Majority of patients (74%) attended more than 1 session (i.e., as repeat attendees). Mean HFS and UCLA-LS scores for all participants (n=16) at pre-evaluation were 50.2 ± 6.9 and 42.1 ± 9.9 , respectively. There were no significant differences noted in the mean HFS scores (46.8 ± 6.2 vs. 49.3 ± 5.0) and UCLA-LS scores (37.5 ± 4.5 vs. 40.0 ± 9.8) of four participants who completed these measures at both pre- and post-evaluation (all p-values > 0.05). However, at the interview, participants (n=4) indicated positive sentiments about the impact of participating in the process group in improving their mental health well-being and outlook in life and the future. From

facilitators' perspectives, the virtual sessions did not interfere with other clinical operations and were generally well-received by attendees with minimal technological barriers. **Conclusion:** Participants indicated a spectrum of experiences related to grief and trauma associated with being infected and recovering from COVID-19. The virtual psychotherapy process group provided an outlet for them to find healing through communicating and sharing of relatable experiences. Although logistics could be improved, overall, the virtual process group was feasible to be integrated in the standard clinical operation.

No. 69

Comparing the Efficacy of Online Versus in-Person Cognitive Behavioural Therapy to Address Major Depressive Disorder: A Non-Randomized Controlled Trial

Poster Presenter: Gilmar Gutierrez, M.D.

Co-Authors: Callum Stephenson, Mohsen Omrani, Elnaz Moghimi, Nazanin Alavi

SUMMARY:

Background: The increased prevalence of major depressive disorder (MDD) amid the COVID-19 pandemic has resulted in substantial growth of online mental health care delivery. Compared to its in-person counterpart, online cognitive behavioural therapy (e-CBT) is a time-flexible and cost-effective method of improving MDD symptoms. However, factors affecting its efficacy, and how they compare to in-person CBT, are yet to be explored. **Objective:** The current study compared the efficacy of a therapist-supported, electronically delivered e-CBT program to in-person therapy in individuals diagnosed with MDD. **Methods:** Participants (n = 108) diagnosed with MDD selected either a 12-week in-person CBT or an asynchronous therapist-supported e-CBT treatment program. E-CBT participants (n = 55) completed weekly interactive online modules delivered through a secure cloud-based online platform (Online Psychotherapy Tool; OPTT). These modules were followed by homework in which participants received personalized feedback from a trained therapist. Participants in the in-person CBT group (n = 53) would discuss sessions and homework with their therapists during one-hour

weekly meetings. The efficacy of the programs was quantitatively evaluated using clinically validated symptomatology and quality of life questionnaires. **Results:** Both treatments yielded significant improvements in depressive symptoms and quality of life from baseline to post-treatment. Participants who opted for in-person therapy presented significantly higher baseline symptomatology scores compared to the e-CBT group. However, both treatments yielded comparable significant improvements in depressive symptoms and quality of life from baseline to post-treatment. e-CBT seems to afford higher participant compliance as among participants who dropped out, those in the e-CBT group completed more sessions on average than those in the in-person CBT group. **Conclusions:** The findings support e-CBT with therapist guidance to treat MDD. Treatment flexibility and accessibility may partly explain greater completion in the e-CBT vs. in-person group.

No. 70

Pharmacological Prevention and Treatment of Postictal Agitation After Electroconvulsive Therapy: A Systematic Review and Meta-Analysis

Poster Presenter: Thomas Feenstra, M.D.

Co-Authors: Yvonne Blake, Adriaan Hoogendoorn, Aartjan Beekman, Didi Rhebergen

SUMMARY:

<p class="MsoNoSpacing" style="margin:0cm">**Background:** Postictal agitation (PIA) after electroconvulsive therapy (ECT) is an important clinical problem estimated to occur in 7-36% of the patients and recur in 19-54%. PIA has the potential to cause dangerous situations for the patient and staff members outside of the financial impact. To date, it is unclear which pharmacological interventions should be used in the management of

PIA.
</p>>

<p class="MsoNoSpacing" style="margin:0cm">Aims:This study aims to systematically review the (preventative) pharmacological treatment options for PIA after ECT.</p>>

<p class="MsoNoSpacing" style="margin:0cm">Method:A systematic search was done in PubMed, EMBASE, PsycINFO and Web of Science from inception to 10-11-2022. We included randomized trials with any pharmacological intervention or comparison and a predefined outcome measure on PIA. Studiesthat solely included patients with neurodegenerative disorders or strokewere excluded. Data quality was assessed with the RoB2 and GRADE. Meta-analysis was performed if possible. This study was registered on PROSPERO under

CRD42021262323.</p>>

<p class="MsoNoSpacing" style="margin:0cm">Results:We screened 2181 and included 14 studies.Dexmedetomidine was investigated in 10 studies. Alfentanil,lignocaine, esmolol, midazolam, propofol, ketamine, haloperidol and diazepamwere each studied in only one study. Meta-analysis revealed an OR of 0.45 (0.32-0.63), a moderate effect size, in favor of dexmedetomidine compared to placebo to prevent PIA with very low heterogeneity (I² = 0%). The certainty of evidence was moderate. The other interventions studied were all found to have a (very) low certainty of evidence.</p>>

<p class="MsoNoSpacing" style="margin:0cm">Conclusions:For clinical practice, we believe

that our results indicate that dexmedetomidine should be considered for prevention of PIA in patients that experienced PIA before.

No. 71

Novel Intervention of Deep Repetitive Transcranial Magnetic Stimulation in Patients With Somatic Symptom Disorder and Its Safety and Outcome

Poster Presenter: Prakamya Singal, M.D., M.B.B.S.

SUMMARY:

Objectives : Somatic Symptom disorders are characterised by the presence of one or more persistent somatic symptoms that are associated with excessive thoughts, feelings, and behaviours related to the symptoms. Their symptoms include bloating, dizziness, abdominal pain/discomfort, nausea, palpitations, headache, backache, chest pain, breathlessness etc. However, treatment modalities for the same have modest efficacy, are non-specific and do not address patients' unmet needs. In a first of its kind, we have explored a novel neuromodulation intervention using deep transcranial neuromodulation at medial Prefrontal cortex to assess safety and outcome in a series of such patients. **Methods :** Ten patients diagnosed with Somatic symptom disorder as per DSM-5 criteria were referred from a tertiary hospital Neuromodulation out-patient clinic in view of inadequate response to pharmacotherapy. The Patient Health Questionnaire-15 Scale, Hamilton Rating Scale for Depression and Hamilton Anxiety Rating Scale were applied for assessing severity of symptoms, and associated symptoms of depression and anxiety. Deep repetitive Transcranial Magnetic Stimulation was applied using double cone coil at 15Hz frequency with 2500 pulses/session with intertrain interval of 10 seconds for a total of 15 sessions. **Results :** All 10 patients completed their sessions except one. 8 out of remaining 9 patients reported significant improvement in their symptoms with a reduction of at least 30% from their baseline PHQ-15 scores. One patient reported worsening of depressive symptoms, headache and suicidal ideation. **Conclusions :** Deep TMS appears to be a potentially safe therapeutic intervention with

promising outcome in Somatic Symptom Disorder that requires further exploration.

No. 72

Tik Tok Tics and Other Trending Diagnoses: Social Media Influence on Identity Formation and Psychiatric Presentation

Poster Presenter: Ok Ji

Co-Authors: Zenab Saeed, Laurie Thomas, Stephanie Omaliko

SUMMARY:

Social media use has sky-rocketed over the course of the last several years on platform such as TikTok, especially in the young adult population. (Cataldo et al., 2021) Over the course of the past few years, psychiatrists have been encountering an increasing number of patients who present to their offices with complaints of psychiatric symptoms and questions regarding diagnoses after exposure to mental health related topics on social media. In particular, there has been a recorded increase in the number of young adult females presenting with complex tics with no previous history and findings inconsistent with traditional diagnostic criteria. (Heyman et al., 2021). On the online platform Tik Tok, there has been a recent increase in the number of content creators generating videos relating to: attention-deficit/hyperactivity disorder (ADHD), autism spectrum disorder and dissociative identity disorder. Review of ADHD related content on Tik Tok indicates that 52% of the content was misleading and that only 11% of the videos were created by health care professionals. (Yeung et al., 2022) This presentation attempts to assess trends in social media relating to mental health and explain this phenomenon by assessing environmental factors such as the COVID-19 pandemic which has resulted in potential neurobiological changes from isolation that effect dopamine and serotonergic systems which can present with symptoms of hyperactivity, anxiety and issues with salient stimuli processing (Orben et al., 2020) which may be misinterpreted as one of the aforementioned mental health diagnoses. We postulate that algorithms that drive content presentation on social media applications perpetuate exposure to this content resulting in significant impact on identity formation. (Papacharissi, 2011)

With these exposures and applying Eriksonian developmental theory as well psychodynamic theory, namely self-psychology allows better insight into the psyche of a developing young adult. Given these findings we make recommendations and have created a guideline for screening for social media use and make recommendations in how to approach these cases in treatment.

No. 73

The Internet Platform Youtube as a Source of Information for Binge Eating Disorder

Poster Presenter: Darshan Kalola

Co-Authors: Sudeep Peddireddy, Temitope Ali, Sree Chinta, Petros Levounis, M.D., M.A.

SUMMARY:

Background: The internet platform YouTube has been increasingly used as a source of mental health information. The purpose of this paper is to evaluate the internet platform YouTube as a potential source of information about Binge Eating Disorder (BED). Particularly, focus was placed on the overall quality, level of bias, and reference-to-uncertainty of each video as per the consumer health evaluation tool known as the DISCERN criteria. **Methods:** Six search terms involving BED were selected and searched on YouTube. For each query, the top ten search results sorted by “relevance” and by “view count” were documented and systematically evaluated by three reviewers using the DISCERN criteria for overall quality, bias, and reference-to-uncertainty. DISCERN scores range from a scale of 1 to 5, with 5 being the highest quality. The type of creator for each video was also classified and noted, namely “mental health professional” or “patient/layperson”. **Results:** Of 120 videos assessed, 58 videos were unique and 62 videos were duplicates. Total view count for all videos was 129,703,025. The average view count for each video was 1,071,926. The mean overall Discern score for all videos was 2.32 ± 0.13 . The mean bias score for all videos was 2.52 ± 0.13 . The mean reference-to-uncertainty score was 2.26 ± 0.12 . Of the 6 search queries, “how to diagnose binge eating disorder” sorted by relevance yielded the highest mean overall DISCERN score and highest bias score at 3.4 ± 0.43 and 3.7 ± 0.33 , respectively. The search query “binge eating” sorted by view count yielded

the lowest overall DISCERN score and lowest bias score at 1.22 ± 0.15 for both. Videos created by mental health professionals had significantly higher mean overall DISCERN scores (3.07 ± 0.18), bias scores (3.27 ± 0.19), and reference-to-uncertainty scores (2.78 ± 0.18) compared to videos created by patients/laypeople (1.54 ± 0.11 , 1.74 ± 0.12 , 1.72 ± 0.11 , respectively). **Conclusion:** Overall, YouTube is a low-quality source of health information regarding BED. Videos created by mental health professionals are more likely to be higher quality, less biased, and aware of the gaps in current knowledge around BED and its treatment. People seeking information on this disorder should acquire it from other, more trusted sources.

No. 74

Embitterment Associated With Depression, Anxiety, Insomnia, and Posttraumatic Stress Disorder: Korean Vietnam War Veterans Study

Poster Presenter: Jihye Song

SUMMARY:

Background: Embitterment refers to a persistent feeling of being disappointed, humiliated, or perceiving oneself a “loser”, combined with a desire of fight back, at the same time, a feeling of being powerless. In prior studies, embitterment has been associated with depression, anxiety, and posttraumatic stress disorder (PTSD). The current study aimed to assess the embitterment among the elderly war veterans, and its association with other psychopathologies. **Method:** Participants included 60 Korean Vietnam war veterans who visited the Veterans Health Service Medical Center, Seoul, Republic of Korea. Based on the posttraumatic embitterment disorder self-rating scale (PTEDS) score, the participants were divided into the embitterment [E(+), the mean score of PTEDS items (mPTEDS) ≥ 1.6] and non-embitterment [E(-), mPTEDS < 1.6] groups. The demographic characteristics, combat exposure severity, depression, anxiety, sleep, and alcohol use disorder symptom measure scores of the participants were collected and compared between E(+) and E(-) groups. A correlation analysis between symptom measure scores of depression, anxiety, sleep, and alcohol use disorder and the mPTEDS was conducted. Further, using step-wise

multiple linear regression, the influences of demographic characteristics and psychopathology on embitterment were investigated. Result: Of the 60 participants, 21 (35.0%) showed mild embitterment symptoms ($1.6 \leq \text{mPTEDS} < 2.5$) and seven (11.7%) reported moderate or severe embitterment symptoms ($\text{mPTEDS} \geq 2.5$). All participants were male. No significant differences were observed between the two groups in terms of age, education level, employment, marital, perceived economic status, and combat exposure level. The mean scores of PTSD, depression, and anxiety measure were significantly higher in E(+) than in E(-) [depression ($p < 0.001$), anxiety ($p < 0.001$), PTSD ($p < 0.001$), sleep disorders ($p = 0.005$)]. mPTEDS was significantly correlated with PTSD, depression, anxiety, and sleep disorder measure scores [depression ($p < 0.001$), anxiety ($p < 0.001$), PTSD ($p < 0.001$), sleep disorders ($p = 0.002$)]. In multiple regression analysis, the PTSD measure score explained the change in the mPTED significantly. Conclusion: Embitterment symptoms were associated with PTSD, depression, and anxiety symptoms in the elderly veterans; this is similar to the results of prior studies involving the general population but not the elderly. Furthermore, sleep disorders were more prevalent among elderly male who showed embitterment.

No. 75

Moral Injury - It's Not Just for the Military Anymore: A Comparative Scoping Review and Predictive Analysis of the Research Into Moral Injury
Poster Presenter: Walter J. Sowden, Ph.D.

SUMMARY:

Background: *Moral injury* – distress caused by moral adversity - has been linked to several mental and behavioral health related disorders. Although introduced in 1994, it wasn't until 2009 that researchers became interested in moral injury. Recently, scholars have noted that work on moral injury has been exclusively studied in military and non-military related work should be prioritized. To set a research agenda, it is important to understand the current state of the science and predict where it is headed. The current project addressed this by comparing the growth of non-military to military

related moral injury research from 2009 to 2022 and predict the growth rate for both over the next decade. **Method:** I conducted a *systematic scoping review* of the non-military moral injury research from 2009 to 2022 by searching *PubMed, Embase, Web of Sciences, & Google Scholar*, including the term “*moral injury*” and excluding the terms “*military personnel*”, *military, veterans, or soldiers*. I ensured each reported only primary or secondary research in a non-military context and coded those articles for context, year published, and general themes. Next, I replicated this with military-related research. Finally, I calculated the incidence rate ratio (IRR) of non-military and military articles from 2009 to 2022 and the progressive growth rate for both literatures from 2023 to 2040. **Results:** I found 281 (non-military) and 304 (military) articles, of which 208 (non-military) and 247 (military) met the inclusion criteria. The research from 2009 to 2018 was significantly weighted towards military contexts (IRR: 6.33 [3.42; 12.79], $p < .001$). Non-military articles almost doubled in 2019 and exponentially grew from 2020 to 2022. Comparatively, military research grew steadily from 2009 to 2016, exponentially grew from 2016 to 2018, and continued to grow over the past four years but at a slower rate than non-military research (IRR: .71 [.57; .90], $p = .003$). Using 2009 to 2018 as an indicator of past growth and 2019-2022 for present growth, we can expect an average annual growth rate of 6.5% for military and 24% for non-military research over the next 13 years (IRR: .25 [.08; .63], $p = .001$). **Conclusions:** Moral injury research has rapidly accelerated and widely expanded over the past 4 years. There is now more non-military than military research and this difference will only get larger over the next decade. The research has expanded primarily into health care and public safety contexts but has recently expanded into diverse and generalized contexts such as educators, families, and workers. The conceptualization and modeling of moral injury has also expanded. Construct validity has been improved, it's been modeled as a predictor, outcome, and interrogating variable, and has been studied in more ethnically diverse environments. This research should motivate psychiatrists to incorporate the diagnosis, prognosis, and treatment of moral injury into their general therapeutic practice.

Wednesday, May 24, 2023

Poster Session 14

No. 1

Decoding Depression: Identify and Remotely Monitor Depression Using Smartphone Usage

Poster Presenter: Janine Ellenberger

Co-Authors: Girish Srinivasan, David Danish

SUMMARY:

According to 'The Global Burden of Diseases, Injuries, and Risk Factors Study (GBD)' 2019, depression is one of the most disabling mental health disorders [3] and poses a significant economic and medical burden. There also has been a global increase in the prevalence of depression. To further add to these globally increasing numbers, the COVID-19 pandemic has led to a substantial increase in mental health conditions, particularly depression. Given this rise in depression rates and the immense costs associated with it, adequate diagnosis and timely intervention has become a pressing and urgent need. Depression, like most other mental illnesses, is diagnosed via the DSM-59 or ICD-1110. There is, however, a growing skepticism about its validity. In a ground-breaking research study done by Newson et al., 2021 they were able to quantify the degree of heterogeneity within and across the DSM-5 symptom profile, in that the DSM-5 criteria "fails to diagnose patients by symptom profile any better than random assignment". This strongly supports Zimmerman et al., 2015 who found that there are 227 different ways to diagnose depression. Further compounding factors include lack of primary care physicians, low recognition of depression in primary care, delayed response to treatment, 12 week waiting period in absence of a response, other comorbidities and patient fear of stigma attached to depression. Use of passive sensors in the mental health industry has the potential to detect real time changes in psychological factors and this can be used to increase access to care, reduce stigma, improve diagnosis, and enable remote monitoring. Smartphone sensors and passive data, when coupled with relevant statistical and machine learning models, provide an avenue to capture behavioral changes associated with mental health disorders in

naturalistic settings. Following successful peer reviewed studies and field implementations of this novel technology, this session demonstrates a novel mental behavioral profiling metric, termed Mental Health Similarity Score (MHSS), derived from analyzing passively monitored non-intrusive and non-identifiable smartphone usage data, to identify and track depressive behavior. We also demonstrate how the solution may be embedded in a routine mental health assessment.

No. 2

Phenotype Frequencies for Psychiatric Versus Non-Psychiatric Pharmacogenomic Test Results From a National Laboratory

Poster Presenter: Raymond Lorenz, Pharm.D.

Co-Authors: Kathleen O'Brien, Loretta Mahon

SUMMARY:

Background: Pharmacogenomics (PGx) guided prescribing has shown clinical and economic benefits in multiple therapeutic areas, but psychiatry is one of the most studied. Phenotype frequencies and diagnoses for utilizing PGx in this field vary considerably and there is minimal data regarding which diagnoses may be associated with clinically significant pharmacogenetic variance. Using PGx results from a large national laboratory, we assessed how often phenotype frequencies for 5 common pharmacogenes (CYP2D6, CYP2C19, CYP2B6, SLC6A4, and HLA-B*15:02) were associated with a psychiatric diagnosis. We also describe the most common psychiatric diagnoses in the sample. **Methods:** PGx results from Quest Diagnostics were deidentified and included in the analysis. ICD-10 diagnosis codes, gender, age, and date the PGx panel was ordered were obtained from the lab ordering system. Genotype and phenotype were obtained from the laboratory report. ICD-10 diagnosis codes were grouped as psychiatric and non-psychiatric to determine differences in phenotype frequencies for the two groups. Psychiatric diagnosis included ICD-10 codes for bipolar disorders, depressive disorders, anxiety disorders, substance use disorders, psychotic disorders, childhood disorders, and other psychiatric disorders (F10-F99). Descriptive statistics were used to analyze these results with two-sided t-tests used to determine differences between the groups. P-

value was set at <0.05 . **Results:** 3,738 reports with 8,693 ICD-10 codes were identified for analysis. The sample was 60% female and the average age was 41.4 years with a range of <1 year to 95 years old. Among the entire sample, about 50% of all reports had a non-normal CYP2D6 and/or CYP2B6 phenotype. CYP2C19 showed about two-thirds of reports being non-normal and about three-fourths of SLC6A4 being non-normal. Of the reports with an ICD-10 code ($n=3,196$), 51.5% ($n=1633$) of the reports were associated with a psychiatric diagnosis. The most common psychiatric diagnoses were anxiety disorders (22.9%), depressive disorders (19.3%), and childhood disorders (10.3%). SLC6A4 phenotype was significantly ($P<0.001$) more likely to be non-normal (decreased or low serotonin transporter expression) in the reports associated with a psychiatric diagnosis versus those without. CYP2D6, HLA-B*15:01, CYP2B6, and CYP2C19 phenotypes were not significantly different between the groups; however, CYP2C19 phenotype did trend toward significance ($p=0.06$). **Conclusion:** At a national laboratory, more than half of all PGx tests were associated with a psychiatric diagnosis with anxiety and depression being most common. SLC6A4 abnormalities were more likely to occur in those with a psychiatric diagnosis, but poor, intermediate, and ultra-rapid phenotypes were common among the entire sample. This information can be useful when determining which patients may benefit most from PGx testing.

No. 3

Functional Impairments Are Common in Adults With Epilepsy and Psychogenic Non-Epileptic Seizures

Poster Presenter: Venkat Suru

Co-Authors: Noah Andrews, James Bena, Nancy Foldvary-Schaefer

SUMMARY:

Objective: To compare the quality of life (QoL) and functional status between psychogenic non-epileptic seizures (PNES) and epileptic seizures (ES).

Background: Studies investigating QoL in adults with epilepsy (AWE) tend to focus on seizure control or isolated measures of functional status. There is limited research on the QoL/functional status

between PNES and epileptic seizures.

Design/Methods: Adults undergoing video-electroencephalogram from 2000-2003 were invited to participate in a long-term study of functional outcomes. Subjects completed questionnaires assessing demographics, seizure-related factors, QoL using a 10-point Likert scale, highest achieved educational and occupational status, living dependence, and driving status. This analysis compared baseline status between PNES and ES groups. Groups were compared using Pearson's chi-square, Fisher's exact, and Wilcoxon rank sum tests. Multivariable models controlled for gender, SSRI and anti-seizure medication use. **Results:** The sample included 143 participants (72 PNES, 71 ES), age 36.6 ± 11.5 , 64.3% female, monthly seizure frequency 4.0 [2.0, 12.0]. QoL was comparably impaired in PNES and ES (6.2 ± 2.0 vs. 6.7 ± 2.0 , $p=0.15$). While highest educational status achieved did not differ between groups (PNES 51.6% and 54.8% ES college educated, $p=0.71$), PNES participants achieved higher occupational status endorsing executive/professional levels (77.6% vs. 53.8%, $p=0.023$). Few participants lived alone (PNES 11.4% vs. ES 7.4%, $p=0.15$) and many in both groups were dependent for financial support (PNES 51.5% vs. ES 43.9%, $p=0.38$). More participants with PNES endorsed current driving (39.7% vs. 23.9%, $p=0.048$). In multivariable modeling, the odds of achieving a professional occupational level were greater in PNES than ES (OR 3.0 (1.13, 7.92), $p=0.027$). **Conclusions:** QoL is comparably impaired in patients with active PNES and ES, however, functional impairments differ. While PNES and ES experience significant living dependency, AWE experience more limitations related to driving and occupational achievements. Further research is warranted given the lack of data on functional impairments in these populations.

No. 4

Clearing the Fog on Covid-Brain Fog

Poster Presenter: Margaret Q. To, M.D., M.P.H.

Co-Authors: Michelle M. Haddad, Ph.D., Alex D. Truong, M.D., M.P.H.

SUMMARY:

Background: "COVID-Brain Fog," or long-COVID related cognitive dysfunction, is one of the most

disabling symptoms of the post-COVID syndrome. We present the neuropsychological profile of 50 patients with long-COVID related memory complaints by examining the stages of attention, learning, and retention to identify targets for therapeutic intervention. **Methods:** This retrospective records review included 50 participants seen in a post-COVID clinic in Atlanta, GA. Neuropsychological testing assessed attention (NACC Digit Span, Symbol-Digit Modality Test, Trail Making Test A and B), learning of novel information (Rey-Osterrieth Complex Figure Test (ROCFT) and Rey Auditory Verbal Learning Test (RAVLT)), and retention of recently learned information. Symptom screening for major depressive disorder (PHQ-8), generalized anxiety disorder (GAD-7), and post-traumatic stress disorder (PCL-C) was also done. Scores were corrected for age, sex, race/ethnicity, and educational background and converted to Z-scores. **Results:** Most participants identified as white (52%) and female (80%). The majority had at least a high school education (mean 16.4, SD 2.1) and were aged 24-73 years (mean 48.6, SD 12.2). Half (48%) had a premorbid diagnosis of depression, anxiety, or both; many reported new or worsening depression (68%) and anxiety (84%). Memory impairment (92%) and inattention (78%) were the two most reported cognitive symptoms. **Attention:** All participants scored borderline impaired or worse on attention tasks. **Learning and Memory:** Memory was assessed as both initial learning and retention after a delay. Half (n = 24) scored in the borderline impaired range or worse on immediate recall of verbal information; 44% (n = 22) scored in the borderline impaired range or worse for learning of novel verbal information. Similar scores were observed for immediate and delayed recall of numerical information (52% on immediate, 50% on delayed) and for visuospatial learning and memory (48% immediate, 50% delayed). **Retention:** There was no significant decline in scores after a delay for verbal, numerical, or visuospatial information initially encoded. **Depression, Anxiety, and PTSD:** Clinically significant levels of psychological symptoms were highly prevalent; 89.4% scored above the cutoff for depression, 63.8% scored above the cutoff for anxiety, and 50% scored above the cutoff for PTSD. **Conclusion:** This study sought to better define therapeutic targets for subjective memory

complaints amongst 50 individuals with cognitive dysfunction from post-COVID syndrome. Though attention and learning are impaired, the retention of information remains comparatively intact, thus suggesting an attention/encoding deficit that underlies subjective memory complaints. This suggests that interventions should maximize learning rather than bolster retention of previously learned information. Pharmacologic and behavioral interventions to address the high prevalence of mood symptoms should also be considered.

No. 5

Modulation of Vagus Nerve for Management of Migraine and Mental Health Disorders in a Veteran Mental Health Clinic

Poster Presenter: Noah Hyduke

Co-Authors: X. Michelle Androulakis, Melinda Thiam, M.D.

SUMMARY:

Veterans with chronic headache are at increased risk for suicide, especially when this is compounded by comorbid mental health disorder. In 2019, there was an average of 17.2 veteran suicides per day. Veterans frequently do not admit to suicidal ideation, making reducing suicide an ever-present challenge. Using Suicide Crisis Syndrome (SCS) checklist, without asking about suicidal ideation or intent, has consistently outperformed suicidal ideation for prediction of future suicidal behavior. While SCS identifies biomarkers for intervention, the categories of HPA-cortisol axis (entrapment), emotional control, cognitive flexibility, arousal and social engagement are also regulated by the vagal nerve.

Transcutaneous cervical Vagal Nerve Stimulation (TcVNS) is FDA-cleared for migraine treatment. Research has also shown that TcVNS is effective for PTSD and depression. We hypothesized that TcVNS would also be useful as a treatment intervention for veterans experiencing SCS. While SCS is an acute syndrome, we also acknowledge that many patients at chronic risk for suicide will go in and out of episodes of SCS. We used the SCS checklist to identify veterans whom may have prior/current periods of SCS and are at risk for future episodes of SCS. We present a case series of 4 veterans seen in a VA MH Clinic. Two male veterans had combat-PTSD

and migraines that were not previously diagnosed or treated. Another male veteran had severe treatment-resistant depression (TRD) and previously undiagnosed/untreated migraines. The fourth was a female with known severe menstrual migraines that were still not adequately managed. Only one of the combat veterans endorsed a history of suicidal ideations; the others adamantly denied SI. Given their refractory migraine and mental health symptoms, all 4 vets were offered TcVNS and eagerly agreed to a “non-medication” treatment that could treat both migraines and PTSD and/or depression. They were instructed how to use it for migraine as well as “off label” for depression, anxiety, and during episodes of SCS. Pre-treatment headache severity was measured with the HIT-6 questionnaire. The two veterans with comorbid PTSD/migraine experienced near resolution of migraines with HIT-6 scores change from 69 to 56 and 71 to 46 after a 30-day trial. The veteran with TRD/migraine had improvement in HIT-6 score from 76 to 65; while he still had severe depression and chronic SCS, it was less intense and he started to feel hopeful. The female veteran’s HIT-6 remained the same, but she did have subjective improvement in migraines, anxiety and regulation during SCS episodes. This case series highlights a utility of TcVNS beyond the current FDA recommendations, specifically for use in PTSD, depression, and SCS, but future research is needed to elucidate the application of this intervention

No. 6
Reassurance-Seeking Behavior Mediates the Influence of Intolerance of Uncertainty on Preoccupation With Covid-19 Among Frontline Nursing Professionals

Poster Presenter: Eulah Cho

SUMMARY:

Objectives : We aimed to investigate whether preoccupation with COVID-19 was associated with reassurance-seeking behavior, viral anxiety, intolerance of uncertainty, or adherence to physical distancing especially among frontline nursing professionals who are working in COVID-19 inpatients ward. Furthermore, we tested whether adherence to physical distancing mediates the influence of intolerance of uncertainty on the may

mediate the vicious cycles of viral anxiety. Methods : The survey including scales such as Obsession with COVID-19 scale, Coronavirus Reassurance-Seeking Behaviors Scale (CRBS), Fear of COVID-19 scale (FCV-19S), Intolerance of Uncertainty Scale-12 (IUS-12) and Questionnaire on adherence to physical distancing was conducted during April 7 - 26 of 2022, among frontline healthcare professionals working in the COVID-19 inpatient wards of three tertiary-level affiliated hospitals in Korea. A total of 256 responses were analyzed after excluding inappropriate or incomplete responses. Results : Pearson’s correlation analysis in that age was significantly associated with OCS ($r = -0.12$, $p < 0.05$), Adherence to physical distancing ($r = 0.27$, $p < 0.01$). Linear regression analysis found that age ($\beta = -0.07$, $p = 0.002$), CRBS ($\beta = 0.35$, $p < 0.001$), and FCV-19S ($\beta = 0.24$, $p < 0.001$) could expect obsession with COVID-19 (Adjusted $R^2=0.60$, $F=78.1$, $p<0.001$). Indirect pathway by mediation analysis showed that reassurance seeking and viral anxiety would mediate the effect of intolerance of uncertainty to preoccupation with COVID-19. Conclusion : In pandemic era, reassurance-seeking behavior and viral anxiety could be closely related to preoccupation in especially frontline health workers. Clinicians should consider the importance of these behaviors could be a sign for further psychiatric problems.

No. 7
Educating Psychiatry Residents in Case Formulation: A Comprehensive Course in Diagnostic, Clinical, Cultural, and Treatment Formulation

Poster Presenter: Brooke Harris, Ph.D.

Co-Author: Jennifer Narvaez

SUMMARY:

Introduction: The accreditation council for medical education (ACGME) lists psychiatric evaluation, formulation, differential diagnosis, and treatment planning as core competencies for psychiatry residents. Although a key component of psychiatric training, there are no standardized, comprehensive curricula on case formulation. As such, we developed a course on components of case formulation. Methods: The course was based on Len and Jon Sperry’s, Case Conceptualization: Mastering this Competency with Ease and Confidence. It included

four hours of lectures, three hours of case presentations, and one worksheet. Each lecture included a didactic component and a case discussion. Content included diagnostic, clinical, cultural, and treatment formulation components. All sessions were general and did not ascribe to a particular therapeutic orientation. The course was provided to 6, 3rd year psychiatry residents in a community-based, psychiatry residency program in Northern California. An anonymous pre-post survey was administered to residents who participated in the course assessing confidence on a four-point scale from extremely confident (4) to extremely NOT confident (0) and frequency of use from never (0) to always (4). Usefulness of the training was assessed in the post survey from Extremely Useful (4) to Extremely Not Useful (0). Results: Four out of six residents responded to the pre-survey and five of six residents responded to the post-survey. When asked “How confident are you in your ability to write comprehensive case formulations?”, residents scored on average 1.5 (SD 1.0) on the pre-test and 3 (SD 0.71) on the post-test. When asked “How frequently do you write case formulations?” residents scored on average 1.75 (SD 1.5) on the pre-test and 2 (SD 1.0) on the post-test. Residents reported hoping to gain more knowledge about how to write a comprehensive yet concise case formulation and to understand how it differs from case formulations with medical management patients. Overall, residents rated the training 4.2 out 5 stars (SD 0.84). Sixty percent of residents found the training “somewhat useful” and 40% found the training extremely useful for an average score of 3.4 (SD 0.55). They reported especially liking the worksheet that accompanied the lectures. Conclusion: Results suggest the training was useful in providing knowledge and practical application of case formulation skills for psychiatry residents as evidenced by increases in confidence. Residents only slightly increased the frequency for which they write case formulations. The post survey was administered at the end of the last session (as residents were completing the course), so we likely didn’t fully realize the effects of increasing the frequency on comfort with completing case formulations on their own. Future directions include a follow-up survey at the end of residency to evaluate long-term effects

and fine-tuning of lectures based on resident feedback.

**No. 8
Needs Assessment of Cyberbullying Curricula in
Psychiatry Residency and Fellowship Training**

Poster Presenter: Mandar Jadhav, M.D.

Lead Author: Caroline McCool

Co-Authors: Soe Thein, Stephanie Alexis Garayalde, M.D.

SUMMARY:

Research indicates that most teens have faced some form of cyberbullying (Anderson, 2018; Cook, 2021). Cyberbullying victims are at higher risk of developing depression, self-harm, suicide attempts, substance abuse, and anxiety (Englander et al., 2017; John et al., 2018; Zhu et al., 2021). It is unclear how much instruction psychiatry trainees are provided on this topic. The purpose of this study is to assess trainees’ comfort in evaluating and treating victims of cyberbullying. A brief anonymous survey was sent to US ACGME-accredited psychiatry residency and child and adolescent psychiatry (CAP) fellowship programs. The survey included questions for program directors and trainees regarding the state of cyberbullying curricula at their programs, trainees’ self-reported comfort level, and program directors’ perception of the trainees’ confidence in providing care for cyberbullying victims. To date, 76 residents, 15 CAP fellows, and 29 training directors have participated in the survey (n=120). The majority (88.98%) reported receiving no formal didactics for cyberbullying. Among the 11.02% who had formal didactics, 84.62% had only 1-2 lectures on the topic. Most of the residents and fellows reported feeling “somewhat uncomfortable” or “neither comfortable nor uncomfortable” in caring for cyberbullying victims. In contrast, over half of the program directors feel that their trainees are “somewhat comfortable” or “very comfortable” with this topic. Overall, trainees’ self-reported confidence is significantly lower than the program directors’ perception of their trainees’ comfort in providing care for victims of cyberbullying (p-value <0.05). Our preliminary data indicates that despite the prevalence of cyberbullying, there is minimal formal training in psychiatry programs on the topic. More

importantly, our data indicates that most trainees do not feel confident in providing care for victims of cyberbullying. Most participants indicated they would like more formal education on cyberbullying, including legal considerations and the decision to involve the school. This highlights the need to improve the curricula of psychiatric training programs.

No. 9
Psychiatric Complications Post Covid-19 Infection in a 65-Year-Old Patient With a History of Hashimoto Disease

Poster Presenter: Pegah Yakhchalian

Lead Author: Abdolreza Saadabadi

Co-Authors: Saina Gill, Nima Saboori, Ethan Pritikin

SUMMARY:

Psychiatric complications post COVID-19 infection in a 65-Year-Old patient with a history of Hashimoto Disease. The patient is a 65-year-old Caucasian female with a 30-year history of Hashimoto thyroiditis, major depressive disorder, and hyperlipidemia. At the time of our evaluation, the patient had been admitted twice to the inpatient psychiatric hospitalizations. The patient had received her COVID vaccinations and after the second dose in May 2021, the patient began to suffer from severe insomnia. In September 2021, the patient was diagnosed with COVID-19 infection after which she reported progressive worsening of her insomnia. In late December 2021, the patient was diagnosed with post-COVID-19 psychosis for the first time. On presentation, the patient reported tactile hallucinations and command-type auditory hallucinations. She also had a suicide attempt during this time. Upon obtaining a further history, it was noted that the patient had Hashimoto's thyroiditis for which she reported compliance with Synthroid for over 30 years. Despite this, her TSH began to fluctuate. In early June of 2022, the patient was referred to get IVIG for Hashimoto encephalitis and post-COVID inflammatory syndrome. Based on the opinion of the patient's neurologist, her encephalopathy was considered to be a result of her COVID-19 infection given the acute onset of the infection the previous year. When reflecting on the course of her illness, despite subsequent IVIG

treatments and the subsequent addition of steroids, the patient's symptoms continued to worsen. Therefore, there is a strong possibility that the psychosis and mood symptoms which initially started with her COVID-19 infection progressively worsened. The patient has been unable to return to her baseline functioning and as a result, she has been admitted to the inpatient psychiatric facility four times, promoting treatment with psychotropic medications to which she demonstrated appropriate response temporarily. Our extensive workup and evaluation showed no abnormalities in the patient's brain structure and labs aside from her underlying thyroid abnormalities. Furthermore, the patient did not have any additional risk factors which could have contributed to the development of primary psychosis. In conclusion, we looked at the various etiologies which may have contributed to the patient's new-onset psychosis. The most significant aspect taken into consideration was her diagnosis of COVID-19 infection in September of 2021 and the role of corticosteroids which seems to be the basis of her psychosis and mood symptom onset. Given the patient's chronic use of Synthroid, this may have also contributed to the alteration of the patient's mentation. When taking into consideration the alteration from her COVID-19 infection on her TSH, the treatment from Synthroid may not have been helping her condition in the appropriate manner.

No. 10
Personalized, Network-Targeted rTMS Affects Nicotine Craving in People With Schizophrenia and Nicotine Dependence

Poster Presenter: Gulcan Yildiz, M.D.

Co-Authors: Mark Halko, Ph.D., Roscoe Owen Brady, M.D., Ph.D., Heather Burrell Ward, M.D.

SUMMARY:

Background: The prevalence of tobacco use among people with schizophrenia is three times higher than the general population. This leads to a 25-year decreased life expectancy for people with schizophrenia due to the medical consequences of their tobacco use. Current treatments for nicotine dependence are significantly less effective for people with schizophrenia. The underlying reason could be that current treatments are not tailored to

schizophrenia-specific pathophysiology of nicotine dependence. We previously observed that Default Mode Network (DMN) dysconnectivity is linked to nicotine dependence in schizophrenia. We hypothesized that manipulating this network using non-invasive neuromodulation would change nicotine craving in individuals with schizophrenia. Methods: Ten people with schizophrenia and nicotine dependence participated in a three-way randomized, sham controlled crossover study of single session DMN-targeted repetitive transcranial magnetic stimulation (rTMS) with fMRI immediately before and after each rTMS session. rTMS was targeted via neuronavigation to each individual's specific left parietal node of the DMN. Every individual received 1 session of intermittent theta-burst stimulation (iTBS), 1 session of continuous theta-burst stimulation (cTBS), and 1 session of sham rTMS. Stimulation intensity was 100% AMT for iTBS, 80% AMT for cTBS. rTMS sessions were separated by at least 48 hours to avoid potential carry over effect of previous rTMS stimulation. Craving and anxiety were assessed before and after each rTMS session using a Visual Analog Scale. Using a within-subjects design, we compared changes in craving and anxiety between each type of rTMS using a mixed ANOVA. Results: All participants completed baseline fMRI for DMN mapping and all 3 rTMS sessions. The parietal DMN target was identified in all participants. rTMS was well-tolerated, and there were no significant adverse events. We observed a significant treatment x time relationship ($p=.036$) where craving was significantly increased by iTBS but not by cTBS or sham. There was no significant effect of rTMS on anxiety. Conclusions: We demonstrated the safety and feasibility of using a connectome-derived target for nicotine dependence in schizophrenia. This disease-informed, network-targeted rTMS intervention significantly affected nicotine craving in schizophrenia. This is the first evidence for a circuit-based intervention for substance use in schizophrenia that was empirically derived, unique to schizophrenia, and affected clinical outcomes. Future experiments should test repeated sessions of rTMS in clinical trials.

No. 11

Self-Reported Unmet Need for Health Care Among Young People Referred to Early Psychosis Intervention Services

Poster Presenter: *Emily C. Yung*

Co-Authors: *Alexia Polillo, Ph.D., Nicole Rachel Kozloff, M.D.*

SUMMARY:

Background: Emerging adulthood is a vulnerable period for the onset of mental illness. Despite the importance of timely and comprehensive treatment in early phase psychosis, young people experiencing psychosis often report unmet health care need.

Aims: This study aims to understand the sociodemographic and clinical factors associated with self-reported unmet health care need among young people referred to early psychosis intervention (EPI) services. **Methods:** Patients aged 16-29 years who were referred to and seen for consultation by a large EPI program between July 2018-February 2020 were invited to complete a survey on service engagement, including demographic and clinical information. We calculated descriptive statistics and examined factors associated with reported unmet health care need in univariate and multivariate logistic regression analyses. Demographic factors included age, gender, race/ethnicity, country of birth, relationship status, living situation, vocational activity, highest level of education, and legal involvement. Clinical factors included recent mental health-related emergency department visits and hospitalizations, access to a regular medical doctor, and problem substance use.

Results: Among 158 participants who completed the survey and responded to the question, 42% reported unmet health care need in the past six months. Being in a relationship (OR=0.39, 95% CI [0.15-0.98]) and vocationally active (OR=0.46, 95% CI [0.23-0.88]) were independently associated with lower odds of reporting unmet health care need. In a multivariable model, being in a relationship (OR=0.22, 95% CI [0.07-0.69]), being vocationally active (OR=0.32, 95% CI [0.15-0.71]), and living with family (OR=0.30, 95% CI [0.12-0.72]) were associated with lower odds of reporting unmet health care need. Age, gender, ethnicity, recent emergency department visit, access to regular doctor, and problem substance use were not significantly associated with reported unmet

health care needs. **Conclusion:** Findings suggest that good social functioning and connectedness protect young adults against perceived unmet health care needs. These findings point to targets to improve access to health care among young people with psychotic symptoms.

No. 12

Review of the Taar1 Agonist Ulotaront: Part II - Summary of Initial Clinical Efficacy/Safety Results

Poster Presenter: Courtney Zeni

Lead Author: Seth Hopkins

Co-Authors: Heather Dworak, Kenneth Koblan

SUMMARY:

Background: Ulotaront is a trace amine-associated receptor 1 (TAAR1) agonist with serotonin 5-HT_{1A} agonist activity whose efficacy in schizophrenia is distinguished from the antipsychotic class by its lack of D₂ and 5-HT_{2A} receptor blockade [1]. Ulotaront has received FDA Breakthrough Therapy Designation for treatment of schizophrenia, and WHO, based on the INN naming convention, has specified “-taront” as the stem for this new drug class. Here we summarize ongoing clinical research characterising the efficacy and safety profile of ulotaront as a member of the novel TAAR1 agonist class. **Methods:** Summarized are results from a double-blind, placebo-controlled study to evaluate the efficacy of ulotaront in an acute exacerbation of schizophrenia [2], and a 6-month, open-label follow-up study [3]. Also summarized are post-hoc analyses comparing the effect of ulotaront vs. lurasidone on negative symptoms (based on a Marder PANSS negative symptom factor [MPNS] enrichment strategy); and analyses comparing key safety and adverse event (AE) domains for ulotaront vs. atypical antipsychotics (APs), including an Empirical Bayes Geometric Mean (EBGM) analysis of the FDA Adverse Event Reporting System (FAERS) database. **Results:** In the double-blind study, ulotaront was associated with significant ($p < 0.001$) endpoint improvement in the PANSS total score (effect size [ES]: 0.45), the CGI-Severity score (ES: 0.52) and the Brief Negative Symptom Scale total score (ES: 0.48) [1]. In a post-hoc enrichment analysis, ulotaront demonstrated moderate-to-large treatment effects on negative symptoms with an endpoint MPNS factor score effect size of 0.84 (vs.

0.33 on the atypical antipsychotic lurasidone). The incidence of any AE was lower on ulotaront vs. placebo (45.8% vs. 50.4%). Results of EBGM analyses of the FAERS database found treatment with ulotaront to be associated with markedly lower risk of both antipsychotic class-related AEs (EPS, akathisia, somnolence, nausea/vomiting), and adverse safety events frequently associated with APs (weight gain, increase in metabolic labs, prolactinemia). The follow-up study [3] further confirmed the tolerability of ulotaront, with a 6-month completion rate of 67%, which compares favourably to benchmark 6-month completion rates in the CATIE study [4]. Furthermore, 6 months of treatment was associated with a mean change from open-label baseline of -22.6 in PANSS total score and -1.0 in CGI-Severity score. **Discussion:** The emerging profile of ulotaront, based on initial clinical trials, is characterized by statistically significant improvement in positive and negative symptoms of schizophrenia. The safety and tolerability profile of ulotaront is markedly different with respect to class-related AEs that are characteristic of both first- and second-generation antipsychotics. The benefit-risk profile of ulotaront, as a member of a novel TAAR1 agonist class, is distinguished from antipsychotics by lack of D₂ and 5-HT_{2A} receptor blockade.

No. 13

Clinical Predictors of Engagement in Telehealth for Complex Psychiatric Disorders in Primary Care Settings: A Randomized Trial

Poster Presenter: Jennifer Severe, M.D.

Co-Authors: Katherine Palm-Cruz, Theresa Hoeft, Paul Pfeiffer, John Fortney

SUMMARY:

BACKGROUND: Telehealth Collaborative Care (TCC) and Telehealth Enhanced Referral (TER) expand the reach of specialty mental health services to underserved populations. **OBJECTIVE:** Assess clinical predictors of treatment engagement for complex psychiatric conditions in TCC—in which remote psychiatrists consult with primary care teams via an onsite care manager who also provides brief psychotherapy—and TER, in which remote psychiatrists and psychologists provide telehealth treatment as usual. **DESIGN:** A randomized pragmatic

trial from 24 primary care clinics without onsite psychiatrists or psychologists. **PARTICIPANTS:** A total of 1,004 adult patients screened positive for posttraumatic stress disorder (PTSD) and/or bipolar disorder were randomized to receive TCC or TER for 1 year. **MAIN MEASURES:** Psychotherapy engagement was measured by the number of sessions completed, and pharmacotherapy engagement by the medication adherence item from the Schizophrenia Care and Assessment Program Health Questionnaire (SCAP-HQ). **KEY RESULTS:** Engagement in TCC psychotherapy visits was greater compared to TER. There was no association between the PTSD symptom severity and treatment engagement. The internal state scale (ISS) activation subscale, an indicator of mania, was associated with reduced odds of initiating psychotherapy (odds ratio [OR] = 0.70; 95% CI, 0.59 to 0.84) but not the number of sessions attended once psychotherapy started. The Drug Abuse Screening Test-10 (DAST-10) score was associated with receipt of fewer psychotherapy sessions (incidence ratio rate [IRR] = 0.88; 95% CI, 0.81 to 0.95). The number of physical health comorbidities was associated with greater engagement in psychotherapy (IRR = 1.11, 95% CI, 1.03 to 1.19) and pharmacotherapy (OR = 1.54; 95% CI, 1.27 to 1.87). None of the findings varied by intervention group. **CONCLUSIONS:** Both telehealth integrated care and telehealth as usual offer an opportunity to treat patients with complex psychiatric conditions with otherwise limited access to mental health specialists. While there was no difference in clinical characteristics predicting engagement, onsite care managers engaged patients in more psychotherapy sessions in Collaborative Care than remote telepsychologists. **TRIAL REGISTRATION:** ClinicalTrials.gov Identifier: NCT02738944

No. 14

Leveraging Care Management to Optimize E-Mental Health Tool Uptake in a Collaborative Care Environment

Poster Presenter: Jennifer Severe, M.D.

Co-Authors: Danielle Taubman, Sophia Wolk, Adrienne Lapidus

SUMMARY:

Background: Mental health mobile apps and internet websites, or “e-Mental health (e-MH) tools,” are accessible self-help opportunities that can enhance mental health treatment. This study leverages the role of a care manager of a Behavioral Health Collaborative Care (BHCC) program to optimize e-MH tool uptake among depressed individuals receiving mental health care in a primary care clinic. **Methods:** This was a single-center, non-randomized, preferred assignment, pilot study of 32 adult participants (men=5, women=27) newly diagnosed with depression, entering a Behavioral Health Collaborative Care (BHCC) program in an underserved Michigan primary care clinic. Participants were recruited for 10 weeks and chose between three digital tools for depression, two involving CBT (MoodGym and Moodkit) and one involving more general coping skills training (Michigan Depression Toolkit), to use for 6 weeks, 3 times a week, for approximately 15 minutes at a time with low intensity coaching delivered by the BHCC care manager during her regular clinical calls with patients. Satisfaction and utilization of the selected tool were assessed through self-reports and tool use metrics at baseline, during the intervention, and 1-month post-intervention. **Results:** The 32 participants were mainly female (84%, n=27) and Non-Hispanic Caucasian (91%, n=29) which reflect the targeted Michigan county ethnic background. The mean age was 41.8 (SD 16.1). At enrollment, most participants had moderate or moderately severe depression (78%, n=25). Moodkit was the most desired tool, chosen by 53% participants (n=17), followed by 25% choosing Moodgym (n=8), and 22% the Depression Center Toolkit (n=7). The chosen tool was used for an average of 3.3 times per week and half of the time for a duration of 11-20 minutes at a time. Satisfaction increased with progressive use of the tool and 78% participants (n=25) continue to use the tool with no coaching for at least another 4 weeks. Seven participants dropped out. Facilitators to uptake were some specific characteristics of each tool such as, organization, ease, perceived efficacy but also the care manager’s regular and brief interventions around struggles with the use of the tools and motivational support. Barriers to uptake were primarily lack of time, depressive symptoms, and uncertainty about the

efficacy of the tool. **Conclusion:** Preliminary results demonstrate that the BHCC care manager can facilitate the integration and uptake of e-MH self-help tools into the existing clinical workflow. To our knowledge, this is the first study to examine the care manager's crucial role in such engagement.

No. 15

Objectifying the Day Response Variation of (Lis)Dexamphetamine in Adults With ADHD

Poster Presenter: Ravian Krw Wettstein

Co-Author: Glenn J. Dumont, Ph.D.

SUMMARY:

Background: In the Netherlands, two brands of amphetamines are available for treating ADHD: dexamphetamine sulfate (D-AMPH) and lisdexamphetamine dimesylate (LDX). LDX is marketed as a long-acting preparation with an extended duration of action compared to D-AMPH regarding symptom amelioration of ADHD [1], which has led to different dosage recommendations for LDX (once a day) and D-AMPH (twice a day). However, research comparing the pharmacokinetic and pharmacodynamic profiles of LDX and D-AMPH is sparse [2,3]. This study investigated the pharmacodynamic profile of D-AMPH and LDX in adults with ADHD during the day, comparing LDX once daily and D-AMPH twice daily. **Method:** A total of 16 subjects diagnosed with ADHD (DSM 5) were included in a randomized cross-over study. LDX was administered once (at baseline) and D-AMPH twice (at baseline and 4 hours after baseline), recommended by the SmPC and commonly applied in daily practice. We used estimated bioequivalent doses [2] as suggested in the SmPC. Outcome parameters were measured at 0, 2, 4, 6, 9, and 12 hours and consisted of plasma samples, the DEQ (drug abuse-related subjective effects), and the BLVAS (subjective mood effects). The data were analyzed using repeated-measure analysis of variance, with drug and time as the within-subjects factor. **Results:** The study sample consisted of 11 females (62,5%) with an average age of 31.7 (21-45) and 5 males (37,5) with an average age of 29.6 (21-39). Two peak plasma levels were observed for D-AMPH of 31.1 ± 16.3 at 2 hours and 42.18 ± 22.4 at 6 hours and one for LDX of 47 ± 24.1 at 4 hours after

administration. Despite bioequivalent dosing, the LDX AUC was higher than the D-AMPH AUC (AUC: $H(1)=3.86$, $p=.049$). A significant interaction for drugs*time was found for wanting more drugs ($F(2.68,40.27)=4.124$, $p=.015$), for D-AMPH at 4 hours after administration ($df(15)=3.59$, $p=.003$), which corresponded with a decreasing D-AMPH plasma concentration. Alertness showed a significantly higher peak rating at 2 hours after administration for D-AMPH ($df(15)=2.79$, $p=.014$) and corresponded with the first peak plasma concentration of D-AMPH. **Conclusion:** Our preliminary results show abuse- and mood-related effects consistent with de- and increasing plasma levels, indicating that subjects seemed to be well aware of fluctuating plasma levels of D-AMPH. In practice, the optimal dosage for stimulants is up-titrated until maximal efficacy and minimal side effects are achieved, which are based on the subjective effects experienced by patients. The current data showed that D-AMPH is more likely to induce craving and dysphoric effects in patients and, as such, will be more prone to pursue higher or multiple doses of D-AMPH. The moderate pharmacokinetic profile of LDX may therefore be clinically beneficial and at least preferable in cases with a history of substance abuse or dependence. This study was registered at ClinicalTrial.gov(NCT04946461).

No. 16

The Influence of Hsa-Mir-370-3P and CYP2D6 on Steady-State Concentration of Paroxetine in Patients With Depressive Disorder

Poster Presenter: Mikhail Zastrozhin

SUMMARY:

Introduction. Paroxetine is used in the treatment of patients with depressive disorder. Some patients do not show adequate response to therapy with paroxetine, while many of them experience type A adverse drug. Current research has shown that CYP2D6 is involved in the metabolism of paroxetine, the activity of which is considerably dependent, inter alia, on the polymorphism of the gene encoding it. The objective of the study was to evaluate the impact of $1846G>A$ polymorphism of the *CYP2D6* gene on the concentration/dose indicator of

paroxetine, using findings on activity of CYP2D6 and on CYP2D6 expression level obtained by measuring the *hsa-miR-370-3p* plasma concentration levels.

Methods. Our study enrolled 128 patients with recurrent depressive disorder. Treatment regimen included paroxetine in an average daily dose of 24.6 ± 9.7 mg per day. Therapy efficacy and safety was assessed using the international psychometric scales. For genotyping and estimation of the microRNA plasma levels we performed the real-time PCR. The activity of CYP2D6 was evaluated using the HPLC-MC/MC method by the content of the endogenous substrate of given isoenzyme and its metabolite in urine. **Results.** Our findings revealed the statistically significant results in terms of the treatment efficacy evaluation (HAM-D scores at the end of the treatment course): (GG) 9.0 [7.0; 11.0] and (GA) 11.0 [10.0; 11.0], $p=0.005$; the statistical significance in the safety profile was obtained (the UKU scores): (GG) 3.0 [3.0; 4.0] and (GA) 4.0 [4.0; 5.0], $p<0.001$. We revealed a statistical significance for concentration/dose in patients with different genotypes: (GG) 2.669 [2.100; 3.782] and (GA) 4.429 [3.983; 5.640], $p<0.001$. Analysis of the results of the pharmacotranscriptomic part didn't show the statistically significant difference in the *hsa-miR-370-3p* plasma levels in patients with different genotypes: (GG) 22.6 [15.7; 27.8], (GA) 20.2 [18.7; 25.7], $p=0.568$. Also, we didn't reveal the correlation between the miRNA concentration and safety profile: $r_s=0.05$, $p=0.585$. In addition, we revealed the relationship between the CYP2D6 enzymatic activity and the *hsa-miR-370-3p* plasma concentration: $r_s=-0.33$, $p<0.001$. Correlation analysis revealed a statistically significant relationship between paroxetine concentration and the *hsa-miR-370-3p* plasma concentration: $r_s=0.31$, $p<0.001$. **Conclusions.** The effect of genetic polymorphism of the CYP2D6 gene on the efficacy and safety profiles of paroxetine was demonstrated in a group of 128 patients with recurrent depressive disorder.

No. 17

Perceived Mental Health Stigma and Cultural Considerations for Managing First Episode Psychosis in Asian American and Pacific Islander (AAPI) Patients

Poster Presenter: Jaclyn L. Chen, M.D.

Co-Authors: Justin Chin, D.O., Eduardo Constantino, M.D.

SUMMARY:

Mr. A is a 25-year-old Chinese male, international student at an American PHD program, without any significant past psychiatric or medical history, who presented to the psychiatric emergency department for a week long history of progressively worsening bizarre behavior, with collateral stating a similar episode 3 months prior. Patient presented extremely paranoid, requesting help from friends to obtain security cameras due to concerns that others were spying on him and also endorsed poor sleep and believing he was God. The patient was admitted given high acute risk for psychiatric decompensation; however, there appeared to be poor insight into his psychotic symptoms. The patient rationalized his paranoia due to current social-political tension between the US and China. Upon further discussion, the patient noted concerns about having a psychiatric diagnosis, the fear of being labeled in academia, and family members not understanding his illness. With his negative history of prior psychotic symptoms, benign psychiatric history, perceived mental health stigma amongst Asian and Asian American individuals and higher academic setting, as well as permanency of a diagnosis like "schizophreniform," Mr. A was ultimately diagnosed with "Brief Psychotic Disorder." He was admitted to a psychiatric unit, where he underwent ongoing individual psychotherapy and significantly improved on Zyprexa before being discharged back home.?? This case highlights the importance of cultural considerations for Asian American and Pacific Islander (AAPI) patients in managing first break psychosis, especially in the emergency psychiatric care setting. Many patients may present with negative past psychiatric history, or with poor insight into their own psychiatric diagnoses, with family and friends who may also have poor insight into their conditions due to mental health stigma or low accessibility to health resources. Currently, there exists minimal research in addressing health stigmas or academic considerations when engaging in a culturally sensitive approach to the psychiatric diagnosis of and treatment for AAPI patients.?

No. 18**Efficacy of Connectivity Guided Theta Burst Stimulation Versus rTMS in Treatment Resistant Depression: Randomized Controlled Trial**

Poster Presenter: Richard Morriss

SUMMARY:

Background. A non-inferiority randomized controlled trial demonstrated that inhibitory theta burst stimulation (iTBS) was as effective as repetitive transcranial magnetic stimulation (rTMS) for treatment resistant depression (TRD)¹. Pilot work suggested that using resting state fMRI, functional connectivity between the right anterior insula and the left dorsolateral prefrontal cortex to personalise iTBS (cgiTBS) might be superior in the duration of efficacy in TRD². **Aim.** To determine if cgiTBS is superior in efficacy to rTMS on depression symptoms at 8,16 and 26 weeks in TRD. **Method.** Participants ≥ 18 years with treatment resistant (Massachusetts General Hospital Stagin Score ≥ 2) SCID diagnosed primary unipolar major depression of at least moderate severity (17-item Hamilton Depression Rating Scale ≥ 16) were recruited from 5 centres in England (specialist mental health and primary care). Exclusion criteria were contraindications to MRI including pregnancy, immediate suicide risk, lack of consent, unstable medical illness, neurological disorder, substance use disorder, bipolar disorder, dementia. Participants received structural and functional MRI to identify personalised sites of stimulation with cgiTBS or rTMS. They were randomised to 20 sessions (3,000 pulses per session) cgiTBS or rTMS over 4-6 weeks. Assessments were baseline and blinded at 8,16 and 26 weeks after randomization. The primary outcome was average HDRS-17 score at 8,16 and 26 weeks. Secondary outcomes were response, remission, sustained remission, self-rated depression (PHQ-9, BDI), anxiety (GAD-7), cognition (THINC-itt), function (WSAS) and quality of life (EQ-5D-5L). Childhood trauma assessed at baseline. Analysis was intention to treat, mixed model analysis with all baseline clinical and demographics as moderators. **Funding:** NIHR EME,UK. **Results.** 255 participants (127 rTMS, 128 cgiTBS) were recruited with mean (sd) age 43.7 (14.0) years, 132 (52%) female, 214 (84%) white British. 95 (38%) showed high treatment resistance. 240 (94%) received 20 TMS sessions and 218 (86%)

completed all follow up. The HDRS-17 score decreased in the rTMS group from 24.0 (4.9) to 15.5 (7.5) at 8 weeks, 15.8 (7.9) at 16 weeks, 16.2 (8.6) at 26 weeks; in the cgiTBS group, baseline was 22.6 (4.6) to 14.4 (6.6) at 8 weeks, 15.0 (7.7) at 16 weeks and 14.4 (7.6) at 26 weeks; adjusted mean difference -0.31 (95% CI -1.87, 1.29), $p=0.689$. Response and sustained remission rates at 26 weeks were respectively 30% and 21% in rTMS; 35% and 25% in cgiTBS. All secondary outcomes and moderators of outcome were non-significant. **Conclusion.** cgiTBS was not superior in efficacy to rTMS on any outcome with both treatments being well tolerated and resulting in remission lasting up to 6 months in 21-25% patients with TRD including those with high treatment resistance.

No. 19**Om Mental Health Namah: Educating Hindu Religious Scholars and Spiritual Leaders on Mental Health and Engaging Them to Educate the Community**

Poster Presenter: Shuchi Khosla, M.D.

Co-Authors: Noor Haq, Micaela Rice, Alex Phillips

SUMMARY:

Religion and psychiatry being at odds with each other not only has historical roots, it is still very prevalent today. India's mentally ill will oftentimes turn to their faith instead of medicine for treatment. In the Hindu American population, more than 87% are first generation immigrants, making their deep roots in Indian culture and religion prevalent in their decision to seek help from their faith clergy. Archayas, who act as religious figures of guidance in the Hindu community, therefore play a very active role in the mental health and wellness of Hindu American people, and a thorough understanding of fundamental mental health conditions will equip them with the tools necessary to help this population. For this reason we constructed an intervention that seeks to find the intersection of mental health and Hinduism, by teaching the Archayas about common mental health disorders and how to address them with their community members. Our study aims to educate Archayas on recognizing depression and anxiety in the Hindu-American population. Our study participants

included a group of 6 Acharyas. We chose preists to be the participants of our study because they have a strong leadership role and provide guidance to members of the Hindu-American culture. We held three, 2-hour interventions with the Archaya. These interventions began with a pre-intervention questionnaire assessing the Archaya's ability to recognize mental health symptoms in the Hindu-American population. Afterwards, we conducted a 2 hour informational session with the Archaya. The goal of these sessions was to teach the various ways depression and anxiety can be presented. At the conclusion of the intervention, we administered a questionnaire to assess how effective the intervention was. Then the Acharyas were invited to participate in a multidisciplinary panel to educate the community via webinar. The intervention was well received and can be used as a model to enhance mental health education among other communities and cultural settings.

No. 20

Healer- Heal Thyself First: Addressing the Barriers Against Mental Health Treatment as Perceived by Hindu- American Physicians When Treating Their Own

Poster Presenter: Shuchi Khosla, M.D.

Co-Authors: Micaela Rice, Noor Haq, Ethan A. Bork

SUMMARY:

The Hindu-American diaspora is a fast-growing minority in the United States. There are about 2.5 million Hindus currently residing in the united states. 5.2 percent of American physicians self-identify as Hindu. Within the Hindu-American community, traditional Indian systems and religion may shape many of its members' lives. These may present as barriers to accessing/accepting mental health treatment. A patient's decision in reporting mental health symptoms, how they cope, and how willing a patient is to receive treatment are weighed against their cultural and religious beliefs. Thus, ensuring that physicians can recognize how these factors can affect their Hindu-American patients becomes essential. Our study aims to engage Hindu-American physicians in a dialogue regarding their understanding of depression and anxiety and the specific barriers to care the Hindu-American

population faces. **We set up a focussed group discussion among a panel of five Hindu American physicians. The group was homogenous in its setting in terms of each of the physicians having completed their medical school in India and then a residency in the united states. The group was diverse in terms of physician specialties- internal medicine, peditrics, emergency medicine, psychiatry, and family practice. The physicians were asked to comment on their level of comfort, knowledge, and understanding of mental health, on what they perceived as cultural barriers in their patient's minds, and on potential solutions that they were aware of. They were also asked to comment on what psychiatric disorders they believed were the most prevalent and challenging to address in the community. Pre and post-survey were completed to assess the efficacy of the intervention. The physicians were then invited to a multidisciplinary panel to speak to the community via webinar. The intervention was well received and can present as a model that can be repeated in other cultural settings in the pursuit to combat the stigma against mental health.**

No. 21

Impact of a Brief Transitional Care Intervention on Behavioral Health Post-Discharge Outcomes

Poster Presenter: George L. Alvarado, M.D.

Co-Authors: Gerald Garland, Hira Ruskin

SUMMARY:

Background: Transitional care programs following medical admission are a mainstay of hospital quality improvement, particularly in Medicare, with a variety of models and incentive programs in place. There has been less attention paid to transitions following behavioral health (BH) admission, despite 30 day readmission rates reported as high as 18%¹ nationally and with higher local variation. One notable exception has been the Critical Time Intervention model, focused on those with severe mental illness and lasting up to 9 months with brief iterations as short as 3 months². Community-based care management programs, such as Medicaid Health Home, have also been tasked with managing transitions, but may be less resourced to do so effectively³. The aim of this pilot is to assess the

impact of an abbreviated 30 day BH transitions program, operated in close coordination with Health Home Care Management, on post discharge outcomes and connectivity to resources in the community. **Method:** Patients were enrolled from a large urban psychiatric hospital in Queens, New York. Eligibility for the pilot was limited to 4 Managed Medicaid payors. Participants had to be ≥ 18 years old and meet criteria for Health Home Care Management: Medicaid enrolled with ≥ 2 chronic conditions or a single qualifying condition (SMI, HIV, or sickle cell disease.) The team consisted of a lead social worker, nurse case manager and two peers, with weekly supervision and escalation available with the Health Home Medical Director. Eligible members were engaged while on the unit and followed for a period of 30 days post discharge, with scheduled contact, every 3-5 days. Contacts prioritized assessing for safety, crisis management and treatment adherence, as well as social determinants of health. Contacts were conducted either by phone or in person, depending on clinical need. The primary outcome measure was 30 day all cause readmission, with secondary outcomes of 7 and 30 day behavioral health follow up. Following completion of the 30 day program, the case would be handed off to the Health Home team for ongoing care management. **Outcomes:** Over a 15 month period, a total of 121 patients were enrolled and followed for 30 days post discharge. Of these, 107 successfully completed the program and were transitioned to the Health Home, while a total of 14 patients returned and were admitted to the hospital for a 30 day readmission rate of 14%. 7 day outpatient mental health follow up was 65% while 30 day follow up was 81%. **Discussion:** Given the potential challenges that may arise during the post-discharge period, intensive engagement through a brief care transitions model appears to have a positive impact on both readmission and follow up. Simultaneous enrollment in longer term care management, such as the Health Home, should help to consolidate these gains, though further study of outcomes at 60, 90, 180+ days post discharge is needed.

No. 22

Engagement in Outpatient Mental Health Services and Telehealth Use in New York State During Covid

*Poster Presenter: Natalie Bareis, Ph.D., L.M.S.W., M.S.
Co-Authors: Miriam C. Tepper, M.D., Thomas Smith, M.D.*

SUMMARY:

Background: The COVID-19 lockdowns presented potential barriers to care for those with serious mental illness (SMI). Public mental health systems responded by rapidly implementing telehealth. Reports indicate telehealth has been widely accepted by providers and patients, but concerns remain regarding subgroups of patients who were unable to use telehealth or for whom telehealth did not meet their needs. We examined engagement in outpatient service use among a large cohort of New York State (NYS) Medicaid recipients with SMI and explored whether the transition to telehealth was associated with changes in engagement following the initial 2020 COVID-19 surge for the overall cohort as well as subgroups based upon diagnosis and ethnoracial status. **Methods:** NYS Medicaid claims data were examined for 54,323 individuals with SMI who received outpatient services from September 2019–February 2021. We examined engagement in care over three 6-month time periods: T₀ (6 months prior to the February 2020 COVID-19 surge); T₁ (March–August 2020); and T₂ (September 2020–February 2021). To account for non-COVID-19 related changes in engagement over time, we created a comparison cohort of 50,966 individuals who received outpatient services during September 2017–February 2019 and calculated their engagement in care over the same subsequent 6-month time periods. For both cohorts, inclusion criteria included: 1) 21-64 years of age, 2) SMI defined as schizophrenia, bipolar disorder, or major depression (MDD), and 3) prescribed at least one disorder-specific psychotropic prescription (antipsychotics for schizophrenia, antipsychotics or mood stabilizers for bipolar disorder, and antidepressants for MDD). Engagement during the T₀-T₂ periods was defined as: High (≥ 4 visits total with at least one visit in 4 of the 6 months); Partial (≥ 4 visits total but in ≤ 3 months of the 6 months); Low (1-3 visits total in the 6-months); and No visits. We compared differences in engagement by

demographics, service use, diagnosis, and presence of a comorbid substance use disorder (SUD), within these two cohorts. We also compared patients who used telehealth versus those who continued in-person visits following the COVID-19 surge. **Results:** Patterns of engagement did not change during the COVID-19 lockdown compared to the comparison cohort. Subgroup analyses indicated no differences in engagement across ethnoracial groups or by SMI diagnosis. Eleven to fourteen percent of the COVID-19 cohort patients continued with in-person care only during the pandemic. Use of telehealth was greater among younger people, women, non-Hispanic Whites, and those with MDD. Use of telehealth was lower among non-Hispanic Blacks, those in NYC, and those with schizophrenia or SUD. **Conclusions:** The shift to telehealth helped preserve access to services for this SMI population. For those who did not use telehealth, exploring reasons for not engaging in telehealth will identify opportunities to increase access to care.

No. 23

Impacts of the Covid-19 Pandemic on Depression, Anxiety, and Cognition in Patients With Wilson Disease (WD)

Poster Presenter: Ayse Kubra Coskun, M.D., M.A.

Lead Author: Adem Aydin, M.D.

Co-Authors: Susan Rubman, Ph.D., Paula Zimbrea, M.D., Sumeyra Tosun, Ph.D.

SUMMARY:

Background: The COVID-19 pandemic had significant effects on depression, anxiety, cognition, and quality of life of patients with medical conditions. In this study, we aim to evaluate the mental health impacts of the COVID-19 pandemic on patients with Wilson Disease (WD). **Method:** We analyzed prospectively collected data for 33 adult WD patients from the international multisite WD Registry Study. The WD registry started enrollment in December 2017 and includes annual assessments of depression (patient health questionnaire (PHQ9)), anxiety (generalized anxiety disorder (GAD7)), cognition (Montreal cognitive assessment), stress level (perceived stress scale (PSS)) and patient self-reported quality of life (12-Item Short Form Health Survey (SF-12)). All participants completed a COVID-19 survey about the

COVID-19 related health and social effects. We used ANOVA to analyze correlations between depression, anxiety, cognition at 2 time points prior to and one time after the start of the COVID 19 pandemic in March 2020. **Results:** 33 out of 33 patients with three-time points responded to the invitation to complete the COVID-related survey. The mean age was 48, 45.5% of the population was female. Being an essential worker (EW) had a significant effect on depression ($p = .005$). The two before COVID (BC) measures were similar for both groups; however, participants required to work during the pandemic ($n = 10$) reported higher depression scores after COVID (AC) compared to those who were not ($n = 22$). While the scores of the non-EW group were similar BC, the mental health perception scores of essential workers declined AC but did not reach statistical significance ($p = .07$). Patients who experienced an income loss ($n = 11$) scored higher in stress ($p = .02$), anxiety ($p = .02$) and self-reported mental health perception ($p = .04$) tests than those who did not ($n = 21$). Participants who initiated a wellness activity ($n = 15$) had a higher anxiety level ($p = .06$) and an increase in their cognitive scores ($p = .09$) but they did not achieve statistical significance. BC, patients who tested positive for COVID-19 ($n = 21$) scored higher on their MoCA than those who did not ($n = 12$). However, this difference disappeared AC. **Conclusion:** In a cohort of patients with treated WD, the COVID -19 pandemic did not cause worsening anxiety and cognitive function, however, depression was more pronounced in those who were essential workers. Only those experiencing an income loss during this time had higher stress and anxiety. Further information is needed to understand factors that correlate with the impact of the COVID-19 pandemic upon the mental health of patients with WD.

No. 24

Pediatric Providers' Satisfaction With CAPP - A CPAP in California: A Mixed Methods Analysis

Poster Presenter: Mahmoud Farghal

Co-Authors: Juliet Yonek, Petra Steinbuechel, Chuan-Mei Lee

SUMMARY:

Background: Access to child psychiatry services is a national problem. Child Psychiatry Access Programs (CPAP) are a pediatric behavioral health integration model that extends the reach of child psychiatrists by providing consultation services to primary care providers (PCP). The Child and Adolescent Psychiatry Portal (CAPP) at the University of California, San Francisco (UCSF) is a CPAP serving Northern and Central California. CAPP provides telephonic consultation to more than 1000 pediatric PCPs across the state and assesses user satisfaction through monthly web-based surveys. Satisfaction survey results are assessed in this study. **Methods:** PCPs who utilized CAPP services at least once in the preceding month were emailed a link to a 12-item satisfaction survey consisting of 10 5-point Likert scale questions and 2 open-ended questions. Questions were designed to capture implementation outcomes from Proctor et al.'s implementation science framework, i.e., acceptability, appropriateness, feasibility, and adoption. Likert scale responses were analyzed in R studio, with "Strongly disagree" coded as 1 and "Strongly agree" coded as 5. Responses to open-ended questions were analyzed in ATLAS.ti, first using inductive coding to generate preliminary themes and subsequently using deductive coding to clarify and revise themes. **Results:** A total of 123 of 750 surveys (16.4%) were completed between July 2021 and May 2022. Two surveys were omitted from the analysis due to insufficient data for a final sample size of $n = 121$. For questions assessing appropriateness (e.g., "The CAPP consultant provides recommendations that are helpful to my patients"), the average rating was 4.76 (SD= 0.53). For questions assessing feasibility (e.g., "I am able to consult a CAPP clinician in a timely manner"), the average rating was 4.47 (SD= 0.87), and for questions assessing acceptability (e.g., "I have seen improvements in psychiatric symptomatology in my patients because of CAPP"), the average rating was 4.62 (SD= 0.68). Thematic analysis of the open-ended questions revealed three themes: 1) an increase in PCPs' confidence in assessing, diagnosing, treating, and managing mental health conditions; 2) a sense that CAPP consultations "interrupted" PCPs' daily workflow; and 3) varying responses to integrating mental health care within their practices ranging from relief to gratitude to

hesitation. **Discussion:** Overall, PCPs were satisfied with the CAPP program. Feedback indicated the need for CPAPs to support efficient integration of tele-consultations in provider workflow. There were several limitations associated with this study. Because the survey was sent in the month following consultation, it could be several weeks between a PCP's consultation and their survey response, increasing the chance for recall bias. The low response rate may be due to the lack of participation incentive and survey fatigue, as PCPs who are frequent users may be sent the survey multiple times.

No. 25

Cycling to the Future: Using Plan-Do-Study-Act (PDSA) Cycles to Drive Curriculum Development and Diversification in Training Programs

Poster Presenter: William Gibbs, M.D.

Co-Authors: Jayinee Basu, Darlene Guerrier, Olusola Segun

SUMMARY:

<p lang="EN-US" paraeid="{00a31283-7621-4e9b-ac4a-529a2d726fdc}{159}" paraid="1577944301" xml:lang="EN-US">Background: There is an inherent need for psychiatry residency training programs to assess and develop their clinical rotation experiences to prepare physicians for the changing practice landscape. As a result of the COVID-19 pandemic, as well as pre-COVID data¹, the use of telepsychiatry has increased substantially, creating both increased opportunities and challenges² with face-to-face handoff and differences in "bedside rounding" as compared with in-person services. This project describes the implementation of a multi-phase resident-led quality improvement project aimed at 1) improving learner satisfaction for residents rotating on a consult-liaison (CL) and emergency psychiatry rotation, and 2) determining the educational benefit of diversifying clinical rotations. Methods: Phase 1 of the CL quality improvement project was completed from June 2021 to July 2022, using a quarterly PDSA cycle³ consisting of a survey given to all residents rotating on the service, interventions for areas of improvement identified by survey data, and specific qualitative feedback on interventions. The survey in Phase 1 was 14 items long: 13 Likert scale questions

and 1 qualitative question regarding overall rotational value. Phase 2 is ongoing, with final data being collected in May. The survey in Phase 2 is 15 items long, with an additional qualitative question addressing the perceived value of the new rotations. Because there are less residents per rotation the PDSA cycle is biannual instead of quarterly. Results: In Phase 1, interventions were designed with the CL attendings based on quarterly reviews of all data. These interventions included feedback training for both attendings and residents, the restructuring of morning and evening sign-out/handoff, and the creation of new rotations. Data showed improvement in rotation goal-setting and feedback quality. Qualitative data indicated a desire for diversified patient populations and learning experiences, leading to the creation of two rotations: a telepsychiatry rotation, and a CL rotation at an alternative site with a different patient population. In Phase 2, the decrease in surveying has limited ability to plan new interventions; at time of submission, qualitative data suggests residents find value in the new rotational experiences but see less cases per shift on telepsychiatry vs both in-person CL rotations. Interventions are under discussion to address this issue, as is the possibility of new feedback training for the current year. All numeric data will be presented; given small sample sizes (the total pool of residents in any given survey period is between 4-8), simple averages of Likert scales were used to determine change over time. Conclusion: PDSA cycles can be utilized to identify areas of potential improvement for curriculum development and diversification; they also represent a valuable learning experience for trainees interested in quality improvement, particularly over an extended time period. </p>

No. 26

Mental Health Care for Individuals With Disabilities: Exploring the Social Relational Model of Disability in the Context of Multiple Sclerosis

Poster Presenter: Matthew Adamson, M.D., Ph.D.

Co-Author: Brynn Adamson

SUMMARY:

Multiple sclerosis (MS) is a chronic neurological condition affecting close to one million individuals in

the United States. Impairments in balance, mobility, strength and function as well as sensory disturbances, cognitive and affective symptoms and fatigue are common. There is a 50% lifetime prevalence of clinically significant depression which is a major determinant of quality of life as determined by individuals living with MS. Similarly, the rates of anxiety disorders are higher in this population (37.5% lifetime prevalence) than the general population (25%). Importantly, Bogart has identified an important and often overlooked protective factor to both anxiety and depression in MS. A positive sense of disability identity was significantly associated with reduced risk of depression and anxiety. Disability identity, disability self-efficacy and self-concept are all significantly related to satisfaction with life among those with disabilities, however those with acquired impairments, such as MS, are less likely than those with congenital impairments to affirm their disability identity. This is complicated by the often invisible and episodic nature of MS. Those with invisible stigmatized identities have reported lower self-esteem and mood than those with visible stigmatized identities. These are all important psychosocial contributors to the high rates of depression and anxiety in this population. This poster will explore the utility of the Social Relational Model of Disability, its construct – psychoemotional disablism and the intersection with psychiatric healthcare among those with MS. The Social Relational Model of disability explores how social, psychological and environmental factors impact on the well-being and participation of individuals with impairments. A key construct within this model is the concept of psychoemotional disablism which arises from social and individual factors related to how disability is understood and consequently how people with impairments are treated and perceived by others and self. This framing brings up several important points worth discussion related to the mental health care of individuals with MS and comorbid anxiety and/or depression. These include: the psychological impact of encountering inaccessible environments, the psychological burden of stigma and social isolation, the impact of internalized ableism, and the difficulty of navigating a new identity with disability. These themes and their implications for mental health providers are

explored in the context of MS and the provision of care to individuals with disabilities with comorbid mental illness.

No. 27

Mental Health Problems of Black and White Children in a Nationally Representative Epidemiologic Survey in the US

Poster Presenter: Tanner Bommersbach, M.D., M.P.H.

Co-Authors: Taeho Greg Rhee, Ph.D., Robert Rosenheck, M.D.

SUMMARY:

Background: Prior studies show that Black children face far more numerous socio-economic disadvantages than White children, but whether they have significantly more adverse mental health problems is unknown. **Methods:** Using nationally-representative data from the 2018-2019 US National Survey of Children's Health, we examined significant differences in mental health problems between non-Hispanic Black (n=2,890) and White (n=30,015) children aged 6-17. Multivariate analyses were used to determine whether significant differences in reported mental health conditions could be accounted for by other socio-demographic or clinical factors. **Results:** Compared to White children, Black children were less likely to have clinically-identified internalizing conditions (especially anxiety) and more likely to be identified with conduct problems ($p < 0.05$ each). Black children were also substantially more likely to be exposed to adverse childhood experiences (ACEs), to be uninsured, experience poverty, have single caregivers, more medical diagnoses, and were less likely to receive needed mental health services ($p < 0.05$ for each). After adjusting for these potentially confounding factors, Black children remained half as likely to have clinically-recognized internalizing conditions (adjusted odds ratio [AOR], 0.49; 95% confidence intervals [CI], 0.37-0.64), but were no longer more likely to have clinically-identified conduct problems (AOR, 1.14; 95% CI, 0.88-1.45). Differences in ACEs alone fully accounted for the racial difference in conduct problems. **Conclusions:** Black children were significantly less likely than White children to have clinically-recognized internalizing conditions, which may reflect provider or assessment bias, but were

more likely to have clinically-recognized conduct problems. Greater numbers of ACEs accounted for the greater risk of conduct problems.

No. 28

Impact of Language Barriers on Length of Stay and Readmission at a Psychiatry Hospital in Kaiser Permanente Northern California From 2018 to 2021

Poster Presenter: Lih-Chiao Hsu, M.D.

Co-Authors: Douglas Stram, M.S., Zhongshu Yang, M.D., Ph.D.

SUMMARY:

Background: Over the past few decades, the medical field has been increasing its awareness of the paramount importance of reducing communication barriers and delivering culturally sensitive care^{1, 2, 3}. Language barriers pose significant challenges for patients to communicate their care needs and for clinicians to deliver medical care³. There is sparse data examining language barriers' impact on care outcomes in an inpatient psychiatric setting, likely due to short length of stay, lack of systematic measurement of patients' language barriers and often the limited study sample size⁴. The goal of this study is to investigate how English proficiency impacts treatment outcomes in a large inpatient sample in Kaiser Permanente Northern California (KPNC) between 2018 to 2021. **Methods:** Demographic and hospitalization data were collected for adult (age 18 and above) patients who were hospitalized at KPNC from 1/1/18 to 12/31/21. Mean length of stay (LOS) and rate of 30-day readmission (30D RR) were calculated overall and within each clinical and demographic subgroup. The association between each demographic factor and LOS was analyzed using Kruskal-Wallis tests and between each demographic and readmission using chi-square tests. Pre-pandemic (1/1/18 – 3/15/20) and pandemic period (3/16/20 – 12/31/21) data were also examined to compare the effect of pandemic upon hospitalization outcome. **Results:** The mean LOS of inpatient hospitalization irrespective of the pandemic between patients with language preference of English, non-English language but without need for interpreter, and non-English language with need for interpreter are 7.3 (SD 8.6), 7.8 (SD 8.5), and 7.3 (SD 8.1) days, respectively ($p =$

0.831). The 30D RR rates are 2.9%, 2.9%, and 1.4%, respectively ($p = 0.746$). The mean LOS pre-pandemic was 7.0 (SD 8.4), and during pandemic is 7.9 (SD 8.8) days, a statistically significant increase ($p < 0.001$) for the entire patient group. **Conclusions:** The inpatient psychiatry treatment outcome at one of the major inpatient psychiatric facilities in KPNC, measured by LOS and 30D RR, does not appear to be affected by patient language preference or the need of interpreter. The encouraging study finding could be at least partially due to the improved cultural-linguistic awareness of the medical field, improved mental health awareness in the community, as well as available resources within the Kaiser Permanente system. Furthermore, this study also revealed that the pandemic did, but only exerted minimal negative impact on inpatient care outcome, i.e. LOS increase is only by close to 1 Day. Our study strength is the total patient number ($N > 2000$) in a culturally diverse community. The limitation of this study may include the relative smaller number of patients with limited language capacity and the potential limitation in the generalizability to other hospital settings or demographic groups.

No. 29
WITHDRAWN

No. 30
Flourishing: Is It an Appropriate Measure of Health, Wellness, and Thriving in Children With Autism Spectrum Disorder?

Poster Presenter: Grace Ibitamuno, Ph.D.

Co-Authors: Christine Kim, M.D., Hermioni Amonoo, M.D., M.P.P.

SUMMARY:

Background Flourishing is a well-established measure of wellness in diverse populations and is associated with better outcomes in children (e.g., reductions in risky behaviors, increased resilience, and creativity) and better physical, mental, and social outcomes in adulthood. Flourishing is characterized by a presence of positive emotions, positive social interactions, a sense of achievement, and diligence in completing tasks. Flourishing has been observed in individuals experiencing hardship or managing chronic illness. Although flourishing has been studied

in general pediatric populations, there is limited data on the prevalence of flourishing in children with Autism Spectrum Disorder (ASD), and limited research on whether measures utilized to define flourishing are appropriate in this population.

Methods Using data from the 2018-2019 National Survey for Children's Health, we assessed flourishing in 1380 school-aged children with ASD compared to 41,673 school-aged children without ASD, with about 30% of the population being children of color. We defined child flourishing according to the literature and based on the following survey questions: 1) Does this child show interest and curiosity in learning new things? 2) Does this child work to finish tasks he or she starts? 3) Does this child stay calm and in control when faced with a challenge? Probit regression models were used to describe the association between ASD and caregiver-reported child flourishing. **Results** Fewer caregivers of children with ASD report flourishing in their children than caregivers of children without ASD (predicted prevalence rates of 45.3% vs 86.8% respectively, $p < 0.001$). Fewer caregivers of girls with ASD report flourishing than caregivers of girls without ASD (predicted prevalence rates of 39.6% vs 89.1% respectively, $p < 0.001$). Fewer caregivers of boys with ASD report flourishing than caregivers of boys without ASD (predicted prevalence rates of 44.0% vs 84.6% respectively, $p < 0.001$). Flourishing in children with ASD may also be associated with the severity of their ASD (predicted prevalence rates of flourishing in severe ASD = 14.6%, $p < 0.05$; in moderate ASD = 33.2%, $p < 0.001$; in mild ASD = 59.3%, $p < 0.001$, in no ASD = 86.8%, $p < 0.001$). **Conclusion** Caregivers of children with ASD are less likely to report flourishing in their children than caregivers of children without ASD. Children with ASD often have deficits in attentiveness, and emotional regulation, and may have limited interests. If we define child flourishing based on strengths in these areas, the actual prevalence of flourishing in children with ASD may be underestimated. For the child flourishing measure to be equitable and appropriate in children with ASD, it needs to consider the unique characteristics of having ASD on the experiences and motivations of children with ASD. Further research is required to appropriately define, measure, and understand flourishing in children with ASD.

No. 31**Seasonality of Suicide in the US: Age Group and Summer Effects (2015-2020)**

Poster Presenter: Samantha Ibarra To

Co-Authors: Erick Messias, M.D., Gavin DeFisser, John Chibnall, Ph.D.

SUMMARY:

Introduction: Suicide is a major public health concern that affects more than 1 million people globally every year. It is the second leading cause of death among Americans ages 10-14 and 25-34. Seasonal variation in suicide rates is a phenomenon that has been documented throughout the literature. Most studies describe a peak in spring, mainly for men and older individuals, and a secondary peak during autumn. Other studies on seasonality of youth suicide describe a decrease during the summer months. Nonetheless, the seasonality of suicide broken down by specific age groups and gender in the US remains less well understood. Objective: The aim of this study is to describe the seasonality of death by suicide as a function of gender (M vs. F) and age (15-24, 25-34, 35-44, 45-54, 55-64, 65-74, 75+ years) from 2015-2020 in the US. Methods: Publicly available data on monthly suicides was obtained from the Underlying Cause of Death database, CDC WONDER, from 2015-2020. The summer incidence, from June-August, of suicide for two groups, 15-24 and ages 25+, was also calculated and a two-sided test was performed. All summer incidences are presented per 100,000 individuals. The results presented here were obtained using a Seasonal Decomposition analysis in SPSS. The time series from 2015-2020 for each age group was converted into Trend, Seasonality, and Residual. Results: During 2015-2020, there were 277,858 total suicides across all age groups. For ages 15-24, there were 35,662 total suicides. For ages 25 and older, there were 239,049 total suicides. In 2020, the incidence of summer suicide (ISS) per 100,000 in the 15-24 group was 3.62 and 4.63 in the 25+ group, incidence rate ratio (IRR) was 0.782 (p-value<0.00001). In 2019, the ISS in the 15-24 group was 3.4, and in the 25+ group was 4.8, IRR was 0.70 (p-value<0.00001). In 2018, the ISS for the 15-24 group was 3.54 and in the 25+ group was 5.0, IRR was 0.693 (p-value<0.00001). In 2017, the ISS of the 15-24 group was 3.68 and in the 25+ group was 4.88,

IRR was 0.754 (p-value<0.00001). In 2016, the ISS for the 15-24 group was 3.17 and in the 25+ group was 4.72, IRR was 0.673 (p-value<0.00001). In 2015, the ISS for the 15-24 group was 3.04 and in the 25+ group was 4.7, the IRR was 0.646 (p-value<0.00001). Discussion: For Americans ages 15-24, the highest spike in suicides was in autumn, Sept-Oct. This is the only age group in which this occurred, differing from previous understanding of the seasonality of suicide in the literature. With all other age groups, there was a consistent pattern of a peak in late spring, small peak in fall, and a trough in late winter. Comparing the incidence of summer suicide between the younger age group 15-24 and older age groups 25+ we found a statistically significant difference for all six years from 2015-2020. We found no difference in the seasonality of suicide between genders. Further investigation into seasonal differences in suicidality among young people is needed.

No. 32**Identifying Complex Suicide Death Profiles Using Unsupervised Learning Model: A Latent Class Analysis Among 267804 Suicide Decedents in US, 2003-2019**

Poster Presenter: Yunyu Xiao, Ph.D.

Co-Authors: Kaiwen Bi, Paul Yip, Ph.D., Julie Cerel, Ph.D.

SUMMARY:

Background Suicide is a serious public health problem, rising by 30% from 2000 to 2020 and ranked as the leading cause of death in the United States. Full understanding of the causes of suicide death remained challenging as each death may associate with co-occurring risks and protective factors of suicide. Identifying the complex profiles of suicide decedents can improve targeted suicide prevention efforts. This study aims to apply an unsupervised learning method to identify the latent clusters of suicide decedents with mixed causes of death in the U.S. Method Suicide death data were extracted from the Restricted Access Database within the National Violent Death Reporting System from 2003-2019 (n=267804). We included 19 circumstances-level indicators in latent class analysis models, including mental health problems, life crises, interpersonal relationships, substance problems, and

family history. After selecting and interpreting the ultimate number of classes, we applied multivariate logistic regression to differentiate suicide decedents with and without recent disclosure of suicide intent (past month), controlling for demographic characteristics. Result We identified 5 classes: Class 1 (mental health and substance problem with complex toxicology; 35 754 individuals [13.4%]), Class 2 (mental health problem; 49 778 individuals [18.6%]), Class 3 (crisis and intimate partner problem; 49 240 individuals [18.4%]), Class 4 (obscured reason with physical health problem; 83 521 individuals [31.2%]), and Class 5 (substance problem with complex toxicology; 49 511 individuals [18.5%]). After controlling for covariates, compared to the “non-mental health group,” the “mental health” group was more likely to disclose their suicide intent to others before they committed suicide (aOR, 1.68; 95% CI, 1.65-1.72). Compared to this class, Class 3 “crisis and intimate partner problem” (aOR, 0.88; 95% CI, 0.85-0.90), Class 4 “obscured reason with physical health problem” (aOR, 0.42; 95% CI, 0.41-0.43), and Class 5 “substance problem with complex toxicology” (aOR, 0.63; 95% CI, 0.61-0.65) were all less likely to disclose their suicide intent to anyone. From 2003 to 2019, Class 5 increased by 172%, from 9.0% to 24.6%, and Class 1 increased by 30.6%, from 10.8 to 14.1. Conclusion Our results shed light on the complexity of suicide risks and potential intervention targets. Clinicians are suggested to routinely screen for substance use problems and comorbid mental health problems. Public health interventions monitoring the opioid crisis and supporting mental health treatment can be effective in reducing suicide risks.

No. 33

Healthcare Services Utilization Among Suicidal Patients: Comparing the Impact of Co-Occurring Opioid or Other Substance Use Disorders

Poster Presenter: Veer Vekaria

Co-Authors: Braja Patra, Ph.D., Wenna Xi, Jonathan Avery, M.D., Jyotishman Pathak

SUMMARY:

Background: Prior literature establishes bidirectional associations between suicide and substance use disorders (SUDs), particularly opioid use disorder

(OUD). However, the context of healthcare utilization remains under-investigated. This analysis examined patterns of healthcare services utilization in patients with SUDs and suicidality, identified associated risk factors, and evaluated the impact of patient engagement on subsequent health outcomes.

Methods: Electronic health records (EHRs) derived from 7 health systems across New York City between 2010-2019 were analyzed. Suicidality was identified as any ICD-9/10 diagnosis of suicide attempt, suicidal ideation, or self-harm injury. SUDs were identified as any opioid, cannabis, cocaine, hallucinogen, inhalant, sedative/hypnotic/anxiolytic, amphetamine, or other substance abuse or dependence. Quasi-Poisson regression adjusted for age, gender, and chronic diseases was used to model associations between OUD exposure and the frequency of encounters and estimate the relative risk (RR) of significant covariates. **Results:** A total of 6977 adults with suicidality and any co-occurring SUD were selected, including 2203 (31.6%) with a diagnosis of OUD and 4774 (68.4%) without a diagnosis of OUD. Most patients were male (54.8%) and aged between 25-64 years (79.3%). Many (61.3%) had over 3 chronic diseases, including depression (80.8%), hypertension (60.6%), anemia (43.0%), and hyperlipidemia (41.9%). Compared to patients with other SUDs, those with OUD had higher odds of self-harm injury [OR: 1.26 (95% CI: 1.13-1.41)], depressive disorders [1.47 (1.29-1.67)], anxiety disorders [1.65 (1.48-1.84)], psychotic disorders [1.23 (1.11-1.37)], personality disorders [1.30 (1.16-1.48)], and post-traumatic stress disorder [1.37 (1.20-1.57)]. Patients with OUD were more likely to utilize all-cause outpatient (RR: 1.16), emergency department (ED) (RR: 1.43), and inpatient (RR: 1.60) services ($p < 0.001$). Males were less likely to have outpatient visits (RR: 0.79) and inpatient hospitalizations (RR: 0.88), and older age was protective against ED admissions (RR range: 0.62-0.71). Additionally, individuals with OUD were more likely to have SUD-related encounters, as well as suicide-related ED admissions and inpatient hospitalizations ($p < 0.0001$). Those who had more mental health outpatient visits were less likely to have suicide-related ED admissions (RR: 0.85), however this association was weaker among younger or male patients with OUD.

Conclusion: Among suicidal adults with co-occurring SUDs, those with a diagnosis of OUD were more

likely to utilize services and have psychiatric comorbidity. Males and older adults were less likely to utilize services. These findings provide a first look at utilization among this vulnerable population based on real-world EHRs, and may inform interventions simultaneously aimed at suicide and substance abuse prevention. This study was supported by grants from the National Institutes of Health.

No. 34

Prevalence of Prenatal and Postpartum Psychiatric Comorbidity Among NYC Mothers

Poster Presenter: Veer Vekaria

SUMMARY:

Background: Severe maternal morbidity (SMM) is defined as an unexpected adverse outcome during pregnancy or postpartum with significant short- or long-term negative consequences to a woman's health. Adequate prenatal care and appropriate management of chronic conditions during pregnancy may mitigate rising maternal risk. The goal of this study was to characterize psychiatric and other medical comorbidity during pregnancy and postpartum. Methods: Electronic health records (EHRs) derived from 7 health systems across New York City between 2010-2019 were analyzed. We identified female adults (18-44.99 years) who had a live birth encounter between 2011-2018, which established the index event. We measured and compared outcomes during the 12-month prenatal and 12-month postpartum period. Results: A total of 84,685 patients were included in the analysis. Overall, the study population largely consisted of patients aged between 28-37 years (57.20%) (mean 31.27 years). A quarter of the population identified as Hispanic or Latino (24.24%), while the majority of patients identified as Not Hispanic or Latino (52.63%). The largest racial categories represented were White (30.10%) and Black or African American (15.79%). Most patients lived in the Bronx (48.30%), followed by Manhattan (35.75%) and Brooklyn (20.60%). In terms of their medical history, most patients were healthy and had no underlying chronic diseases during the prenatal period (70.68%) and during the postpartum period (81.22%). Among those with chronic conditions during the prenatal period, the top five diagnoses were anemia

(10.85%), asthma (7.14%), acquired hypothyroidism (5.65%), depression (3.82%), and hypertension (3.59%). During the postpartum period, the most prevalent diagnoses were anemia (5.68%), hypertension (3.73%), acquired hypothyroidism (3.69%), asthma (3.42%), and depression (2.85%). Very few patients had a prenatal substance use disorder diagnosis, with tobacco use disorder (1.16%), cannabis use disorder (0.47%), and alcohol use disorder (0.29%) being the most common diagnoses. Similar findings were observed during the postpartum period, with tobacco use disorder (0.92%), cannabis use disorder (0.17%), and alcohol use disorder (0.13%) impacting similar numbers of patients. Diagnoses of suicidal behaviors were also rare, with suicidal ideation most often reported during the prenatal (0.11%), childbirth (0.04%), and postpartum (0.09%) periods. Psychiatric comorbid diagnoses were slightly more common, with maximum prevalence among anxiety disorders (3.39%) and mood disorders (2.58%) during the prenatal period. Similar findings were observed during the postpartum period (impacting 2.48% and 2.19% of patients, respectively). Conclusion: Among NYC mothers, the burden of adverse prenatal and postpartum psychiatric outcomes was overall low. These findings may inform future interventions aimed at mitigating rising maternal risk.

No. 35

Racial and Ethnic Inequities in Buprenorphine and Methadone Utilization Among Reproductive-Age People With Opioid Use Disorder

Poster Presenter: Kevin Young Xu, M.D., M.P.H.

Co-Authors: Richard A. Grucza, Laura Bierut

SUMMARY:

Background: The relationship between race/ethnicity and medication to treat OUD (MOUD) type in reproductive-age people has not been thoroughly studied in multi-state samples. Methods: We conducted a retrospective cohort study of reproductive-age people with opioid use disorder (OUD), ages 18-45 years, in the IBM MarketScan Medicaid databases (2011-2016) who were in OUD treatment. OUD was identified based on ICD-9/10 diagnosis and procedure codes. The main predictor variable was race/ethnicity (non-Hispanic White v

non-Hispanic Black v Hispanic v other race/ethnicity). The primary outcomes were MOUD initiation (yes/no) and time to discontinuation for buprenorphine and methadone. Analyses were conducted at the treatment episode level. The likelihood of starting MOUD was estimated using multivariable logistic regression. Differences in treatment discontinuation by race/ethnicity were evaluated using multivariable Cox regression models. Results: We included 65,556 reproductive-age people, identified as female, with OUD who were enrolled in Medicaid (mean age 30.8 years; 84.1% non-Hispanic White; 2.6% pregnant at time of treatment initiation). Only 33% (n=21,956) started MOUD (15,453 [23.6%] buprenorphine, 6,409 [9.8%] methadone). The non-Hispanic Black group was less likely to start buprenorphine (aOR=0.77; [0.70, 0.85]) and more likely to start methadone (aOR=1.76; [1.58, 1.96]) compared to the non-Hispanic White group. The median MOUD discontinuation time for the non-Hispanic Black group was 122 days in comparison to 132 days and 142 days for non-Hispanic White and Hispanic groups ($\chi^2 = 15.0$; DF=1; P< .001). The non-Hispanic Black group experienced greater discontinuation for buprenorphine and methadone (aHR=1.16; [1.08, 1.25] and aHR=1.17; [1.09, 1.26] respectively) compared to the non-Hispanic White group. Race/ethnicity explained less than 3% of total variance in models for both initiation and retention in buprenorphine and methadone. Conclusions: Racial inequities exist for Medicaid enrollees seeking and receiving treatment for OUD during pregnancy. The non-Hispanic Black group was less likely to start and more likely to discontinue buprenorphine treatment. Even though the non-Hispanic Black group was more likely to start methadone, retention rates for methadone in the non-Hispanic Black group were lower than for non-Hispanic White group. Examinations of factors that include patient, provider, program, community, state and federal systems are warranted to improve equitable access and retention to both MOUD among all patients with OUD.

No. 36

Medication for Opioid Use Disorder (MOUD) in Pregnant Individuals in the US: An Analysis of Racial and Insurance Disparities (2006-2016)

Poster Presenter: Kevin Young Xu, M.D., M.P.H.

Co-Authors: Richard A. Grucza, Laura Bierut

SUMMARY:

BACKGROUND: The USA has experienced escalating rates of overdoses and adverse birth outcomes among women of childbearing age with opioid use disorder (OUD). The initiation and retention rates for medication for OUD (MOUD) have been seldom characterized using national data. We sought to (1) calculate the initiation and retention rates for buprenorphine and methadone in reproductive-aged people with OUD using national data, and (2) characterize disparities in initiation and retention by insurance status and race. **METHODS:** In this retrospective cohort study, we analyzed data from women, ages 16-45 years, with a diagnosis of OUD in the MarketScan databases (2006-2016). Pregnancy was identified based on insurance claims for established ICD-9/10 diagnoses and procedure codes. The main outcomes were MOUD initiation and retention, determined using pharmacy claims. Adjusting for age and cooccurring psychiatric and substance use disorders, we used logistic regression to estimate buprenorphine and methadone initiation, and Cox regression to estimate buprenorphine and methadone retention, stratifying analyses by insurance status and race. **RESULTS:** Our sample included 103,038 reproductive-aged women in the USA with OUD, of whom 2,982 (2.9%) were pregnant. 67,521(65.5%) were initiated on psychosocial treatment without MOUD, in comparison to 29,435 (28.6%) and 6,082 (5.9%) initiated on buprenorphine and methadone respectively. 52% of buprenorphine and 41% of methadone episodes were discontinued at 180 days. Medicaid status was associated with a significant decrease in buprenorphine initiation (OR=0.26 [0.26-0.27]) in comparison to commercial insurance. In contrast, Medicaid status was associated with a large increase in methadone initiation (OR=4.92[4.47-5.43]). Decreased buprenorphine initiation was observed for episodes among Black individuals (OR=0.72[0.65-0.80]) relative to White peers; in contrast, Black individuals were more likely to be

initiated on methadone (OR=1.52[1.37-1.68]). Relative to commercial insurance, Medicaid status was associated with a nearly 20% increase in buprenorphine discontinuation (HR=1.19[1.17-1.21]), mirrored by a nearly 20% decrease in methadone discontinuation (HR=0.81[0.75-0.87]). We found an increase in both buprenorphine (HR=1.13[1.04-1.23]) and methadone (HR=1.18[1.09-1.28]) discontinuation among Black people relative to White peers. **CONCLUSIONS:** Most reproductive-aged women with OUD in the USA do not receive buprenorphine or methadone. Large insurance-based disparities were observed such that Medicaid enrollees are less likely to be initiated and retained on buprenorphine as commercial insurance enrollees, and more likely to be initiated and retained on methadone. BIPOC individuals were significantly less likely to be initiated and retained in buprenorphine treatment; even though BIPOC individuals were more likely to be initiated on methadone, methadone retention rates among BIPOC patients were lower than White counterparts.

No. 37

Impact of Accompanying Non-Pharmaceutical Therapy on Antidepressant Adherences

Poster Presenter: Jeonghoon Ahn

Co-Authors: Chi-Un Pae, Changsu Han, Song Vogue Ahn

SUMMARY:

Background: Non-pharmacological treatments (NPTs) including psychotherapies and behavioral therapies have proven to be an effective treatment tool for patients with depression. More importantly, NPTs reduce drop-out rates for pharmacotherapy when combined with it. Given that one of the major obstacles to effective treatment of depression is low adherence to antidepressant therapies, NPTs deserve more attention in treating patients with depression. This retrospective study analyzed the current status of NPTs for patients with depression and the relationship with adherence to antidepressant therapies in Korea. **Methods:** The Health Insurance Review Agency (HIRA)'s National Health Insurance (NHI) claims database from 2017 to 2020 was used in the analysis and those noninstitutionalized and operationalized new (no prior history of diagnosis or

treatment for any depressive disorder at least in 12 months) patients with at least one inpatient diagnosis with depression or twice diagnosed in outpatient services (ICD10=F06.3, F32*, F33*, F34.1, F38.1, F41.2) between Jan 1st 2018 to Jun 30th 2019, were included in the analysis (N=383,638). NPTs were identified by HIRA treatment codes in each claim. Adherence to antidepressant therapies was defined as 180-day medication possession ratio (MPR). **Results:** Those patients with any claim for NPT (N=127,551) showed significantly higher MPR than those without (N=242,661), 50.8% vs 44.7% ($p<0.001$), respectively. Those patients with 3 or more NPTs showed an increasing trend as the number of NPT increases (MPR=48.5% for NPT=3, 54.0% for NPT=4, 67.4% for NPT>=5). **Conclusion:** Accompanying NPT more than twice a year was positively associated with patients' adherence to antidepressant pharmacotherapies in Korea. Hence, it is warranted to further investigate the relationship between accompanying NPT and relapses. This study was supported by Pfizer Korea, Inc.

No. 38

Efficacy of Layperson-Delivered Empathetic Telephone-Based Program for Those With Symptoms of Depression: A Post-Hoc Analysis of a Clinical Trial

Poster Presenter: Nazan Aksan, Ph.D.

Lead Author: Maninder K. Kahlon, Ph.D.

Co-Author: Rhonda Aubrey

SUMMARY:

Background: A shortage of behavioral health providers will persist for the foreseeable future. Therefore, it is useful to explore alternate approaches to providing mental health support to expand capacity and focus mental health professional expertise on those who most need it. In 2020 we implemented an empathetic relational program delivered over the telephone by laypeople to clients of Meals on Wheels to address loneliness. Within 4 weeks, we achieved statistically significant improvements in loneliness, as well as in symptoms of depression and anxiety. In the current report, we estimate the magnitude of improvements in symptoms of depression among the subset whose baseline ratings of depression were elevated and in

the clinically significant range. **Methods:** Of 240 people recruited in the original trial, data were analyzed for those whose PHQ-8 scores at baseline were 10 and above in the intervention and control arms (N=58). The intervention arm included 28 of 120 (22.5%) participants and the control arm included 30 of 120 (25%). We examined whether the group by time interaction was significant among this subgroup of participants relying on mixed linear regressions with random intercepts for all outcomes relevant to sense of well-being. **Results:** Retention was excellent in both groups with 26 of 28 in intervention arm and 30 of 30 in the control arm providing follow-up data. We found that symptoms of depression on the PHQ-8 improved in the intervention arm from a mean of 13 (SD 2.6) to 9.2 (SD 3) for a difference of 3.8 (95% CI 2.9 – 4.7), while the mean in the control arm went from 13.6 (SD 2.9) to 12.3 (SD 4.6) for a difference of 1.3 (95% CI 0.1 – 2.5). These results were statistically significant, $p=.013$. In addition, for this subgroup of participants, loneliness also improved on the 3-item UCLA (mean difference of 1.5, 95% CI 1.1 – 1.9, $p<.001$) and the 6-item DeJong (mean difference 0.6, 95%CI 0.31 – 0.99, $p<.03$). Anxiety as measured by GAD-7 and general mental health as measured by SF-12 did not show statistically significant improvements. In contrast to the subjective improvements in the perception of isolation or loneliness, objective isolation as measured by the Lubben Social Network Scale (LSNS) did not change. **Conclusion:** The findings from this post hoc subgroup analyses show that the intervention of lay-person delivered empathetic calls lowered symptoms of depression of those who showed clinically significant depression at baseline over the course of a month. This simple intervention holds promise in reducing the burden of a clinical care system in improving clinically significant elevations in depression as well as other indicators of mental health.

No. 39

Trend and Geo-Availability of Ketamine, ECT, and TMS for TRD Somatic Treatment Options in the US

Poster Presenter: Tajudeen Olaposi Basiru

SUMMARY:

Background: Treatment resistant depression (TRD) constitutes a major burden to healthcare in the US and globally, affecting close to a third of people diagnosed with depression in the US. Several studies have demonstrated the higher economic burden associated with TRD. This study attempts to investigate changes in the availability of TRD somatic treatment options (Electroconvulsive therapy (ECT), Ketamine infusion, and Transcranial Magnetic Stimulation (TMS)) in the US between 2014 and 2020 and the geographic variations in availability of TRD treatment options in the US as of 2020. **Method:** This cross-sectional study of US mental health facilities providing TRD treatment options between 2014 to 2020 utilized the National Mental Health Services Survey (N-MHSS) data from the Substance Abuse and Mental Health Service Administration (SAMHSA). Service availability per 100,000 US adults, both nationally and regionally were computed while a random-effect logistic regression was used to calculate the changes in the availability of the services since 2014. **Result:** Overall, availability of any one of ECT, Ketamine infusion therapy, or TMS in US mental health facilities declined between 2014 and 2019 (0.23 vs. 0.18 per 100,000 US adults) but increased to 0.24 in 2020. While availability of ECT consistently declined between 2014 and 2020, ketamine and TMS only became available in 2020. North Dakota, Wyoming, and Utah had the highest availability per 100,000 US adults (0.86, 0.67, and 0.65) while Nevada, Oregon and Nevada have the lowest availability (0.04, 0.06, and 0.06) regionally. **Conclusion:** The US has less than one mental health facility offering somatic treatment options for TRD per 100,000 US adults. Also, the observed decrease in the availability of somatic treatment options for TRD across the US since 2014 does not reflect the increasing need for more treatment options for the treatment of TRD.

No. 40

Efficacy/Safety of Transcranial Magnetic Stimulation for Major Depressive Disorder: An Umbrella Review and Re-Analysis of Published Meta-Analyses

Poster Presenter: Stefano Brini

SUMMARY:

Objectives We re-analysed data from published meta-analyses testing the effects of Transcranial Magnetic Stimulation (TMS) on Major Depressive Disorder (MDD) in adults. We applied up-to-date meta-analytic techniques for handling heterogeneity including the random-effects Hartung-Knapp-Sidik-Jonkman method and estimated 95% prediction intervals. Heterogeneity practices in published meta-analyses were assessed as a secondary aim. **Study design and setting** We performed systematic searches of systematic reviews with meta-analyses that included randomised controlled trials assessing the efficacy, tolerability, and side effects of TMS on MDD. We performed risk of bias assessment using A MeaSurement Tool to Assess Reviews (AMSTAR) 2 and re-analysed meta-analyses involving 10 or more primary studies. **Results** We included 29 systematic reviews and re-analysed 15 meta-analyses. Authors of all meta-analyses interpreted findings to suggest TMS is safe and effective for MDD. Our re-analysis showed that in 14 out of 15 meta-analyses, the 95% prediction intervals included the null and captured values in the opposite effect direction. We also detected presence of small-study effects in some meta-analyses and 24 out of 25 systematic reviews received an AMSTAR 2 rating classed as *critically low*. **Conclusion** Authors of all included meta-analyses interpreted findings to suggest TMS is safe and effective for MDD despite lack of comprehensive investigation of heterogeneity. Our re-analysis revealed the direction and magnitude of treatment effects vary widely across different settings. We also found high risk of bias in the majority of included systematic reviews and presence of small-study effects in some meta-analyses. Because of these reasons, we argue TMS for MDD may not be as effective and potentially less tolerated in some populations than current evidence suggests.

No. 41

Investigating the Short and Long-Term Effects of Microbe Therapy on Sleep Disturbances in Individuals With Depression

Poster Presenter: Hayley M. Bromley

Co-Authors: Arthi Chinna Meyyappan, M.Sc., Roumen Milev, M.D., Ph.D.

SUMMARY:

Background: Approximately 90% of patients with depression experience some form of sleep disturbance. Sleep symptoms have a major impact on quality of life as well as increase the risk factor for suicide. While sleep disturbances were traditionally considered a symptom of depression, current evidence suggests that most sleep-related symptoms remain unresolved following treatment and may precede depression. Recently, it has been proposed that probiotics, fecal microbiota transplant, and other microbial therapies can interact with intestinal microbiota to benefit individuals suffering from various psychiatric disorders. Evidence suggests that the gut microbiome may be able to regulate sleep and mental states through the microbiota gut-brain-axis. **Methods:** This study investigates the use of a novel gut repopulation treatment, Microbial Ecosystem Therapeutic (MET)-2, as a therapeutic intervention against sleep disturbances in depression. MET-2 contains 40 bacterial strains from a healthy donor and is administered daily as an oral capsule. In this phase 2, double-blind, placebo-controlled, randomized controlled trial, treatment-naïve individuals between 18 and 45 years old with depression will be randomized into treatment or placebo groups. Patients will orally consume either the MET-2 product or placebo alternative once daily for 6 weeks. Participants' sleep disturbances will be assessed using the Pittsburgh Sleep Quality Index (PSQI) at baseline, week-2, week-4, and week-6 of treatment. Participants who have completed at least 5 weeks of MET-2 treatment will be invited to participate in a follow-up study to assess lasting changes of MET-2 on sleep disturbances. This will be assessed at week-12 and week-24 upon completing treatment. **Results:** Of the seventeen participants included in this study to date, the majority of individuals (n=12) displayed an improvement in PSQI scores from baseline to the week-6 visit. Of the five participants who have completed the follow-up study, the majority of participants (n=3) maintained an improvement in PSQI scores from baseline to the week-12 visit. Given that the study is double-blind in nature and not yet completed, we are unable to state any significance at this time but are hopeful with the current results. **Impact:** This study is the first to examine MET-2 efficacy on sleep disturbances in depression. We hope these results will contribute

to a growing body of research assessing gut repopulation as a therapeutic for a variety of psychiatric illnesses.

No. 42

Improved Response and Remission Rates in Patients Receiving Idgenetix-Guided Medication Management for Major Depressive Disorder

Poster Presenter: Feng Cao

Co-Authors: Alejandra Maciel, Kelly Wosnik, Ali Cullors, Robert Cook

SUMMARY:

Background: Pharmacogenomics (PGx) offers the opportunity to select effective therapies for first-line treatment based on a patient's genotype. IDgenetix is a PGx test that utilizes a 15-gene variant panel to provide medication recommendations for patients diagnosed with major depressive disorder, anxiety, or other mental illnesses. Unlike other PGx tests, the medication management recommendations from IDgenetix take into consideration not only drug-gene interactions, but also drug-drug interactions and lifestyle factors. **Methods:** This study was designed to determine whether IDgenetix-guided medication management could improve clinical outcomes in patients with moderate to severe depression who were enrolled in an IRB-approved, single-center, open-label study. Study data was collected prospectively for the PGx-guided group (n=120) and retrospectively for the control group (n=122). All subjects met inclusion criteria of moderate or severe depression, measured as PHQ-9 score of 10 or greater at baseline, and a follow-up visit with PHQ-9 assessment at 8 weeks following baseline. Response and remission rates across study groups were compared using the chi-squared test and logistic regression. **Results:** At the 8-week timepoint, the guided group had response and remission rates of 58% and 31%, respectively, compared to 42% and 19% for the unguided group (response $p=0.03$; remission $p=0.01$). The guided group was 1.8 times more likely to experience a response and 1.9 times more likely to experience remission than the unguided group (95% CI 1.09-3.03 for response; 1.06-3.48 for remission). **Conclusion:** Consistent with previous multi-center studies, results from this single-center study demonstrate that PGx-guided

medication management using IDgenetix improved response and remission rates for patients diagnosed with moderate to severe depression.

No. 43

Pre-Existing Depression and Anxiety Associations With Long Covid Fatigue

Poster Presenter: Isabelle V. Carter, B.A.

Co-Authors: Kingman P. Strohl, M.D., Anna M. May, M.D., M.S.

SUMMARY:

Long COVID is common after COVID-19 infection and leads to functional limitations with most reporting substantial symptom burden from fatigue. We hypothesize prior psychiatric diagnoses are associated with severity of long COVID fatigue. A retrospective chart review of consecutive long COVID clinic adult patient referrals at least 3 months after the acute infection (n= 210) used linear analysis to evaluate self-reported depression and anxiety prior to COVID-19 diagnosis in relation to the Fatigue Severity Scale (FSS) score (primary outcome) and ECOG performance scale (secondary outcome). Adjustors included age, sex, body mass index (BMI), and whether patient had COVID-19 hospitalization. The cohort was primarily female (66.2%), aged 51.6±14.4 years, median BMI 29.8 [interquartile range (IQR): 26.2, 37.7]. Preexisting depression prevalence was 36% and anxiety prevalence was 39%. Overall, 77% had moderate-severe fatigue (FSS ≥ 4) with a median FSS of 5.44 [IQR: 4.11, 6.44] and ECOG of 1.50 [IQR: 1.25, 2.00]. With a history of depression, fatigue prevalence increased to 86% with median FSS 6.06 [IQR: 4.79, 6.56] and ECOG of 1.82 [IQR: 1.40, 2.42]. Pre-existing depression was associated with more severe fatigue ($\beta=0.78$, [95% confidence interval (95%CI): 0.31,1.24] in unadjusted analysis and $\beta=0.61$, [95%CI: 0.117, 1.103] in adjusted analysis) and worse ECOG ($\beta=0.40$, [95%CI: 0.19, 0.61] in unadjusted and $\beta=0.37$, [95%CI: 0.15, 0.59] in adjusted analysis). Preexisting anxiety had no association with fatigue or ECOG scores. In conclusion, a prior history of depression but not anxiety contributed to more severe long COVID fatigue.

No. 44**Alterations in the Brainstem Volume of Patients With First Episode Depression and Recurrent Episodes Depression**

Poster Presenter: Yue Chen

SUMMARY:

background: Major depressive disorder (MDD) is recurrent in a large proportion of patients. The number of previous episodes is one of the important predictors of depression recurrence, but the neural mechanism of recurrence is still unclear. Morphologic changes of the brainstem in first episode depression (fMDD) and recurrent episodes depression (rMDD) have rarely been reported in neuroimaging studies. This study investigated volume changes in each region of the brainstem and their association with the number of previous episodes and illness duration. method: A total of 61 patients with MDD (fMDD=36) and 38 healthy controls (HC) underwent T1-weighted structural magnetic resonance imaging. The author analyzed volumes of each brainstem region, including the medulla oblongata, pons, midbrain, and superior cerebellar peduncle (SCP), and the volume of the whole brainstem using a Bayesian segmentation algorithm. We subsequently compared the differences between fMDD, rMDD, and HC group. Partial correlation analysis controlling for gender, education and age identified associations between regional volume and clinical symptoms. result: The MDD patients showed decreased volumes in pons, midbrain and in the entire brainstem. Compared to HC, the fMDD had significantly decreased volumes of midbrain ($P < 0.01$) compared to HC, while rMDD showed no significant alterations. Particularly, rMDD group exhibited significantly decreased volume in the SCP compared to fMDD ($p < 0.01$) and to HC ($p = 0.02$). Moreover, SCP was inversely correlated with the number of previous episodes ($r = -0.36, p < 0.01$) and illness duration ($r = -0.28, p = 0.035$). conclusion: We observed that the volume of midbrain is reduced in patients with MDD, especially those with first episode. This may help us to understand the pathophysiological mechanism of fMDD. In particular, reduced volume in the SCP may be a neurobiological marker of recurrent episodes depression. Further studies are needed to confirm our observations.

No. 45**Ketamine Induction and Maintenance for Treatment Resistant Depression in a Large Integrated Healthcare System**

Poster Presenter: Ingrid Lynn Chen, M.D.

Co-Author: Kevin Li

SUMMARY:

Introduction Major depression is a leading cause of disability worldwide, contributing to increased healthcare utilization and mortality. One third of patients with depression do not respond to two or more trials of antidepressants and are considered to have treatment resistant depression (TRD). Rapid reduction in depressive symptoms has been observed in some with TRD following administration of ketamine, an N-methyl-D-aspartate receptor (NMDAR) antagonist. However, treatment response may be short lived following ketamine induction. Maintenance treatment may prolong therapeutic effects. To date, there is a paucity of literature on the long-term efficacy of maintenance ketamine treatment for depression. The aim of this retrospective chart review is to examine patient and ketamine treatment characteristics in patients with TRD across two sites within a large integrated healthcare system. Methods Patients with TRD aged 28 to 90 years old were given a subanesthetic ketamine hydrochloride dose of 0.5 mg/kg delivered intravenously for 40 minutes for a target of 2 days per week over 2-3 weeks from 1/1/2015 to 12/31/2022. Responders to ketamine induction were continued on an individualized maintenance series of infusions. Results Among the 47 patients who received 1+ infusion of ketamine, the mean age was 54 years old; 87.2% and 63.8% identified as White and female, respectively. Racial/ethnic minority groups were underrepresented: 0.0% American Indian/Alaskan Native (AIAN), 0.0% Asian, 8.5% Black, 2.1% Hispanic, 0.0% Native Hawaiian/Other Pacific Islander (NHPI), 2.1% Other. More patients were diagnosed with unipolar (80.9%) than bipolar (19.1%) depression. Psychiatric comorbidities included: 40.5% anxiety disorders, 14.9% PTSD, 8.5% ADHD. During induction, the mean number of infusions was 4.2 (1 to 6) over a mean duration of 10.2 days (0 to 28). 29 out of 41 (70.7%) patients

who received ketamine induction transitioned to maintenance infusions. Of those who received maintenance, the mean number of infusions was 43.9 (2 to 133) over a mean duration of 1322.7 days (42 to 2286). At the start of induction, mean baseline PHQ-9 scores (n=42) were comparable between the induction only (19.2; n=12) and maintenance groups (19.0; n=30). PHQ-9 scores at 9 month follow-up for the induction group was 15.6 (n=5) and 10.6 for the maintenance group (n=25). Out of the patients with available PHQ-9 scores at 9 month follow-up, 40% had no decrease (induction only n=3, maintenance n=7), 24% had clinically significant decrease not meeting criteria for response/remission (induction only n=1, maintenance n=5), and 36% had response/remission (induction only n=1, maintenance n=8). Conclusion These preliminary findings provide promising data on long term outcomes of maintenance ketamine in TRD. Prospective studies are needed to identify predictors of treatment response and to establish clinical guidelines for the use of maintenance ketamine.

No. 46

Perceived Healthcare Disruption During the Pandemic: An Observational Study in Iceland

Poster Presenter: Yue Wang

Co-Authors: Thor Aspelund, Unnur Anna Valdimarsdottir

SUMMARY:

Background COVID-19 has caused major disruptions in healthcare services worldwide. Yet little is known about the trends of healthcare disruption within the pandemic develops and its association with social-demographic factors, medical conditions and psychological well-being. The aim of our study was to investigate the prevalence of perceived healthcare disruption during the pandemic period and its impact on population mental health. **Methods** We used data from the Icelandic COVID-19 National Resilience Cohort of 15816 individuals 18 years or older who responded to questions on perceived healthcare disruption. We performed both logistic and Poisson regression to explore the association between social-demographic factors, medical conditions and perceived healthcare service disruption. We used linear regression to explore the

association between duration of perceived healthcare disruption and changes in depression, anxiety, sleep quality, and somatic symptoms.

Results The prevalence of perceived healthcare disruption was slight decreased during the pandemic period, from 12.26% in December 2020 to 10.27% in June 2021. Perceived healthcare disruption was pronounced among young adults who being sexual minorities, with lower income and had pre-existing psychiatry disorders (prevalence rates 15.75% - 16.80%). However, compared to those without COVID-19 diagnosis, no increase prevalence rate was observed among patients with COVID-19 diagnosis (11.74% vs 11.47%, p=0.82). Furthermore, we found later perceived healthcare disruption was positively associated with changes in symptoms of mental illness (β s 0.41 – 0.68). **Conclusions** The disruption of healthcare services during the COVID-19 was distinctly reported by vulnerable groups, while the Icelandic healthcare system seems to have managed to maintain accessible services to individuals with COVID-19 diagnosis.

No. 47

Symptom Trajectories of Depression in the Icelandic Population During the Covid-19 Pandemic

Poster Presenter: Yue Wang

Co-Authors: Fenfen Ge, Thor Aspelund, Unnur Anna Valdimarsdottir

SUMMARY:

Background Changes in depressive symptom during the COVID-19 pandemic have been described across populations, but data are still scarce on the role of pandemic-specific factors on varying trajectories of depression in the general population. We aim to identify determinants of varying trajectories of depression in the Icelandic population during the COVID-19 pandemic. **Methods** We used data from the Icelandic COVID-19 National Resilience Cohort of 8307 individuals 18 years or older with three consecutive response data on depressive symptoms across the pandemic period (April 2020 – July 2021). We assessed 40 candidate features including demographic, lifestyle, physical and psychological health, and pandemic-specific factors. We used a latent growth mixture model to identify varying trajectories of depression, and performed both

logistic regression and X-GBoost model to identify determinants of unfavorable trajectory vs. favorable trajectory. **Results** We identified 4 distinct trajectories during the median 13 months of follow-up with most individuals showing consistently low (83.2%) or improved (5.4%) symptom of depression, while 11.4% participants showed unfavorable trajectories (i.e., deteriorating or consistently high symptom). Both logistic regression model and X-GBoost model showed good performance in distinguishing unfavorable trajectories from favorable trajectories (C statistics 0.81-0.85). Risk factors identified of unfavorable trajectories were younger age, pre-pandemic existing psychiatric disorders and financial difficulties, while identified protective factors were increased family support, regular exercise and frequent in-person social contact. **Conclusions** These data suggest that the vast majority of the Icelandic population maintained favorable mental health during the COVID-19 pandemic and that social support may be a key factor against unfavorable trajectories of depression.

No. 48

The Role of MOUD Trained Counselors in Effectively Treating Opioid Use Disorders

Poster Presenter: Emily Sudhakar, M.D.

Co-Authors: Sharon Chaing, Nicole Savidge, Shangari Varatharajan, Keriann Shalvoy

SUMMARY:

A growing body of research has indicated that addiction treatment counselors may play a critical role in patient education regarding MOUD (Medications for Opioid Use Disorder) and impact patients' attitudes towards different treatment options¹. Studies have also suggested that counselors receive minimal training regarding MOUD and have limited comfort in discussing the options with patients². Ultimately, those with greater training have both more positive attitudes and greater understanding of MOUD and are more likely to encourage treatment with patients³. It is imperative to assess counselors' understanding regarding MOUD and develop a curriculum to educate and empower counselors to discuss MOUD treatment with patients. In our study, we will survey counselors at Thomas Jefferson University Hospital Center for

Community Substance Abuse Programs to assess what prior training they have received, their understanding of opioid use disorder treatment, and their comfort in discussing with clients. We will first survey counselors to identify what if any prior education related to medication treatment counselors have received. We will use a Likert scale to identify their baseline comfort regarding discussing MOUD with clients. Finally, we will identify which areas counselors believe would be most helpful to learn including what the different treatment options are, their mechanism of action, dosing/route, along with risks, benefits and alternatives. Based on this information we will identify areas for improvement and create an OUD curriculum. We anticipate that counselors will benefit most from receiving individualized education regarding the topics above. Additionally, we will simulate conversations with clients so that counselors may practice discussing treatment options. Counselors will be asked to participate and a pre- and post-test survey to assess the effectiveness of this educational intervention. Our aim is to empower counselors to discuss lifesaving MOUD treatment options with clients who are more likely to interface with counselors than with physicians who have advanced training in this area. By creating and instituting a comprehensive MOUD curriculum for counselors we anticipate that counselors will gain a greater understanding of different medication treatments for opioid use disorders based on "pre" and "post-test" results. Additionally, by simulating conversations with clients, counselors will improve their ability and perceived comfort of discussing with clients.

No. 49

Benzodiazepine Use in the Elderly: How to Evaluate and Adjust Chronic Regimens

Poster Presenter: Nikhil R. Tondehal, M.D.

Co-Author: Amy Swift

SUMMARY:

Treating anxiety, panic, depression, and insomnia symptoms in late life poses many challenges. The use of benzodiazepines for these symptoms often offers rapid relief but poses risks that increase with age. Concerns regarding side effects of falls, fractures,

acute and chronic confusion states, limitations in daily activities, abuse potential, and drug-drug interactions have led to a movement to both de-prescribe and not initiate benzodiazepine treatment in older adults. Patients often cite concerns regarding the tapering of these agents, including fear of relapse of anxiety and panic and a wish to maintain feelings of comfort with what is perceived as a stable medication regime in their advanced years of life. A challenge to clinicians is to work with aging patients over a treatment plan which balances medication safety with the therapeutic benefits of these agents. Cases were identified from the patient population at Mount Sinai Beth Israel, an urban medical center serving a multicultural and socioeconomically diverse population. Patients were identified as those who presented to the ambulatory care geriatric psychiatry service with care needs that included chronic benzodiazepine use. These cases were evaluated to derive an algorithm for evaluating and treating with benzos in the aging population. A finding from our hospital-based clinic population includes an increasing number of patients who enter treatment after prior providers have refused to continue prescribing controlled substances. However, these medications should not always be discontinued among those who have been treated chronically. Our algorithm for treatment includes the following: revisit benzodiazepine usage/dosage at every consultation, use Beer's criteria to further/support discussions for BZD taper, divide the single dosage into divided dosages, thus easing further taper, and involve the patient in deciding the dosage for taper, time of dosage reduction & no. of days for 'medication holidays' and be honest and open about possible relapses or bumps when tapering down. This helps make a contingency plan and allows the patient to be prepared. If benzodiazepines are absolutely needed, be mindful of decreased metabolisms and drug interactions.

No. 50

WITHDRAWN

No. 51

Effects of Theta-Burst Stimulation on Craving, Smoking, and Resting-State Functional Connectivity in Adults With Nicotine Dependence

Poster Presenter: Spencer Upton

Co-Authors: Alexander Brown, Brett Froeliger

SUMMARY:

ABSTRACT BACKGROUND: The right inferior frontal gyrus (rIFG), a prefrontal region that mediates top-down inhibitory control over motivational behaviors via connectivity with striatal-limbic regions (fronto-striatal-limbic circuitry), is dysregulated among individuals with nicotine dependence. However, there is a lack of research examining the effects of neuromodulation to the rIFG on smoking behaviors and fronto-striatal-limbic functional connectivity among smokers. **METHODS:** Adult smokers ($N = 31$; female: $n = 15$) participated in a double-blind, crossover, theta-burst repetitive transcranial magnetic stimulation (TBS) study. After a baseline session, smokers were randomized to two sessions of rIFG neuronavigated TBS: continuous TBS (cTBS) on one day; intermittent TBS (iTBS) on another. Appetitive craving, withdrawal craving, and cigarettes per day (CPD) were assessed over 24 hours following each session. Resting-state functional connectivity (rsFC) was assessed at baseline and 20 minutes after each TBS treatment. **RESULTS:** cTBS and iTBS reduced appetitive craving and withdrawal craving immediately after treatment, but these effects persisted for 24 hours after cTBS, including a reduction in CPD. cTBS strengthened rsFC between rIFG pars opercularis and: 1) subcallosal cingulate cortex (fronto-striatal circuit), and 2) right posterior parahippocampal gyrus (fronto-limbic circuit). At 24 hours, cTBS-induced change in fronto-striatal rsFC was associated with less appetitive craving, while change in fronto-limbic rsFC was associated with less withdrawal craving and fewer CPD. **CONCLUSIONS:** Results suggest that a single session of rIFG cTBS disrupts smoking behaviors and strengthens fronto-striatal-limbic rsFC. These findings warrant further investigation into the therapeutic value of repeated rIFG cTBS treatment for smoking cessation.

No. 52

Study Protocol: Virtual Reality-Assisted Cognitive Behavioral Therapy for Outpatients With Alcohol Use Disorder - a Randomized Controlled Trial

*Poster Presenter: Anne-Cathrine Vissing-Uhre
Co-Authors: Anders Fink-Jensen, Daniel Thaysen Petersen*

SUMMARY:

Introduction Alcohol Use Disorder (AUD) is a complex brain disorder linked to more than 200 health conditions as well as functional impairment and reduced quality of life. Cognitive behavioral therapy (CBT) is considered best practice in the treatment of AUD, but more than 60 percent of patients still relapse within the first year after treatment cessation. Psychotherapy combined with virtual reality (VR) has received increasing awareness in the treatment of AUD. However, existing studies have primarily investigated the use of VR for exposure purposes. VR-assisted CBT (VR-CBT), wherein VR is used to facilitate both cognitive and behavioral treatment processes, remains to be investigated.

Aim The aim of the study is to design a study protocol to implement the existing knowledge on CBT, exposure therapy and VR research for a novel treatment modality, VR-CBT. Thus, investigating the efficacy and safety from VR-exposure implemented in standardized CBT for outpatients with AUD.

Methods and analysis The present study is an assessor-blinded, randomized, controlled trial. We will include and randomize a total of 102 patients to 14 sessions of either manualized VR-CBT or CBT. Treatments will be performed by CBT-trained and clinically experienced nurses in outpatient, alcohol treatment clinics. The head-mounted device, Oculus Quest 2, will be used for patients randomized to VR-CBT. Patients from the VR-CBT group will be exposed to 360-degree virtual high-risk situations with a gradually increasing degree of alcohol-related cues in five different locations (pub, bar/party, restaurant, supermarket and home; each location in the virtual setting comprises six subscenes). Real actors and extras will be used to create authentic scenes with the purpose of simulating real-life-like VR-high risk situations to increase immersion. VR-exposure is performed to induce, identify and modify dysfunctional beliefs in

vivo, e.g. high-risk induced craving and relief-oriented, anticipatory, permissive beliefs. The treatment period is 6 months; treatment sessions 1 to 4 are held at 1-2 weeks intervals, treatment sessions 5 to 14 at 2-4 weeks intervals. Follow-up visits are performed 3, 6, 9 and 12 months after inclusion. The primary outcome measure is reduction in total alcohol consumption from baseline to 6 months after inclusion. The secondary outcome measures include 1) changes in number of heavy drinking days, 2) days without consumption, 3) alcohol craving, 4) cognition, 5) symptoms of depression and anxiety, and 6) general functioning.

Status: Currently recruiting patients, a total of 31 have been included at this point. **Ethics and dissemination** Ethical approval has been obtained from the National Danish Ethics Committee. The study is approved by The Regional Ethics Committee (journal number H-20082136) and The Danish Data Protection Agency (protocol number RHP-2021-217). Trial is registered at Clinicaltrials.gov (NCT05042180).

No. 53

Mental Health Treatment Needs for Primary Care Patients With Co-Occurring Disorders

*Poster Presenter: Katherine E. Watkins, M.D., M.H.S.
Co-Authors: Miriam Komaromy, Lisa Meredith, Michael Schoenbaum, Lauren Kelly*

SUMMARY:

Background. Collaborative Care is a service delivery intervention that supports primary care providers in delivering evidence-based mental health treatments. The effectiveness of the Collaborative Care Model for co-occurring opioid use disorders with depression or PTSD disorders (COD) is unknown. As part of a clinical trial, we evaluated how common suicidality and overdose are in patients who have opioid use disorder (OUD) plus co-occurring depression and/or PTSD, and their access to mental health treatment.

Methods. We enrolled patients from 13 primary care clinics in New Mexico who reported probable OUD, depression and/or PTSD detected on baseline screening. We evaluated how often these disorders co-occur and studied participants' patterns of self-reported suicidality, overdose and access to mental health treatment. We describe their characteristics

and compare rates of suicidal ideation, suicide attempts, rates of overdose and current medication and counseling treatment endorsed on the baseline survey. We used chi-squared tests to compare these frequencies among the participants who had OUD, plus depression or PTSD exclusively, or both, at baseline. **Results.** Our sample included 589 patients. Among those with OUD, 18% also suffer from depression but not PTSD, 23% suffer from PTSD but not depression, and 58% suffer from both. Baseline survey data revealed that 31% endorsed suicidal ideation during the 30 days prior to enrollment; participants with depression and PTSD reported suicidal ideation at a higher frequency (38%) than did those with either depression (23%) or PTSD (21%) exclusively ($\chi^2=16.223$; $p<0.001$). 33% reported ever making a suicide attempt; participants with co-occurring depression and PTSD (37%) were more likely to report a previous attempt than those with depression (25%) or PTSD (28%) alone ($\chi^2=7.651$, $p=0.022$). Reported overdoses in the past 90 days were rare (5%) and did not differ significantly among groups ($\chi^2=3.587$, $p=0.166$). Rates of treatment for mental health problems were low: 28-40% for counseling and 46-55% for medication. There were no significant differences by group for rates of reported mental health treatment.

Discussion. Among primary care patients with probable OUD, PTSD was more common than depression, and the co-occurrence of all three was the most prevalent condition. Patients with all three disorders had nearly twice the rates of current suicidal thoughts, compared with those who had OUD plus depression or PTSD exclusively. Few patients were receiving treatment for their co-occurring mental health disorder. We conclude that high rates of suicidality occur among patients with OUD and co-occurring disorders, and that this is coupled with low rates of mental health treatment access, indicating high unmet need. Collaborative Care for COD could help primary care practices in providing mental health treatment for a population with high unmet need, potentially reducing suicide, overdose and death.

No. 54

Use of Glp-1 Receptor Agonists and Subsequent Risk of Alcohol-Related Events: A Nationwide Register-Based Cohort and Self-Controlled Case Series Study

Poster Presenter: Marie Kim Wium-Andersen

Co-Authors: Merete Osler, Martin Balslev Jørgensen, Joergen Rungby

SUMMARY:

<p style="margin:0cm 0cm 10pt">BACKGROUND:

Despite the high prevalence and serious consequences of alcohol use disorder only few affected patients receive treatment and the existing treatment modalities are ineffective. In recent years evidence from animal studies have shown that intestinal hormones such as ghrelin and glucagon-like-peptide 1 (GLP-1), which are well-known as regulators of appetite and food intake, might also affect alcohol-related behaviors [1]. Studies on the effect of GLP-1 receptor agonists on alcohol addiction have reported reduction in alcohol drinking behavior in rodents and monkeys [1,2], and polymorphisms in the GLP-1 receptor gene have been associated with alcohol use disorders [3]. However, to date no published studies on humans have examined the potential association between GLP-1 receptor agonists and alcohol use disorders. Thus, the aim of this study was to examine the association between use of GLP-1 receptor agonists and the risk of subsequent alcohol-related events in Danish adults. **METHODS:** We did a register-based cohort and a self-controlled case series study based on all Danish citizens aged 18 or above ($n=4,296,270$) in 2010. They were and followed for an alcohol-related event defined by a hospital contact with alcohol use disorder or purchase of drugs for treatment of alcohol dependence in Danish nationwide registers from 2010 through 2018. Redeemed prescriptions of GLP-1 receptor agonists between 2010-2018 were used as exposure. Associations were examined in cohort and self-controlled case-series designs using Cox proportional hazard and conditional Poisson regression. **RESULTS:** During a mean follow-up of 8.2 years, 97,868 (2.3%) of all participants were registered with an alcohol-related event. Initiation of GLP-1 receptor agonists treatment was associated with lower risk of an alcohol-related event (Hazard Ratio=0.59

(95%CI:0.53-0.65)). Self-controlled case-series analysis showed that the highest risk of alcohol-related events was in a three-month pre-treatment period (incidence rate ratio (IRR)=1.20 (0.90-2.02)), whereas the risk was lowest in the first 3 months treatment period (IRR=0.61 (0.49-0.91)). During the following 2 years of treatment with GLP-1 receptor agonists, the risk did not vary from the non-treatment period. **CONCLUSION:** Compared with non-users, individuals who start treatment with GLP-1 receptor agonists had lower incidence of alcohol-related events in traditional cohort analyses, but self-controlled analyses indicated confounding by indication. However, there might be a transient preventive effect the first month after initiation of treatment.

No. 55

Adolescents and ICTs: Knowing Their Uses to Promote a Healthy Future. a Representative Study of Adolescents in the Province of Córdoba, Argentina

Poster Presenter: Raúl Ricardo Quiroga

Co-Authors: Lucía Bianconi, Andrea Espinardi

SUMMARY:

Background: Information and Communication Technologies (ICT) implied a cultural-social change as they modified the way of accessing information and knowledge, the way of communicating, interacting and leisure. However, the mass use raise concerns about the problematic use that can be made of them, considering adolescence a risk group at the demographic level. This study evaluated the use of ICTs by adolescents of public schools in the Province of Cordoba, Argentina. **Method:** A 28-item instrument was developed and adapted, consisting of the Questionnaire of Behaviors Associated with the Use of ICT, the Perceived Stress Scale of 4 items and 3 questions about the use of video games that apply the DSM-5 diagnostic criteria. This self-administered questionnaire was uploaded to the SurveyMonkey platform from Jun.-Dec. 2021, with participation voluntary. **Results:** The analysis included responses from 7543 adolescents aged 11 to over 21 years who answered the entire questionnaire. The refusal rate was 44.80%. 61.3% reported being aware that they spend too much time

online and that this has repercussions on their studies. Regarding parental control, 64% say adults set some rules regarding when they can go online, 80% report complying with the rules they set for going online. 89% say rarely or never using applications that they are not authorized to use, 89% rarely or never connecting in secret, while 76.3% say rarely or never connecting at night so that their parents do not find out about it. 91% say they have never spent money on online gambling without parental consent. In relation to the Perceived State, all the items score most frequently in the option "From time to time". Regarding the use of video games during the last year, 84.5% say that they have not felt discomfort for not being able to play, 65.7% have not neglected other obligations to play and 74% have not tried to stop playing without success.

Conclusion: There is a tacit usage regulation that adolescents comply with, even if not explicitly stated by adults; there are restrictions on content, money and privacy, time of use, and self-regulation in the recognition of the passing of time and direct academic consequences arising from the use. Regarding Perceived Stress, taking the category of coping with stress or self-efficacy in stressful situations, and analyzing it from its two-dimensional structure, it can be seen that 61.3% consider that they have coping strategies. Regarding the use of video games this is not a problem, most of them do not present modifications in their mood due to not being able to play, nor have they neglected other aspects of their life to play and have not lost control of their game. In this context, we could think that perhaps it would be appropriate to include responsible adults to work on these guidelines for the proper use of ICTs together with the approach to adolescents from activities developed in the educational environment. Funded this study Lotería de Córdoba

No. 56

Racial Disparities in Mental Health Service Utilization Among U.S. Youth With Incarcerated Parents: Findings From a National Study

Poster Presenter: Jennie E. Ryan, Ph.D.

Co-Authors: Stephen DiDonato, Ph.D., Philip Veliz, Ph.D.

SUMMARY:

Background: Youth with incarcerated parents (YIP) have greater rates of mental health conditions¹, but are more likely to have unmet mental healthcare needs². Black and Hispanic youth are affected by parental incarceration at disproportionate rates and receive markedly less mental health services than their non-minority peers³. While recent trends in research and advocacy have resulted in multiple federal, state, and school-based programs aimed at improving outcomes for YIP⁴⁻⁶, it is still unclear the extent to which this at-risk subpopulation utilizes health care services for mental health treatment and whether this varies by race. The primary aim of this study was to assess utilization of mental health services in YIP using a recent nationally representative sample of United States' (US) youth, with a specific focus to assess racial disparities in utilization of mental health services among YIP.

Methods We conducted a secondary analysis of the baseline and first full year follow-up data from the longitudinal Adolescent Brain Cognitive Development (ABCD) study in 11,875 youth beginning at age 9/10 years⁷. Logistic regression assessed associations of race/ethnicity, parental incarceration, and mental health service utilization.

Results: In the sample (N=11,875), 1,022 youth (8.6%), experienced parental incarceration. Black youth (N=477, 47%) and White youth (N=457, 45%) were the majority of YIP. After adjusting for gender, household income, race and ethnicity, YIP were significantly more likely to have received mental health services (25% vs 15%, 1.89 aOR, 1.6-2.22, p<0.001) compared to youth not exposed to parental incarceration. However, among YIP, Black YIP were significantly less likely to report receiving mental health services (19% vs 34%, aOR 0.38, 95% CI .27-.52, p<0.001) compared to White YIP. In addition, Hispanic YIP were less likely to report receiving mental health services compared to non-Hispanic YIP (10% vs 17%, aOR 0.5, 95% CI .33-.76, p<0.001). In the full sample, Black (16% vs 17%, .75 aOR, 95% CI .66-.86, p<0.001) and Hispanic (11% vs 17%, aOR .55, 95% CI .48-.65) youth were less likely to report receiving mental health services compared to White youth and non-Hispanic youth, respectively.

Conclusion: In this recent national sample of youth, we found that YIP were more likely to report receiving mental health services, however, these

services were disproportionately reported in White YIP as compared to Black and Hispanic YIP. In general, Black and Hispanic youth were less likely to report receiving mental health services compared to White youth. Despite improvements in providing mental health services to youth with incarcerated parents, racial disparities continue to exist. Further research is needed to explain why racial disparities remain.

No. 57

Attention-Deficit/Hyperactivity Disorder With and Without Oppositional Defiant Disorder/ Conduct Disorder in an Inpatient Psychiatry Youth Sample

Poster Presenter: Mona Salehi

Lead Author: Marco Grados

Co-Authors: Sagar Dua, Elizabeth Reynolds, Szu-Chi Cheng

SUMMARY:

<div class="WordSection1">

<p class="MsoBodyText">Background. Attention-deficit/hyperactivity disorder (ADHD; motor/behavioral), oppositional defiant disorder (ODD; defiant/rule-breaking) and conduct disorder (CD; aggression/deceitfulness) are disruptive behavior disorders. Research suggests that the comorbid subtype ADHD+ODD/CD has biological (genetic, imaging) and psychopathological differences compared to ADHD alone, such as more distal antisocial behaviors, executive function deficits, and substance use. Youth inpatient research has not addressed the impact of comorbid ADHD+ODD/CD compared to ADHD alone with respect to family, dyadic, and psychopathology variables. Methods. Demographic (age, sex, ethnicity, insurance status) data and DSM-IV clinical diagnoses were ascertained in a large youth inpatient sample from an urban academic center. Clinical groups were: ADHD alone, ADHD+ODD/CD, and psychiatric controls (the remaining subsample). Family function (Family Environment Scale, Moos; FES), parental stress (Parental Stress Index, Abidin; PSI), and comorbid conditions were ascertained. Chi-square tests for categorical data and t-tests for continuous data estimated differences between clinical groups. Key demographic variables were controlled for by linear regression. Results. 808 psychiatric inpatient

youth (56% female, 52% black) ages 5-17 years (13.2 ± 3.0) comprise the sample. Clinical groups are ADHD only (225; 27.8%), ADHD+ODD/CD (179; 22.2%), and psychiatric controls (404; 50%). Psychiatric controls have mostly depression (64.1%) and anxiety (46.3%) but no ADHD, ODD, or CD. Compared to ADHD only, ADHD+ODD/CD group has a higher proportion of black youth (70% vs 53%, $p < 0.001$) and uses more public insurance (85% vs 76%, $p < 0.05$). FES-conflict scores are higher in ADHD+ODD/CD youth (54.3 vs 51.5, $p < 0.05$) while cohesion scores are not different. Parent total PSI-stress measures are higher in ADHD+ODD/CD ($p < 0.01$), as are PSI-difficult child ($p < 0.001$) and PSI-difficult interaction ($p < 0.01$). All FES and PSI scores are lowest in psychiatric controls, intermediate in ADHD alone, and highest in ADHD+ODD/CD. Compared to ADHD alone, ADHD+ODD/CD has a reduced anxiety disorder burden ($p < 0.01$) but a higher risk for substance use disorder ($p < 0.001$). Compared to controls, both ADHD alone and ADHD/ODD/CD have less depression and suicidal phenomena. Results did not vary when controlling for demographic variables race and insurance type. Conclusions. A large psychiatric youth inpatient sample highlights clinical, family function, and parent-child dyadic differences between ADHD alone and the ADHD+ODD/CD subtype. ADHD+ODD/CD has the highest level of familial conflict and parental distress, compared to ADHD alone and psychiatric inpatient controls. Given the high levels of parent and family dysfunction, inpatient care for youth with ADHD+ODD/CD should emphasize interventions to address family function and inform treatment planning strategies to include community and family support post-discharge. </p></div>

No. 58

The Role of Social Support and School Belonging in Mental Health Among College Students in Central Appalachia

Poster Presenter: Praveen Fernandopulle, M.D.

Lead Author: Manik Ahuja, Ph.D., M.A.

Co-Authors: Thiveya Sathiyaseelan, M.D., Nils Went, M.D.

SUMMARY:

Background: Depression is the most common mental illness worldwide. It has become an important public health problem. The number of incident cases of depression worldwide increased from 172 million in 1990 to 258 million in 2017, representing an increase of 49.86% (Liu et al 2020). Depression is one of the several mental health conditions diagnosed in adults as well as in the adolescent population. Children and adolescents are probably more likely to experience high rates of depression and most likely anxiety during and after prolonged isolation periods (Loades et al 2020). It is important to understand the importance of screening for mental health conditions and study the benefit of clinical services that offer preventive support and early intervention (Loades et al 2020). The student population happens to be a vulnerable population requiring special attention as poor mental health outcomes affect school performance, social engagement, and future employment. Mental health problems are common in college freshman and associated with lower academic function (Bruffaerts et al 2018). The goal of this study is to find out whether social support and school belonging are associated with mental health outcomes among college students from an underserved region. Methods: We interviewed college students ($n=147$) aged 18-25 in Central Appalachia. Logistic regression analysis was used to assess the association of social support, school belonging and offspring depressive symptoms in the past year. Parent education, income, age, gender, past month mentally unhealthy days, and race were used as controls in the study. Results/Findings: Overall, 25.6% of participants reported low social support, while 22.4% reported low belonging in their school, while 21.8% reported poor mental health. Low social support (OR = 3.26, 95% CI, 1.27, 8.41) was significantly associated with depressive symptoms, while low belonging (OR = 2.03, 95% CI, 0.81, 5.09) in one's school was not associated with depressive symptoms. Discussion: It is important identify tools to help screen for mental health conditions in the college population during their wellness visits and then, if necessary, recommend various social support therapies to help manage mental health conditions. Globally, many individuals who require mental health treatment lack access to high quality care. There are human resource

shortages, fragmented service delivery models, and a lack of research for implementation and policy change contributing to the current mental health treatment gap (Wainberg et al 2017) Conclusion: Developing alternative treatment plans involving social support programs for adolescents suffering from depression should be given high priority as it is a serious health burden and can cause distress to the patient and their families as well as cause long-term impairments in functioning leading to premature death (Thapar et al 2012).

No. 59

Personality Traits Associated With Suicidal Ideation and Behaviors in a Clinical Sample of Adolescents With a Depressive Disorder

Poster Presenter: Michel Spodenkiewicz

Lead Author: Johanne Renaud

Co-Author: Anthony Gifuni

SUMMARY:

Background: Pathological personality traits have repeatedly been identified as important risk factors for suicidal thoughts and behaviors. In particular, impulsive-aggressive traits have shown a consistent association with suicidal behaviors across the lifespan. Adolescence represents a critical period for the emergence of personality traits, mood disorders, and suicidal behaviors, but the relationship between these variables remain poorly understood. Methods: These variables were examined in a cross-sectional case-control design involving three groups: adolescents with a depressive disorder and past suicide attempt, adolescents with a depressive disorder but without past suicide attempt, and healthy adolescent controls. Suicidal ideations were indexed using Suicidal Behavior Questionnaire (SBQ-R), depressive symptoms with the Beck Depressive Inventory (BDI), psychiatric disorders with the Schedule for Affective Disorders and Schizophrenia for School-Age Children-Present Version (K-SADS-P), personality traits with the Scheduled Clinical Interview for the DSM-IV (SCID-II) screening questionnaire an, and impulsivity with the Barratt Impulsivity Scale (BIS). Results: 102 adolescents aged between 11 and 17 years old have been included: 30 adolescents with a depressive disorder and past suicide attempt (Mean Age=16.2, Females=26), 38

adolescents with a depressive disorder but without past suicide attempt (Mean age=16.0, Females=29), and 34 healthy adolescent controls (Mean age=15.2, Females=22). Results: Impulsivity ($F=11.0$, $p<0.0001$) and antisocial personality traits ($p<0.001$, $d=0.70$) displayed the most robust association with adolescent suicide attempts. Borderline personality traits did not discriminate attempters from non-attempters but presented high correlations with suicidal ideation and depression severity. In an item-wise analysis, suicide attempt status was uniquely correlated with specific antisocial personality traits also corresponding to the symptoms of conduct disorder such as shoplifting/stealing as well as with non-suicidal self-injury and chronic feelings of emptiness. The caveats of this cross-sectional study include the use of items developed for an adult population to describe personality traits and the limited sample size. A preponderance of females in the sample restricts the generalizability of the current findings. Conclusion: Suicidal behaviors were characteristically correlated with increased impulsivity and antisocial behaviors, but other personality factors appeared relevant to adolescent depression and suicidal ideation. Understanding the emergence of personality traits and suicidal behaviors in a developmental context can ultimately inform not only the neurobiological origin of suicidality, but also provide new avenues for early detection and intervention. This study was supported by Manulife.

No. 60

ECT as Innovative Life-Saving Treatment and Rehospitalization Prevention: A Case of Suicidal Ideation Via Enucleation

Poster Presenter: Minh Nguyen, D.O.

Co-Authors: Lauren Nicole Tronick, Leo Meller, B.S., Michelle Wu

SUMMARY:

S is a 15-year-old child with an extensive psychiatric history including major depressive disorder, post-traumatic stress disorder, in-utero drug exposure, history of trauma, and multiple psychiatric hospitalizations who was transferred to the inpatient child and adolescent psychiatry unit (CAPS) with suicidal ideation and urges to self-harm specifically

via enucleation. The patient was transferred to the CAPS unit after a 12-day PICU stay following intentional overdose on chlorpromazine, olanzapine, sertraline, hydroxyzine, and lithium, resulting in intubation and dialysis. Prior to this hospitalization, S had undergone extensive psychiatric treatment including four hospitalizations at the present institution, multiple hospitalizations at other institutions, partial hospitalization programs and intensive outpatient programs, and various medication trials (including hydroxyzine, lithium, olanzapine, sertraline, aripiprazole, and fluoxetine) to minimal effect. During this hospitalization, he continued to require chemical and physical restraints due to unsafe behaviors including self-harming and attempts at enucleation. This behavior, along with his history of refractory depression and suicidality and failure of numerous extensive medication trials, led the treatment team to explore electroconvulsive therapy (ECT) as a treatment method. It was decided that ECT was warranted as the least-restrictive modality of treatment; the treatment team, parent, and patient agreed to proceed with a court hearing for approval of ECT treatment, and treatment was ultimately approved and initiated. S completed six sessions of ECT prior to discharge with the seventh session scheduled on the day of discharge. At the time of discharge, his symptoms and self-injurious behavior urges of enucleation had markedly improved. While he has presented to the emergency department with suicidal ideation since discharge, he has not been readmitted to the hospital. In the United States, treatment resistant depression has been associated with significant burden in healthcare costs, with an annual burden of \$43.8 billion (1) and in adolescents, treatment resistance depression is more prevalent among females, white patients, and patients with recurrent illness (2). Although the utility of ECT has been widely studied in adults, it is not a familiar method of treatment among child and adolescent psychiatrists (3). While ECT therapy remains controversial for use in children and adolescents and requires court approval in the state of California, this poster demonstrates potential life-saving utility of using ECT as an innovative treatment in a unique case of treatment resistant depression with enucleation, leading to prevention of rehospitalization and improved outcomes.

No. 61

SSRIs/SNRIs Effect on Weight Change in the Pediatric Population: A Meta-Analysis

Poster Presenter: Roshni Wani

SUMMARY:

Background: In 2022, the CDC found that 9.4% and 4.4% of adolescents suffer from anxiety and depression¹. While considering the significant risk of morbidity and mortality from these conditions, the effect of antidepressants has been studied in the pediatric population with positive outcomes. Further, 80% of adolescents treated with SSRIs showed significant clinical improvement over 9 months, with a number needed to treat of 3-5 for GAD and OCD, and 4 for MDD². In addition, the relationship between weight gain and SSRIs/SNRIs can be confounded by disordered eating in this age group³. In addition, 50% of adult body weight is gained during adolescence, with 80% of females and 29% of males rating themselves as being larger than their ideal figure³. Therefore, it is important to understand how SSRIs/SNRIs affect weight in adolescents and counsel patients to mitigate potential adverse effects of body dissatisfaction and psychological stress⁴. Methods: Weight data was collected from 16 RCTs addressing weight changes in the pediatric population treated with SSRIs/SNRIs versus placebo for 8-24 weeks. Studies that included subjects with a diagnosis of eating disorders or weight-focused interventions were excluded. Statistical analysis was completed by comparing effect sizes using Cohen's recommendations: calculated effect size of 0.2 is small, 0.5 is medium, and 0.8 and above is large. The formula used for calculations was: $\text{Effect Size} = \frac{(\text{mean}_{\text{post}} - \text{mean}_{\text{pre}})}{\text{pooled standard deviation}}$. Results: Most studies (n=14) show small positive effect sizes for placebo subjects with only two studies showing negligible negative effect sizes. Positive effect sizes represent small weight increases anticipated during maturation in adolescence. For the treatment subjects, half of the studies (n=8) illustrate a small negative effect size (<0.1) showing a small amount of weight loss. The other studies (n=7) show positive effect sizes (<0.2), showing a small amount of weight gain. When comparing the difference between the placebo and treatment subjects, a positive difference indicates less weight gain in the treatment group. Most studies (n=14)

demonstrate less weight gain in the treatment group than the placebo group with two showing a medium positive effect size (0.22). The other two studies with Escitalopram and Paroxetine as the treatments show a very small negative difference in effect sizes (-0.01). Coincidentally, the other studies with Escitalopram as the treatment (n=2) demonstrate a positive difference in effect sizes. Conclusion: Overall, the use of SSRIs and SNRIs in the pediatric population did not cause a significant weight gain in comparison to placebo and can be used with minimal concern for negative impact on adolescent body image. Patients should be counseled about the possibility of weight loss, as well as weight gain for physiologic reasons and with clinical improvement of depression and advised not to discontinue medication for this reason.

No. 62

Impact of Covid-19-Related Policy Changes on Inpatient Aggression

Poster Presenter: Salman Akram

Lead Author: Ankur Sah Swarnakar, M.D.

Co-Authors: Madeline Elaine Lodeiro, M.D., Fahad Mukhtar, Faisal Akram, M.D.

SUMMARY:

Introduction: In early 2020, the COVID-19 pandemic shocked the whole world with its sudden emergence. Psychiatric facilities took several measures, such as social distancing, wearing face masks, restricting family members' visits, limiting utilization of gyms or courtyards, reducing the census of the unit, and so on for the safety of patients and staff.[1] Despite knowing the devastating effect of the COVID-19 pandemic on mental health, the impact of COVID-19-related policy changes in medical facilities is still not completely realized.[2] Recent research have shown some beneficial aspect of such policy changes on inpatient aggression.[3][4] To further study that effect, we looked at the impact of policy changes due to the COVID-19 pandemic on the rate of inpatient aggression at a large state psychiatric hospital.

Method: A retrospective chart review of adult civil and forensic patients admitted to a state psychiatric hospital, between January 1, 2015 – December 31, 2020, was done. March 6, 2020, was set as a cutoff

timepoint to categorize aggressive events into pre-COVID and post-COVID groups. Data were analyzed using Chi-square tests and general linear modeling. P-value was set at < 0.05. Our primary outcome variable was the rate of aggression-related unusual incidents (UIs). **Results:** During the COVID-19 pandemic, there was a decrease in the absolute number of inpatient aggressive events from 20.8/week to 17.2/week (mean difference: 3.58/week, p-value = 0.032). A comparison of the pre-COVID and post-COVID aggression UI groups showed that there was a decrease in proportion of 7-day and 14-day post-admission aggressive events by 5.4 % (p<0.001, OR: 0.485; 95% CI: 0.33 - 0.74) and 12.1 % (p<0.001, OR: 0.277, 95% CI: 0.19 - 0.40), respectively. **Conclusion:** The results of this study revealed a significant reduction in the incidence of aggression during the COVID-19 period at the inpatient units of a state psychiatric facility. Several factors - reduction in the hospital census, decrease in the number of admissions, separation of new admissions from other inpatients, and other social distancing measures such as the closure of transitional learning centers, decrease in the number of therapeutic groups, decrease in the number of individuals in the dining area, decrease in the number of staff, and decrease in in-person visitation - might have contributed to these result findings. However, further research into the contribution of these restrictive interventions is required as the implementation of these restrictive measures can prove beneficial to reduce the future incidence of aggression in psychiatric units.

No. 63

Psychiatry Meets Clabsi: A Novel Place and Type of Contribution to Pediatric Hospital Patient Safety

Poster Presenter: Avram H. Mack, M.D.

SUMMARY:

Background Behavioral health disciplines can have a role in preventing general hospital patient safety risks by identifying and modifying the effects of problem behaviors. Attention to this problem follows the recognition that mental disorders elevate the risk of the occurrence of patient safety events in the care of the patient and in the case of Central Line Associated Blood Stream Infections (CLABSIs) our

institution had found an increased risk in patients with behavioral health (BH) concerns. The aims of this intervention were to identify barriers and proactive strategies for CLABSI prevention in patients with BH concerns. Methods •A multidisciplinary group was established, including CLABSI leaders, unit representatives, behavioral health clinicians, and family representatives. •A fishbone diagram was utilized to identify barriers to CLABSI prevention •Plan-do-study-act QI methodology was used to develop interventions to test. •Intervention metrics were tracked using retrospective chart audits. Interventions •Analysis revealed 3 core barriers to CLABSI prevention in this patient population: •Knowledge and training gaps for staff. •Barriers to patient and parent comprehension. •Insufficient policies, procedures, and strategies to target CLABSI prevention in this population. •To address these, our initial PDSA was designed to leverage the “Tier Zero” huddle: pro-active multidisciplinary bedside discussions of challenges and mitigating strategies. •PDSA 1 aimed to schedule a Tier Zero within 72 hours for patients with central lines who were ordered for safety observation (i.e., 1:1). •Huddles included the Centralized Behavioral Health team and, when appropriate, the family. RESULTS We conducted BH/CLABSI Tier Zeros on 15 patients between November 2021 and January 2022 out of 28 identified patients. Patient challenges included periods of agitation/delirium, poor safety awareness, scratching/picking at dressings, pulling on lines, and caregiver refusal of care related to patient behavioral concerns. Key mitigating strategies included communication strategies (39% - communication between staff, with patients, with families), physical diversion strategies (15%), and child life involvement (12%). In addition, fingernail maintenance was identified as a key mitigating strategy for patients known to pick and scratch at central line dressings Lessons Learned Improved communication and a shared mental model of risk factors across all staff caring for patients with BH concerns and central lines are critical steps to preventing CLABSIs in this population. Using these results, our team is refining the Tier Zero to include additional stakeholders and targeted questions about hand-off as part of our 2nd PDSA. Automation of patient identification will be needed for a more reliable process with some

consideration as to the specificity of the Safety Observation order. Findings will aid us in developing a toolkit of BH-specific interventions for CLABSI prevention.

No. 64

Reduction of Restraint and Emergency Psychiatric Medications’s Usage in the Covid-19 Pandemic

Poster Presenter: Ankur Sah Swarnakar, M.D.

Lead Author: Salman Akram

Co-Authors: John Echevarria, Fahad Mukhtar, Faisal Akram, M.D.

SUMMARY:

Introduction: Emergency psychiatric medications and physical restraints have been used in psychiatric facilities as a last resort to prevent harm to self or others. There has been a universal push to reduce the number of restraints and seclusions due to their negative outcomes.[1][2] Environmental factors, such as less personal space for patients, increased hospital beds, a large number of patients in the hospital, crowded spaces, narrow hallways, and noisy surroundings, have been shown to increase the rate of restraint events.[3] With the COVID-19 pandemic in 2020, several changes – social distancing, reduced patient census, suspending visitors, limiting patient gathering, etc. - were made to prevent the spread of infection. There are limited studies reporting the effect of these COVID-19-related changes on inpatient aggression, and the result has been promising in showing a reduced number of aggression events during the pandemic.[4][5] We were also interested to study the effect of ward environment changes secondary to the COVID-19 pandemic on the rate of restraints and use of emergency medications at a large mid-atlantic state psychiatric hospital. **Method:** We did a retrospective chart review of adult (≥18 years old) forensic and civil patients admitted to a state psychiatric hospital from January 1, 2015, to December 31, 2020. March 6, 2020, was chosen as a cutoff time. Chi-square tests and general linear modeling were used for data analysis with P-value set at <0.05. All models were adjusted for age sex and year of admission. **Results:** During the COVID-19 pandemic, there was a significant decrease in the number of restraints and emergency psychiatric medication usage in the

inpatient units. Physical hold by staff and restraint events decreased by 13.5% ($p < 0.001$, OR: 0.41, 95% CI: 0.31 - 0.53) and 3.6% ($p = 0.032$, OR: 0.74, 95% CI: 0.56 - 0.98), respectively. Emergency psychiatric medication usage decreased by 28.2% ($p < 0.001$, OR: 0.2, 95% CI: 0.15 - 0.26) during the pandemic.

Conclusion: This study shows that policy changes secondary to the COVID-19 pandemic have impacted various clinical factors including decreasing the rate of physical hold, restraints, and the use of emergency psychiatric medication. The likely explanations for this reduction in rate might be a lower patient census, separation of new admissions from other patients, social distancing measures, decreasing number of individuals during meals, limiting groups and visitors, a sense of unified purpose against the pandemic, and so on. Further studies are needed to learn more about the effect of COVID-19-related policy changes. These findings will help to make future policies conducive to reducing the rate of coercive measures.

No. 65

Women's Reproductive Health Groups: Empowering a High Risk Inpatient Population

Poster Presenter: Sirisha Iruvanti

Co-Author: Avanti Puri, M.D.

SUMMARY:

Introduction: Women with mental illness are five times more likely to experience an unplanned pregnancy due to lower rates of effective contraception use, higher rates of comorbid substance use, and the nature of psychiatric illness itself. They also experience higher rates of adverse pregnancy outcomes, perinatal & postpartum psychiatric disorders, and changes in child placement. Despite this, education on women's reproductive health and family planning is not routinely offered in inpatient psychiatric settings. **Methods:** Psychiatry residents were trained, provided a script, and led weekly groups on the inpatient psychiatry unit. Groups focused on structured contraception education followed by an open-discussion format. Data collected included the percentage of women with history of contraception use, child protective service involvement, unplanned pregnancies, abortions, and percentage of women

who found the group helpful. Special care was taken to discuss available options, including long-acting reversible contraception, in order to empower women to make their own decisions about their contraceptive needs. **Results:** In our ongoing initiative, 16 sessions have been conducted, and attendance among women in the inpatient unit was 42%. Out of the 40 patients who participated, 100% found the group beneficial and responded they would share information they learned with women outside the group. 31.2% self-identified as having used contraception, 45% have had an unplanned pregnancy, 23.3% have had an abortion, and 27.7% have had child protective services involvement. Group facilitators and free response indicated that the women who participated gained a better understanding of the medical, emotional, and financial implications of unplanned pregnancies. Many patients requested further groups to discuss issues such as domestic violence and experiences as a mother. **Conclusions:** The inpatient contraceptive education group is a critical tool in view of the poor access to healthcare experienced by women who receive inpatient psychiatric care. These inpatient groups provide a unique intervention at a crucial junction—it may be the only time women with severe mental illness receive preventative, reproductive health education. The groups should further lead to appropriate follow-up with primary care and/or OB/GYN providers. Ongoing recommendations and efforts will be put forth to increase group attendance, to incorporate participation from unit staff, and to build this group into psychiatry training curriculums. **Funding:** None

No. 66

Successful Use of ECT to Eliminate Self-Injurious Behaviors in an Adolescent With Autism Spectrum Disorder

Poster Presenter: Amandeep Singh, M.D.

Co-Author: Hunter McLendon

SUMMARY:

Non-suicidal self-injurious and mutilation behaviors in the context of autism spectrum disorder have been widely reported in the literature. Commonly utilized treatments of these symptoms are behavior modification therapy

and pharmacologic management. Little data is published on management in refractory cases but recently, a handful of case reports highlight ECT as a potential treatment. A theory has emerged that these self-injurious behaviors present in the context of catatonia as a type of stereotypy and are due to dysfunction of the GABAergic receptors. This case describes a case in which ECT was used to wholly eliminate debilitating and refractory self-injurious behaviors in a pediatric patient with severe autism, further highlighting the potential of ECT as a therapeutic option in this population. In this report, a fourteen-year-old male with a psychiatric history of autism spectrum disorder with developmental delay, and a complex medical history including cerebral palsy and chromosomal microdeletion syndrome, began engaging in self-injurious behaviors at eight years old. At this time, the patient began to experience a global regression of functioning. He lost the ability to control urination and defecation, and became wheelchair bound due to issues with balance. His self-injurious behaviors consisted of banging his head on objects, biting his fingers, and hitting his arms and legs with his fists. The patient had undergone several courses of behavioral therapy with multiple therapists, all without benefit. The behaviors had been resistant to multiple trials of medications including with antipsychotics, mood stabilizers, antidepressants, and alpha-2 agonists. Stimulants made behaviors worse. Gabapentin, which was prescribed for muscle spasticity, and Ativan were noted to cause a mild improvement in self-injurious behaviors. Prior to initiation of ECT, the patient was engaging in self injury once every few minutes for hours at a time. Due to the severity of his self-injurious behaviors, the patient had been unable to go to school and unable to tolerate any physical, occupational or behavioral therapy for several years. Once ECT was initiated, he experienced a dramatic reduction in symptoms. By the fourth treatment of ECT, all self-injurious behaviors had ceased. He was making eye contact for the first time in years, and as he continued to receive ECT, his ability to communicate and interact with others improved as well. He had re-entered school and was able to re-engage with behavioral and other therapies. Initially, the patient received ECT treatments three days a week and this was successfully decreased to once a week over the

course of several months. He continues to receive ECT as further tapering of ECT was not successful due to the re-emergence of self-injurious behaviors. </p>

No. 67

Clinical Considerations for Electroconvulsive Therapy in a Breastfeeding Mother for Postpartum Depression Without Psychosis

Poster Presenter: Nina T. Ballone, M.D.

SUMMARY:

Mrs. C is a 26-year-old G1P1 female who presented to the women's mental health clinic at 2 months postpartum per the recommendation of her outpatient therapist for worsening postpartum depression to consider treatment options. Over the next 2 months, she was tried but was unable to tolerate trials of sertraline, escitalopram, fluoxetine, desvelafaxine and bupropion. Her postpartum depression symptoms became so severe that she was hardly able to function; however, her 4 month-old child was not accepting a bottle and Mrs. C was only able to provide nutrition through direct breastfeeding. This limited her ability to participate fully in higher level services where she would be away from the baby for prolonged periods of time without nutrition. Her depression was significantly impairing and distressing that was not responding to twice weekly psychotherapy and inability to tolerate antidepressant medications. Electroconvulsive therapy (ECT) was recommended on an outpatient basis; however, literature is limited to provide guidance for ECT in lactating women in an outpatient setting where Mrs. C both preferred and needed to provide direct feeds for the infant. In this poster, I will discuss the literature reviewed on this topic, elaborate on the outcomes of this search and the guidance it provided for Mrs. C's treatment course of 15 ultra-brief right unilateral ECT treatments. This poster will highlight key points for analgesia and anesthesia use considerations for breastfeeding mothers in outpatient procedure settings and strategies to minimize interruptions in feedings for the baby when patients are to be fasting overnight. Finally, this poster will discuss the lack of streamlined data available for patients with postpartum

depression and considerations of ECT outside of the hospital setting or those with psychotic features.

No. 68

Pregnant and Breastfeeding Women's Attitudes and Fears Regarding Covid-19 Vaccination: A Nationwide Cross-Sectional Study in Saudi Arabia

Poster Presenter: Sultan Mohammed Alshahrani

SUMMARY:

Introduction: Contracting coronavirus disease (COVID-19) during pregnancy has been linked to an increased risk of severe maternal and fetal complications. Mass vaccination is considered a promising solution to successfully combat the COVID-19 pandemic. It includes vaccinating of pregnant and breastfeeding women. The success of a vaccine is determined not only by its efficacy, but also by its acceptability. Therefore, our study aimed to explore the acceptability and reluctance of pregnant and breastfeeding women to receive COVID-19 vaccination in Saudi Arabia. **Methods:** This cross-sectional study was conducted in Saudi Arabia from March 2022-beginning to June 2022-end. Using an online self-administered questionnaire with a convenience sampling technique, we assessed women for pregnancy, gravidity, parity, high-risk pregnancy, trimester of pregnancy, and current or planned breastfeeding. Furthermore, we assessed patients with preexisting chronic illnesses. The questionnaire comprised sociodemographic data and items drawn from Goncu Ayhan et al, including vaccination history, perception of risk related to the COVID-19 pandemic, impact of the COVID-19 pandemic, and acceptance and attitude toward future COVID-19 vaccination. **Results:** A total of 854 women (615 pregnant and 192 breastfeeding women) were included. Predictors of COVID-19 vaccination acceptance were found in women with a high level of education, those who lived with an elderly family member, and had close contact with a COVID-19-positive person. The reasons for declining vaccination included COVID-19 diagnosis during pregnancy and concerns about side effects of COVID-19 vaccines. 503 (58.9%) women believed that COVID-19 vaccines had the potential to harm their babies. Only 415 (48.6%) agreed they would take the COVID-19 vaccine if it were recommended for

pregnant women. **Conclusion:** Pregnant and breastfeeding women fear COVID-19 vaccination due to safety concerns for their babies. COVID-19 vaccine acceptance varies among pregnant and breastfeeding women, regardless of whether they receive the COVID-19 vaccine. Our study underlines the importance of public education campaigns to improve the overall quality of information on COVID-19 vaccination, particularly among pregnant and breastfeeding women. **Keywords:** COVID-19, fears, vaccine, pregnant, breastfeeding, Saudi women.

No. 69

Effectiveness of Active Versus Sham Alpha-Stim Cranial Electrostimulation in Primary Major Depression: Randomized Controlled Trial

Poster Presenter: Richard Morriss

SUMMARY:

Background. Randomized sham-controlled trials of cranial electrostimulation with the Alpha-Stim Anxiety Insomnia and Depression (AID) device have reported improved anxiety and depression symptoms^{1,2}. However no adequately powered sham-controlled trials in major depression are available. **Aim.** We investigated whether active Alpha-Stim AID is superior to sham Alpha-Stim AID in terms of clinical effectiveness for depression symptoms in major depression. **Method.** Multicentre, parallel group, double-blind randomised controlled trial recruiting participants from 25 primary care centers in England³. Inclusion criteria: primary major depression, score of 10–19 on the 9-item Patient Health Questionnaire, and had been offered or prescribed and reported taking antidepressant medication for at least 6 weeks in the previous 3 months. Main exclusion criteria were contraindications to Alpha-Stim AID device use, having persistent suicidal ideation or self-harm, neurological conditions, substance use or dependence, an eating disorder, bipolar disorder, or non-affective psychosis, or receiving psychological treatment in the past 3 months. Eligible participants were randomly assigned (1:1, minimised by region, anxiety disorder, and antidepressant use) to 1-h daily use of active (100 µA) or sham Alpha-Stim AID treatment for 8 weeks. Blinded assessments at baseline, 4, 8 and 16 weeks. Primary outcome was

change from baseline in score on the 17-item Hamilton Depression Rating Scale (HDRS-17) at 16 weeks after randomisation analysed by intention-to-treat mixed modelling. Secondary outcomes; response, remission, self-rated depression (PHQ-9), anxiety (GAD-7), function (WSAS) and health (EQ-5D-5L VAS). **Funding.** NIHR ARC East Midlands. **Results.** 236 participants were randomly assigned to active or sham Alpha-Stim AID (n=118 each). 156 (66%) participants were women, 200 (85%) were White British or Irish; mean (SD) age was 38.0 years (15.3). 200 (84%) participants were followed up with 73% participants completing ≥ 28 hours Alpha-Stim CES. In the ITT population, mean change in HDRS-17 at 16 weeks was -5.9 (95% CI -7.1 to -4.8) in the active Alpha-Stim AID group and -6.5 (-7.7 to -5.4) in the sham group (mean change difference -0.6 [95% CI -1.0 to 2.2], $p=0.46$). Some secondary outcomes were significantly greater in the sham than active Alpha-Stim AID group (PHQ-9 at 4 and 8 weeks, GAD-7 at 4 weeks, EQ-5D VAS at 16 weeks) but the differences were neither clinically important or consistent. Among the 236 participants, 17 adverse events were reported in 17 (7%) participants (e.g. headaches, tinnitus, dizziness, skin irritation), 9 in the active and 8 in the sham group, one in the sham being a serious adverse event (hospitalisation due to suicidal ideation). **Conclusion.** An 8 week course of fixed dose Alpha-Stim AID was safe, and well tolerated . However, it was not clinically superior in effectiveness to sham treatment for moderate primary major depression.

No. 70

Augmented Reality Exposure Therapy for Treating First Responders With PTSD: A Pilot Clinical Trial

Poster Presenter: Liam Browning

Lead Author: Arash Javanbakht

Co-Authors: Sophie George, Alex Damarjian

SUMMARY:

Background: While exposure therapy is the first line treatment for PTSD, its use is often limited by lack of access to avoided situations. We developed a patented method of using augmented reality (AR; not virtual reality [VR]) for exposure therapy that allows for generalization and real-life contextualization of extinction learning. Unlike VR,

AR superimposes digital stimuli onto the physical world surrounding the patient, allowing the patient to be exposed to a fear stimulus while still feeling present in the real world. Previous work from our team and others has validated this approach in the treatment of small animal phobias (Javanbakht, Madaboosi, & Grasser, 2021; Suso-Ribera et al., 2019); however, the application of AR exposure therapy (ARET) to PTSD is understudied. In this presentation, I will share pilot data on the use ARET for treating first responders with PTSD. **Methods:** Two police officers with a clinical diagnosis of PTSD were treated using ARET software (by the time of the presentation, we will have added more cases to the series). ARET software connects the AR headset wirelessly with the therapist's computer, enabling the therapist to guide exposure by scaling the intensity of avoided scenarios (e.g., gradually increasing the number of people and/or noise in a police station). Subjective Units of Distress Scores (SUDS) were prompted and collected directly through the ARET software, and patients proceeded to higher exposure hierarchies when the SUDS were 4 or lower. Skin conductance responses (SCRs) were also collected during exposure therapy. PTSD Checklist (PCL), GAD-7, and Social Anxiety Scale questionnaires were completed immediately prior to the ARET session and immediately after. **Results:** After a one-hour ARET session, both patients showed improvements in multiple symptom domains: pre- to post-treatment SUDS (8 to 2), PCL (69 to 37), GAD-7 (23 to 15), Social Anxiety Score (37 to 23), and SCRs showed significant decline. **Conclusion:** Real-life contextualization of exposure therapy is effective for treating PTSD and phobias. AR may strengthen and expedite the effects of exposure therapy by enhancing the realistic experience of avoidant situations that are not feasible or ethical for *in vivo* exposure therapy. This method may be particularly suitable for patients with avoidant coping strategies and poor emotional engagement, which are common among first responders (Arble, Daugherty, and Arnetz, 2018). Further studies comparing ARET to traditional extinction therapy modalities for PTSD are needed.

No. 71**Engagement Patterns With a Mental Health App for Dysregulated Anger and Aggression: Learning From 35,355 Anonymous Users**

Poster Presenter: Shilpa Hampole

Co-Authors: Sofia Reyes, Shannon McCaslin, Ph.D., Adrienne Heinz, Ph.D., Margaret-Anne Mackintosh, Ph.D.

SUMMARY:

Episodes of dysregulated anger and aggressive behaviors have become increasingly prevalent in the psychiatric and forensic literature and have been associated with devastating public health consequences. Further exacerbating the problem, access to empirically based psychosocial interventions is limited, particularly in low-resource communities. Digital mental health tools (e.g., mobile apps) can provide accessible and scalable real-world interventions for dysregulated anger. However, sustained engagement with such apps is often low which can lead to limited benefit. This study evaluated the use patterns of the evidence-supported, free, and publicly accessible Anger and Irritability Management Skills (AIMS) app developed by the U.S. Department of Veteran Affairs National Center for PTSD. Constructs investigated were the usage of the key content areas in the app, identification of latent user profiles, and variations in use based on the level of self-reported anger problems. Anonymous mobile usage data were collected from 35,355 Android users from October 1, 2018, to September 30, 2021. AIMS users rated the app an average of 4 stars out of 5 in the Google Play Store indicating acceptability and sufficient net-promoter scores. Users accessed the app on an average of 2.86 days (SD = 5.13 days) across an average timespan of 53.83 days (SD = 117.66 days). A total of 12,355 (34.95%) users completed the Anger Quiz (AQ) with a mean score of 5.01 (SD = 2.24) out of 10. Users accessed an average of 6.70% (SD = 18.37%) of 51 psychoeducation topics and tried 4.22 (SD = 8.01) of the 27 interactive tools. Latent class analyses with 2–10 classes using the 10 AQ items and 12 variables summarizing the psychoeducation content, Tools, Anger Log entry, and Anger Control Plan use were conducted. The two-class solution was the only model that clearly differentiated between latent subpopulations (entropy = 0.74). Classes were

differentiated by level of engagement with psychoeducation content and anger management tools, reflecting high versus low use of both. There were no differences in patterns of anger problems endorsed between classes. A zero-inflated Poisson model indicated that while users with high anger scores, compared with lower scores, were over-represented in the group who would never likely try a tool, in the count portion of the model, higher anger scores tended to predict increased tool use. Further, analyses showed that higher AQ scores predicted a higher likelihood of returning to the app (a 5% likelihood increase for each one-point increase in quiz score). While continued examination of the AIMS app is needed, these results can inform both app design and patient care. Understanding that users come to the app with different motivations and immediate needs can highlight ways to tailor content, recommendations, and resources in ways that can improve the app's "stickiness" and nudge users towards healthier, less destructive behaviors.

No. 72**Reversal of Insulin Resistance Associated With Blood-Brain Barrier Repair and Remission in a Patient With Post-Traumatic Stress Disorder**

Poster Presenter: Katherine Lines

Co-Authors: Claire Reardon, Cynthia Calkin, Jacob Cookey

SUMMARY:

Many patients with psychiatric illness have comorbid insulin resistance or type-2 diabetes (IR/T2DM). Extensive leakage of the blood brain barrier (BBB) has been linked to insulin resistance (IR) and chronic neuro-progressive course in patients with treatment resistant bipolar disorder (TRBD)¹. In a case report of a patient with TRBD we showed that reversal of IR led to remission of psychiatric symptoms and normalized the permeability of the BBB². We hypothesized that this may hold true in other psychiatric disorders like Post Traumatic Stress Disorder (PTSD). In this case a 61 year old male with treatment refractory PTSD and comorbid IR was treated with metformin for 6 months to reverse his IR. The patient's anthropometric measures, laboratory tests, vitals, were taken and psychiatric symptom rating scales were performed pre and post-

insulin sensitizing treatment with metformin. To assess BBB functioning, the patient underwent dynamic contrast enhanced-magnetic resonance imaging (DCE-MRI) pre and post-metformin treatment. The patient's HOMA-IR (with a HOMA-IR³ 1.8 indicating IR) went from 2.6 pre- metformin treatment to 1.68 with post metformin treatment to reverse his IR. Treating IR with metformin lead to clinically significantly improvement in our patient's PTSD symptoms as demonstrated by decreased scores on the PTSD Checklist for DSM-5 (PCL-5) (51 to 38) and PTSD Scale-Self Report for DSM-5 (PSS-SR5) (59 to 38). Anxiety and depressive symptoms remitted, Montgomery-Asberg Depression Rating Scale (MADRS) (22 to 1) and Hamilton Anxiety Rating Scale (HAM-A) (18 to 8). Clinical Global Impression Scale (CGI) improved from markedly ill (5) to mildly ill (3) and Global Assessment of Functioning Scale (GAF) improved from serious symptoms/impairment (50) to mild symptoms/impairment (70). Further, BBB leakage on DCE-MRI improved from extensive (14.2%) to normal permeability (2.9%), suggesting that BBB leakage could be an underlying mechanism in treatment refractory PTSD. Further improvements in LDL (3.99mmol/l to 2.67 mmol/L), HDL (1.34 mmol/L to 1.37 mmol/L) and triglycerides (2.94 mmol/L to 2.09 mmol/L) were observed. These results are consistent with the TRIO-BD clinical trial in bipolar patients with TRBD for whom reversing IR significantly improved depression, anxiety and functioning. Further, it is consistent with BBB imaging in a case of TRBD and IR where reversal of IR resolved BBB leakage. There are a number of mechanisms by which metformin may repair the BBB³. This suggests, BBB leakage is dynamic and could be an underlying mechanism in refractory PTSD symptoms.