Poster Proceedings

#APAAM21

Saturday, May 01, 2021

Poster Session 1

No. 1

Suicidality and Psychosis Following Vaping Related Lung Injury

Poster Presenter: Chad Percifield, D.O.
Co-Authors: Zachary Cohen Hommer, M.D., Bradley Adam Demijohn, M.D., Carol Janney, Samuel Lin

SUMMARY:

The use of modified electronic cigarettes and unregulated black-market devices to vape tetrahydrocannabinol has been increasing in recent years. Vaping THC is inconspicuous, odorless, and more convenient when compared to traditional means of smoking THC. Vaping THC, however, presents novel health concerns including vaping-related lung injuries. We present the case of a 20-year-old female with history of major depressive disorder, recurrent, severe and heavy THC use by vaping who had two inpatient treatments separated by 2 weeks. Her first admission was for suicidal ideation and was preceded by ICU treatment for vaping-related lung injury. Her second admission followed a suicide attempt by several methods including stabbing, electrocution and ingestion. The patient was noted to be exhibiting psychotic features during her second admission. The patient was stabilized on quetiapine 600 mg nightly, fluoxetine 60 mg daily and gabapentin 100 mg daily prn anxiety and discharged home. The increasing popularity of vaping as a means of THC consumption presents several concerns. There is a current epidemic of vaping-related lung injuries, particularly among those who vape THC and data suggests that the rates of vaping amongst adolescents has increased substantially. Furthermore, there is little research regarding mental health consequences of vaping THC, but considering the high potency of vaping solutions, an increased risk of THC-induced psychosis and schizophrenia spectrum disorders should be considered. In this poster, we discuss this patient case as well as the concerns described above surrounding vaping THC.

No. 2

The CHOP Program: Ending the Cycle of Recidivism for Rough Sleepers

Poster Presenter: Rebecca Gwynn Creel, M.D.
Co-Authors: Ana T. Turner, M.D., Colleen Bell, M.D.

SUMMARY:

Those persons who have the highest recidivism rate in Jacksonville, Florida’s jail system are also experiencing homelessness. From 2009-2012, 43 misdemeanor offenders cost the Jacksonville Sherriff’s Office over $400,000. The cost to arrest and jail a person in Jacksonville, FL, includes $884 for booking and $62 per day to house them. The average cost to the community for jail time, emergency room visits, social services and other costs related to one person experiencing homelessness is $50,000 per year. However, it costs between $12,000 and $24,000 to provide a permanent supportive housing solution for that same individual. The Sulzbacher Center and Jacksonville Sherriff's Office have also partnered with the Public Defender’s Office, State Attorney’s Office, judges, the jail, and Salvation Army probation programs to launch the CHOP program (Chronic Homeless Offender Program) to get chronic offenders experiencing homelessness off the streets and out of jail. We will describe how 10 community partners developed a probationary program to break the cycle of homelessness and associated crimes and ultimately decreased costs to the city by over $88,000 in one year. Using a cross-sector collaboration, 23 persons were identified who had numerous incarcerations related to homelessness. They were offered the chance to comply with probation, terms of a lease, and weekly case management meetings in exchange for rapid housing, access to free drug/alcohol rehabilitation, and wrap-around services including job placement and peer specialist. Twelve months prior to the program the identified persons had been arrested 67 times for a total of 871 days in jail, along with 28 Crisis Stabilization (CSU) stays. Twelve months after the program, there had been 26 arrests, 182 days in jail and 0 CSU stays, leading to a decrease in costs by $88,829. Case examples of those who not only remained out of jail but obtained recovery from alcohol, reconnected with family, and became

contributing members of society through the CHOP program are also included in this review.

No. 3

Medical Student Psychotherapy Experiences and Impact on Attitudes Towards Mental Illness

Poster Presenter: Jia Pamela Guo, B.S.
Co-Authors: Shi Xun Fang, B.S., Sahil Munjal, M.D., E. Shen, Ph.D., Paige Bentley, Ph.D.

SUMMARY:
Introduction: Negative perceptions towards mental illness held by medical students may adversely affect their willingness to care for psychiatric patients and have negative implications for the field of psychiatry (1). Despite stress, depression, and burnout that can occur in medical school, students are often uncomfortable seeking personal psychotherapy (2). There is limited research investigating the impact of personal psychotherapy experience on student attitudes towards mental health and specialty choice. Understanding this impact and potential barriers to psychotherapy is critical to cultivating medical graduates comfortable and competent in caring for their own psychological well-being as well as that of their patients. **Methods**: The IRB of the Wake Forest School of Medicine (WFSM) approved this study. A convenience sampling method was used to recruit WFSM MD students via email survey on a volunteer basis. Results were analyzed with descriptive statistics, and regression analysis to identify independent outcome predictors. We will collect basic demographic information, history of psychotherapy participation, mental health extracurricular experience, and barriers in accessing therapy. The survey includes a medical student version of Mental Illness Clinicians' Attitudes Scale 2 (MICA) (3). **Results**: Preliminary results yielded 238 completed surveys, excluding psychology major students (n=10) as their studies may have induced positive biases towards psychotherapy and mental health. Average age was 25.7, SD =3.17; and predominantly female (M 37.8%, F 58.8%, 3% uncategorized/other). One-way ANOVA between-subjects compared the effect of personal therapy experience before (PT-past, n=33) or during medical school (PT-now, n=44); both before and during (PT-both, n=56), and never (PT-none, n=105) on MICA. Prior therapy experience (past, now, and both) had a significant effect on MICA at the $p<.05$ level [$F(2, 214) = 3.18$, $p = 0.037$]. Post hoc comparisons using the Tukey HSD test indicated that the mean score for PT-past and PT-now (M = 34.69, SD = 7.51) was significantly different than PT-none condition (M = 37.95, SD = 7.79). **Discussion**: These results suggest that prior therapy experience influences medical student attitudes towards mental illness. Students who had therapy experience before or after entering medical school reported a positive attitude toward people with mental illness. However, bias may exist as students who choose to attend therapy may exhibit lower stigma towards mental health. Further data analysis will be conducted to identify barriers to therapy, and examine possible associations between therapy exposure, attitudes, and psychiatry specialty choice. **Conclusion**: This preliminary cross-sectional study offers insights into student behavior and attitudes regarding mental health care. As this study is ongoing, further data analysis will be conducted to identify drivers of behavior.

No. 4

Firearm Ownership in Patients Admitted to an Inpatient Alcohol and Drug Detoxification Unit

Poster Presenter: Jeremy Weleff, D.O.
Co-Author: Brian Scott Barnett, M.D.

SUMMARY:
Introduction: Access to lethal means is an important risk factor for suicide and homicide, but data on the prevalence of firearm ownership amongst patients with mental illness or substance use disorders are scarce. Despite the need to evaluate firearm access for effective suicide and violence risk assessments, the few studies exploring this topic demonstrate low documentation rates of firearm access in medical records. Therefore, we sought to investigate firearm ownership, captured upon routine admission screening, amongst those admitted for inpatient alcohol and drug detoxification. **Methods**: We retrospectively reviewed charts for all admissions to an alcohol and drug detoxification unit between 1/1/2009-5/16/2020. Data on patient demographics, admission diagnosis, length of stay, and results of a standardized admission suicide screening tool, which inquires about firearm access, current suicidal

ideation, past suicide attempts, past non-suicidal self-injurious behavior (NSSIB), family suicide history, and inpatient psychiatric treatment were extracted. Multivariate logistic regression were performed to assess for differences between patient variables and firearm ownership. **Results**: 10,652 admissions were identified. Patients were mostly male (64%; 6811), Caucasian (79.4%; 8462), and a mean age of 44.7 ± 12.7 years (range: 18-93). Admissions were mostly for detoxification from alcohol (68.7%; 7316), opioids (6.6%; 707), and sedatives (4.7%; 504). Firearm ownership was not documented in 36.3% (3,354) of admissions. Excluding these records, 10.4% (759) of patients screened were identified as owning a firearm. Firearm ownership was associated with having previous suicide attempts [OR: 1.30, p=0.04], having a previous suicide plan [OR: 1.70, p=0.01], being homeless [OR: 1.55, p=0.04], and being married [OR: 2.57, p<0.01]. Having a family history of suicide was negatively associated with firearm ownership [OR: 0.74, p=0.03]. No associations were found between firearm ownership and age, gender, Caucasian ethnicity and diagnosis of Alcohol Use Disorder. **Discussion**: Compared to past studies in emergency rooms and inpatient psychiatric units, the firearm ownership rate in this population was similar and also lower than amongst the general population. Lacking documentation for firearm ownership, despite the use of a standardized admission tool is concerning, given firearm ownership and addiction's links to suicide risk. Firearm ownership's associations with previous suicide attempts and plans, as well as homeless status, are concerning, since these are important risk factors for suicide completion. **Conclusion**: Like studies of firearm ownership in other treatment settings, we found that screening for firearm ownership was poor, even with the use of a standardized admission template. Though only a small portion of patients reported owning a firearm, associations between firearm ownership and other important suicide risk factors were identified.

No. 5

Suicide and Law Enforcement: A Literature Review

Poster Presenter: Aidaspahic S. Mihajlovic, M.D., M.S.

Co-Author: Jon Fredrick T. Casas

SUMMARY:

The problem addressed in this study was the high suicide rates of current and former police officers in the United States. Police officers define their work as stressful due to the uncertainties of each shift and the possible trauma that could be witnessed throughout their workweek. [1] Unfortunately, mental health stigma and the lack of training within agencies contribute to the reasons why police officers are skeptical about sharing their concerns with anyone. [2] According to Blue H.E.L.P., a nonprofit organization that works to reduce mental health stigma within law enforcement, between 2016 and 2019, 463 law enforcement officers worldwide committed suicide by agency-issued firearms. [3] In the US in 2019, 228 current or former police officers died by suicide – a record high number – compared with 172 officers in 2018. The state of New York had the highest number of suicides, 27, followed by California, 23, Texas, 18, and Florida, 15. [4] Among the 228 officers, 90% were male and approximately 25% were veterans with at least 20 years of service. At least 38 states had one suicide last year. [4] According to the National Alliance on Mental Illness (NAMI), 1 in 4 police officers has thoughts of suicide at some point in their life. [5] A recent meta-analysis found that of 272,463 police personnel from 24 countries, the prevalence of depression was 14.6%, for posttraumatic stress disorder (PTSD) 14.2%, for generalized anxiety disorder 9.6%, for suicidal ideation 8.5%, hazardous drinking 25.7%, and alcohol dependence 5.0%. [6] Lack of support, administrative pressure, and avoidant coping strategies are just a few of the occupational stressors in police work that are associated with troubling mental health outcomes. [6, 7] Efforts are being made to curb this crisis. In 2018, there were nearly 25,000 "contacts" between Chicago Police Department (CPD) clinicians and department members and their families; this was double that of 2016. [8] Similarly, in August 2019, the New York City Police Department (NYPD) announced that it is launching a "peer-to-peer support program," in which volunteers within the department will "ask, listen, encourage, and follow-up with all members of the service." [9] Bolstering support for the program, a 2020 study found that within an Ontario police department's peer-support program, this was more

than a conversation – it enhanced mental health literacy among police officers and significantly contributed to stigma reduction. [10] During these unprecedented times, rife with civil unrest, economic uncertainty, and a global health crisis, we are all, in one way or another, confronting unique circumstances that challenge our mental health and well-being — challenges that, at times, push individuals toward the unfortunate outcome of suicide. Through this poster, we will explore the current state of mental health within perhaps one of our most talked-about yet most overlooked populations: our law enforcement officers.

No. 6

Covid-19 Pandemic and Increased Risk of Suicide

Poster Presenter: Kenneth Oforeh, M.D.
Co-Authors: Chiedozie Ojimba, M.D., Terence Tumenta, M.D., Tolu Olupona, M.D., Olaniyi O. Olayinka, M.D., M.P.H.

SUMMARY:
Suicide accounts for one death every 40 seconds, which is approximately 800,000 deaths. There were 44,965 cases of suicide in 2016, and it ranks as the 10th leading causes of death in the United States. Common factors that increase the risk of suicide include strong family history, depression, presence of psychotic symptoms, and substance use disorder. Also, acute psychosocial stressors such as social isolation, unexpected and recent loss of spouse or work, stress and anxiety in a natural disaster or pandemic have been indicated. The COVID-19 pandemic started in 2019, and over 23.4 million COVID-19 cases have been reported globally. Since then, there has been an increase in suicidality, medical and other mental health disorders due to social isolation, economic recession and barriers to treatment, especially in the vulnerable population. The increased suicidality has been attributed to factors such as increased fear, stress and anxiety with or without mood or anxiety disorders. Multiple lines of evidence have shown an increased risk of suicide in patients with previously diagnosed psychiatric disorders since the pandemic. However, limited studies have shown an increased risk of suicide in patients without previously diagnosed mental health illness. Hence we report a case of a 25-year-old African American female with no prior mental health disorder or suicide attempt who presented with acute psychosocial stressors related to COVID-19 pandemic.

No. 7

A Case Report of Familial Cyclical Vomiting Syndrome: A Unique Presentation During Differential of Obsessive Compulsive Disorder

Poster Presenter: Raheel Imtiaz Memon, M.D.
Co-Authors: Marvi Memon, M.D., Aurif Akhtar Abedi, M.D.

SUMMARY:
Familial Cylical Vomiting Syndrome (CVS) is an illness of idiopathic etiology characterized by recurrent episodes of vomiting lasting for hours to days. Methods We present a case of adolescent with clinical features and family history consistent with CVS. The age of onset was around age 14 or 15 in all siblings. Selective serotonin reuptake inhibitors was beneficial for this family. We searched databases, PubMed and Scopus, for the relevant articles pertaining to pathophysiology and management of CVS. Results In this case, 15-year-old male presented to us for worsening anxiety. For last two years, patient had recurrent and persistent thoughts about food getting stuck in to his throat and choking and bloating sensations, resulting in extreme distress. He reported history of vomiting, burping, and spitting to suppress his anxiety. Other symptoms includes panic attacks happening more often and around Christmas time in 2019. He was admitted to hospital where he received as needed lorazepam after assessment. Patient was started on fluoxetine 10 mg daily to target anxiety and panic attacks. The role of serotonin has been studied in the pathophysiology of functional disorders, including CVS. Psychosocial stressors such as thoughts about food, school, trauma, or social situation, triggers the release of corticotrophin-releasing factor that stimulates brainstem vagal receptors. Treatment for CVS is primarily empirical with multiple disciplinary approach that includes gastroenterologist, primary care physicians, psychiatrist, and therapist. Both psychological and pharmacological interventions, such as antidepressants and cognitive behavioral therapy have been beneficial. Conclusions Early and

prompt identification and management of CVS helps in better prognosis and improved social and functional outcomes. It also helps children and adolescents from using cyclical vomiting as defense against anxiety in certain home situations.

No. 8
WITHDRAWN

No. 9
Use of Bupropion in the Management of Negative Symptom Schizophrenia: A Cast Report
Poster Presenter: Pradilka N. Drunalini Perera, M.D.
Co-Authors: Afrina Zaman, M.D., Samuel Ayodeji Adeyemo, M.B.B.S., Patrice Ananie Fouron, D.O., Ayodeji Jolayemi, M.D.

SUMMARY:
Antipsychotic treatment has been documented as the mainstay for the management of schizophrenia. Evidence in literature has suggested that the management of negative symptoms of schizophrenia continue to be a treatment challenge. Therefore the residual negative symptoms can become more pervasive and visible after the treatment of positive symptoms leading to impaired marked deficit in vital daily functions of patients. We present a 57 year old male patient with a long standing history of schizophrenia who presented to the psychiatric emergency with acute symptoms schizophrenia. Following antipsychotic treatment the patient showed some improvement of positive symptoms however profound negative symptoms of schizophrenia became visible. His negative symptoms include anhedonia, amotivation, alogia, affective flattening and passive social withdrawal. We added Bupropion to manage the negative symptoms and patient achieved good treatment response. This case suggests that the anti-depressive effects of Bupropion might be a valuable treatment option in the treatment of negative symptoms of schizophrenia.

No. 10
A 52 Year Old Female With Presentation of Atypical Delirium
Poster Presenter: Syed Naveed Kamal, M.D.
Co-Authors: Sameerah Akhtar, Alessandra Santamaria, M.D.

SUMMARY:
Development of delirium in patients is sudden in onset and challenging for clinicians to diagnose and treat. The etiologic factors are numerous and clinical presentation may range from a stuporous state to severe restlessness. Clinical and diagnostic work up even fail sometimes to delineate the possible causes of acute consfusional state. Presence of current or past psychiatric disease makes the situation more complicated. Often in clinical settings, delirium is misdiagnosed as psychosis or catatonia despite the lack of sufficient affective symptoms. "Delirious mania", also known as "Bell's mania" is a rare clinical entity that can justify the concomitant presence of mood symptoms and acute mental confusion presenting in a bizarre pattern. Though the condition has not received a formal diagnosis in DSM classification-it is reported to be a potentially lethal condition. More often it is associated with Bipolar disorder presenting with mania and delirium. Understanding the temporal profile of development of the symptoms is very crucial to reach the diagnosis. Patients of geriatric age group with multiple medical co morbidities compound the situation further.

No. 11
A Case of Cannabis Induced Catatonia and Management With ECT
Poster Presenter: Aditi Sharma
Co-Authors: Sanjay Chandragiri, Vinod Sharma, M.D.

SUMMARY:
Introduction: Catatonia is a clinical syndrome categorized by a discrete group of psychomotor disturbances which can range from immobility, mutism, refusal to eat or drink, and negativism to excessive psychomotor agitation. It can be divided into three subtypes; retarded, excited and malignant type. Retarded catatonia mostly comprises of symptoms including mutism, negativism, immobility, echolalia, staring, and rigidity; excited catatonia is associated with psychomotor agitation. Malignant catatonia is a life-threatening presentation characterized by movement disturbance, autonomic

dysregulations, hyperthermia, and can be fatal. Catatonia prevalence is reported to be between 7.6% to 38% in the United States, which has been increasing with the increased use of recreational substances.. **Case Description**: We are presenting a case of an 18-year-old Hispanic male who presented with mixed episodes of retarded and excited catatonia after extensive cannabis smoking. His first psychotic episode, with paranoid delusions and hallucinations which occurred at the age of 16 after smoking cannabis, progressed to severe catatonia after prolonged and continuous use of medical marijuana. He was treated with different modalities and responded to electroconvulsive therapy (ECT), after which he was transferred to the psychiatry unit and was started on quetiapine for his paranoia and became stable. This report will also focus on the neuropsychopharmacology of cannabis and its negative effects on the brain functions. **Discussion**: Although there is limited literature and evidence available for cannabis-induced catatonia, the increasing prevalence of cannabis use disorder of 2.9% to 30.6% indicates that physicians should consider cannabis as the probable etiology of catatonia in the future . Furthermore, catatonia is an unpleasant and traumatic experience for the patient; physicians should be cautious to recognize and treat it as soon as possible. Extra consideration should be given to the likely negative effects of marijuana. Doctors should be vigilant when prescribing medical and legalized marijuana. More research is needed to explore the emerging illness due to cannabis smoking, and physicians need to be watchful to consider cannabis as a potential differential for the etiology while diagnosing and treating catatonia.

No. 12

Catatonia: Diagnostic Difficulty and Treatment Strategies in a Manic Patient

Poster Presenter: Roshan Chudal, Ph.D., M.B.B.S., M.P.H.

Co-Authors: Caesa Nagpal, M.D., Shitij Kapoor, M.D., M.P.H.

SUMMARY:

BACKGROUND: Catatonia is a complex syndrome that occurs in many of the acute psychiatric conditions (1). Mostly commonly it presents in Schizophrenia but can be present in major mood disorders, with neurological disorders and general medical conditions (2). Treatment is very challenging when presenting with increased depressive and psychotic symptoms (3). We present a case of a 41-year-old Hispanic female with past psychiatric history of Major Depressive disorder presenting with increased psychotic symptoms and catatonia.
METHOD: Ms. A is a 41-year-old Hispanic female with previous psychiatric history of Major Depressive disorder was admitted to an acute psychiatric unit for increased depressive symptoms with suicidal thoughts for 1 week, not eating and not talking to family members. On admission, she was selectively mute with significant thought blocking, poor oral intake and poor hygiene. Lorazepam was started at 1 mg PO tid for catatonia and was restarted on her outpatient medications, Citalopram 30 mg PO qam for depression. Citalopram was discontinued on day 2 to observe patient just on Lorazepam. Patient started eating more and talking more on day 3. On day 3, she gave more history and reported problems with sleep with increased goal directed activity with paranoia, a week before admission to the hospital. She was started on Risperidone 1 mg PO q am and qhs for mood and psychotic symptoms. Due to reports of extrapyramidal side effects, Risperidone was changed to Quetiapine which was titrated up to 250 mg/ day with good response. Lorazepam was tapered off before discharge. Routine labs were drawn including TSH which were within normal limits and UDS was negative. She denied any other substance use. After 8 days of hospitalization, her symptoms were much improved, denied any suicidal ideations, homicidal ideations, affect much improved, eating good and sleeping well.
DISCUSSION: Catatonia is a complex syndrome that occurs in many of the acute psychiatric conditions. Mostly commonly it presents in Schizophrenia but can be present in major mood disorders, with neurological disorders and general medical condition. Treatment is very challenging when presenting with increased depressive and psychotic symptoms due to increased risk of neuroleptic malignant syndrome when treated with antipsychotics. We propose treatment with psychotropics should be withheld until the cause of catatonia is known such as in our case it was the switch to increased manic symptoms that caused

catatonia. Citalopram for treatment of depression was withheld initially, and she was started on antipsychotics once the etiology was clearer. CONCLUSION: Treatment of catatonia is challenging. Benzodiazepines remain the mainstay of treatment. We propose treatment with psychotropics should be withheld until the cause of catatonia is known.

No. 13

Olfactory Hallucinations in the Context of COVID-19

Poster Presenter: Parul Kumar, M.D.
Co-Author: Alexander C. L. Lerman, M.D.

SUMMARY:

Background: Patients with schizophrenia are at increased risk for SARS-CoV-2 infection (COVID-19 illness) and its complications, including mortality. Method: We present here a case of a woman with schizoaffective disorder and migraine with multiple symptoms of psychiatric decompensation due to medication non-adherence, who also presented with new-onset olfactory hallucinations. Results: Despite the obvious symptoms of her psychiatric illness and no other signs of medical illness, the olfactory hallucinations were unusual, creating an index of suspicion for SARS-CoV-2 infection, for which she tested positive. Conclusion: The authors discuss the expanded differential diagnosis for olfactory hallucinations in patients with psychiatric illness in the context of the SARS-CoV-2 pandemic.

No. 14

Polypharmacy in a Patient Taking Valbenazine for Tardive Dyskinesia, Leading to a Case of Neuroleptic Malignant Syndrome

Poster Presenter: Michelle T. Jaehning, M.D.

SUMMARY:

Neuroleptic Malignant Syndrome (NMS) is a life-threatening neurologic emergency characterized by fever, altered mental status, autonomic dysfunction, and muscular rigidity. Although NMS is associated with neuroleptics, we introduce a novel case report suggesting that polypharmacy, which includes a neuroleptic as well as valbenazine, may increase the risk of developing this reaction. There have been no reported cases of NMS associated with valbenazine. Patients with a history of NMS were excluded in clinical trials involving valbenazine and NMS was excluded as part of the extrapyramidal symptoms reported in clinical trials post-treatment, however, our case study argues for a closer investigation on polypharmacy with Ingrezza, and the association with NMS. Our patient is a 71-year-old Caucasian female who took multiple medications including valbenazine, a VMAT-2 inhibitor that is FDA approved for the treatment of adult patients with tardive dyskinesia. She has a psychiatric history of schizophrenia and tardive dyskinesia, and no substance abuse history, and was admitted to the medical service with stiff posturing, tremors, and rigidity. She had a fever of 103°F, heart rate over 120 bpm, and initial CPK of 7870 iU/L. When all other medical etiologies were ruled out, it was concluded that she had NMS. The patient did not respond to questioning. By report, the patient developed bronchitis a month prior to admission, was subsequently given a 10-day course of antibiotics, and has experienced mental deterioration since with an unstable gait and five falls during the past month. Her home medications included amlodipine 2.5 mg daily, benztropine 0.5 mg b.i.d., trazodone 50 mg q.h.s., valbenazine 80 mg daily, and paliperidone palmitate quarterly injections with last dose two months prior to admission. She was reportedly taking clonazepam 0.5 mg b.i.d., but this was recently tapered, with her last dose one week prior to admission. She was also taking amantadine 100 mg b.i.d. in the recent past, and this was discontinued when benztropine was started. She began benztropine a month ago, starting with twice daily dosing, increasing to three times daily dosing a week later, however, her mental status worsened, and the dose was reduced back to twice daily dosing. She had been psychiatrically stable with paliperidone palmitate injections. She had been taking valbenazine for about seven months and this helped alleviate her tardive dyskinesia. In a literature search, we have not found a case of NMS in a patient taking valbenazine. In this poster, we discuss a case of NMS in a patient with exposure to valbenazine, among other agents.

No. 15

"I Burn Myself to Get High": A Case Report on How Pain Can Be an Addiction

Poster Presenter: Gurtej Singh Gill, M.D.

Lead Author: Khai Tran, M.D.
Co-Author: Panagiota Korenis, M.D.

SUMMARY:

Introduction: Authors have argued that engagement in Non-Suicidal Self Injurious (NSSI) involves addictive components similar to those of other behavioral or process addictions. The following elements of addiction have been widely accepted: (a) compulsivity, (b) loss of control, and (c) continued use of the substance or behavior despite negative consequences. Authors have also discussed the role of tolerance in addictive behaviors and its connection to specific neurochemical processes, such as the endogenous opioid system. We present a case of patient who showed addictive patterns to her NSSI. Case Report: Ms X is a 24 year old female with past history of Major Depressive Disorder who was admitted to the inpatient psychiatric unit after presenting to the psychiatric emergency department for worsening suicidal ideation and self-injurious behavior. She was noted to have multiple tear drop burn scars on her forearms. According to her, these wounds are her way of “getting high”. She reported that she used to have severe anxiety and she was using marijuana as a way to cope. On one occasion when she was not able to buy cannabis, out of frustration, she decided to burn her arm. She described the pain as “sharp and good”. Since then she has been burning her arms with lighter for the craving. She expressed that the high that she experienced with the burning was “intense at first, then mellowed out and lasted long”. Patient was then stabilized on Lexapro as well as Vistaril to be used as needed, she was able to refrain from inflicting pain during her stay. Upon discharge, patient was referred to outpatient addiction service where she has a psychiatrist and therapist. Patient has not had any readmission since discharge. Discussion: Compulsive behavior is preceded immediately by negative emotions and performed to serve the purpose of alleviating negative emotions. Lack of control seems evident in such situations because acts of NSSI exceed the individual''s intentions or expectations. The proposed criteria for the DSM-5 diagnosis of NSSI are in alignment with the view that individuals who self-injure continue to engage in NSSI despite negative effects. Tolerance in self-injuring individuals'' experience of NSSI would provide an additional reason to classify NSSI as a process addiction. Researchers have found that engagement in NSSI becomes progressively intense and frequent for some people who self-injure. Endorphins contribute to the experience of analgesia (absence of pain) and increase an individual''s sense of comfort and control or power. Authors have suggested that engagement in NSSI may activate the Endorphin Opioid System (EOS) as a result of the experience of pain accompanying NSSI. Authors have further asserted that, as individuals who self-injure continue to activate the EOS for the attainment of an intended result (e.g., improved mood), they may develop tolerance to the endorphins triggered by NSSI.

No. 16

“I Don’t Use Drugs”: A Case of Unexpected PCP Use in an Older Patient

Poster Presenter: Jason I. Koreen, M.D.
Co-Author: Santiago Castaneda Ramirez, M.D.

SUMMARY:

TM is a 58-year-old African American female, employed as a mail carrier for USPS, with no known previous psychiatric history, who was brought to the emergency room by emergency services after being found partially unclothed outside her apartment. On arrival, the patient was not oriented to time and was confused. A psychiatry consult was requested to rule out any psychiatric causes for her confusion. On interview, TM was initially distant and found to have thought latency. She denied psychiatric history or care of any kind and denied past suicide attempts or gestures. She endorsed a medical history of hypertension and diabetes mellitus. However, it was not clear if the patient was adherent to her medications as her blood pressure was elevated. TM admitted to occasional alcohol use, stating her last drink was 1-2 days ago, but denied having a drinking problem. Her ethanol level was found to be < 10 mg/dL and she did not exhibit any symptoms of alcohol withdrawal. TM also denied use of any illicit substances. The patient’s son was met with and reported his mother was not at her baseline and stated, "my mother usually is normal and nothing is wrong with her". On the Mini-Mental state exam, when TM was asked to draw a clock showing the

time 1010, all of the numbers were skewed to the right side. On memory recall, she was unable to recall the provided words at both 3 and 5 minutes. When the patient was asked to perform serial sevens she became evasive and appeared to minimize her inability to perform this and other tasks. CT head was done and showed no abnormalities. However, considering the cluster of symptoms there remained an outside possibility that the patient may have had a lacunar stroke. Other differential diagnoses per the medical team also included meningitis/encephalitis or toxin/drug use which the patient continued to deny. An MRI of the brain demonstrated no acute ischemia, yet exhibited multiple foci hyperintensity in the cerebral white matter bilaterally, consistent with mild chronic microvascular ischemic disease and a chronic left basal ganglia lacunar infarct. Urine toxicology was negative for all substances, except for Phencyclidine, which the patient later admitted to using. TM was determined to have acute toxic metabolic encephalopathy secondary to Phencyclidine intoxication. Two days later, she fully recovered to her baseline mental status and was discharged home and recommended to follow up with an outpatient substance program. In this poster, we discuss the unlikely use of Phencyclidine in older patient populations and the other potential differential diagnoses that can arise when substance use status is unknown. Although PCP use in the mature older adult population is less common, surreptitious substance use along with silent infarcts may complicate and muddle clinical assessment.

No. 17

"I Was Trying to Spiderman My Way Off a Roof": A Case of a Patient With Schizophrenia and Synthetic Cannabinoid Use Disorder Who Fell From a Building

Poster Presenter: Santiago Castaneda Ramirez, M.D.
Co-Author: Jason I. Koreen, M.D.

SUMMARY:

KM is a 29-year-old man, unemployed previously domiciled at a residential program, with past psychiatry history of schizophrenia and substance use disorder, extensive prior psychiatry admissions including state hospital and treatment over objection, history of public masturbation (including in front of children), history of incarceration for assault in second degree who was brought to the hospital by an ambulance due to disorganized behavior. On initial evaluation, the patient was disheveled, malodorous, disorganized, oddly related, and rambled "I was trying to spiderman my way off a roof". The patient then clarified that he fell off a 7-story building. Patient reported he was climbing down the building, and denied jumping off, suicidal ideation or attempt. Patient complained of back and leg pain. Trauma team was activated. CT of the abdomen and pelvis was performed, showing chance fracture of the L1 vertebral body with a retropulsed fracture fragment causing approximately a 50% narrowing of the spinal canal, widening of interspinous process between T12 and L1, and oblique fracture of the transverse process of L1. DX of the left foot showed comminuted displaced fracture through the left calcaneus. Patient was taken to surgery for thoraco-lumbar decompression instrumentation and fusion of T11-L3 and open treatment of calcaneus fracture. During hospital admission, the patient remained agitated, aggressive, and displayed self dangerous behavior such as taking off his left foot cast, with disorganized thought process, and poor insight and judgement, thus requiring 1:1 observation as well as intramuscular injections for agitation. Collateral information obtained by his mother revealed that the patient left the residential program about a year ago, has not been adherent to medications, was street homeless, and was using synthetic cannabinoids. Previous medication trials included Quetiapine and Olanzapine, however most recent treatment before admission consisted of Valproic acid 750 mg twice a day and Risperidone 2 mg twice a day which were restarted during hospitalization. The patient required psychiatric hospital admission for stabilization once medically optimized. Synthetic cannabinoid use has been associated with lethal outcomes and has been linked as contributory or a cause of death and traumatic injuries. Some exploratory studies have shown that nabiximols (a combination of THC and CBD) and naltrexone can help relieve withdrawal symptoms and reduce cannabis use but it is not clear if they are effective in synthetic cannabinoid dependence. This case highlights the impact of synthetic cannabinoid dependence in patients with chronic mental illness

who despite multiple interventions, including state hospitalization, still exhibit risk behavior including accidental deaths and have been unsuccessful when discharged back into the community. Treatment of this subset of patients is extremely challenging.

No. 18
WITHDRAWN

No. 19
A Case Series About Perioperative Management of Buprenorphine
Poster Presenter: Shuo Qiu
Co-Author: Sachinder Vasudeva, M.D.

SUMMARY:
Introduction In 2010, the US consumed 80% of world's opioid pain medication supply1. From 1999-2018, more than 200,000 people died in the US from overdoses from prescription opioid pain medications2. Buprenorphine is becoming a popular medication used to treat opioid use disorder. Currently, there is no consensus on continuing vs. holding buprenorphine preoperatively.1,3,4 Management of post-operative pain in patients on buprenorphine has been divided, with evidence showing for and against stopping buprenorphine prior to surgery.1 Methods This case series examines 6 VA patients who have undergone a variety of surgeries with different levels of expected pain. Patients were assessed for opioid relapse post-operatively and characteristics that may contribute to relapse. Information regarding their surgeries, buprenorphine dose, pain management, and UDS were collected. Patients' comorbid psychiatric diagnoses, medications and psychosocial situations were also reviewed to assess their risks of relapse. Results The six patients have undergone a variety of surgeries with different levels of pain. Patients who have undergone cataracts and dental extractions continued buprenorphine without significant complaints of pain. Patients who underwent major surgeries such as hip replacements and wrist joint arthroplasty stopped their buprenorphine prior to surgery and received full mu opioid agonists post-operatively. After finishing their opioid pain medications, they restarted their buprenorphine. With the exception of patient 3, none of patients had a positive UDS. Patient 3 had three illicit substances, amphetamine, benzoylecgonine and opioids, in his UDS. Discussion Patients show resiliency against opioid use in their negative UDS even when undergoing surgeries involving stopping their buprenorphine. Patient 3 was prescribed opioid pain medications for 3 months after his right lower extremity nerve compression. It was unlikely that stopping his buprenorphine perioperatively but rather his prolonged use of morphine that triggered his opioid relapse. Patients who had undergone minor surgeries with low expected pain can safely continue buprenorphine. Our patients who had undergone minor surgeries while using buprenorphine did not reported significant pain. Buprenorphine can help manage moderate levels of pain. Patient 4 had undergone a total knee replacement. After he ran out of his opioid pain medications, he increased his buprenorphine from 16 to 32 mg daily to manage his post-operative pain.4 Many approaches exist to manage pain perioperatively in patients prescribed buprenorphine. Regardless of which approach, patients should be monitored perioperatively for cravings and withdrawal from opioids. The surgeon should collaborate with the buprenorphine provider and anesthesiologist to manage opioid use disorder and pain in a safe and effective manner 1,4.

No. 20
A Case Study of Withdrawal Management in a Patient Abusing Designer Benzodiazepine Analogues
Poster Presenter: Daniel Michael Tuinstra, M.D.
Lead Author: Ali Saleem, M.D.
Co-Authors: Mark Juel, M.D., Chad Percifield, D.O.

SUMMARY:
Benzodiazepines have long been prescribed as effective medications for the treatment of anxiety disorders in the United States. "Designer" benzodiazepines are non-FDA approved substances that are functional analogs or derivatives of approved benzodiazepines and have been gaining popularity over the past 10 years. They are relatively easy to acquire through online sources with questionable legal and ethical practices and pose significant public health risks due to lack of

regulation. We present the case of a 33-year-old male who was voluntarily admitted to a dual-diagnosis inpatient psychiatric hospital unit for worsening suicidal thoughts. Patient had a history of major depressive disorder(recurrent, severe, and without psychotic features); post-traumatic stress disorder; unspecified anxiety disorder; borderline personality disorder; opioid use disorder(severe); alcohol use disorder (severe); cocaine use disorder (mild); and benzodiazepine use disorder (severe). The patient noted drinking a half gallon of vodka daily and using one milligram tablets of etizolam six to seven times per day (total daily dose: 6-7mg) prior to admission. He noted purchasing etizolam online from India. The patient was continued on gabapentin, paroxetine, and quetiapine. Gabapentin was titrated to 600 mg three times daily for anxiety, quetiapine was titrated to 300 mg nightly for mood instability, and paroxetine was continued at 30 mg daily for depression and anxiety. The patient was successfully detoxed off alcohol and designer benzodiazepines using a diazepam taper. After five days the patient was successfully discharged to outpatient psychiatry. Benzodiazepines, though effective for anxiety-reduction, have well-documented addictive potential and can be lethal in overdose. The increasing popularity of designer benzodiazepines, their ease of accessibility, and lack of established drug monitoring leads to risk of abuse and potential adverse effects for individuals using them. In this poster, we review the current medical understanding of designer benzodiazepines, including pharmacology, manufacturing and distribution, and clinical concerns. We also discuss options for improving monitoring, testing, and clinical management of designer benzodiazepine use.

No. 21

A Report of Penile Abscess in a 60-Year Old Patient Subsequent to Local Injection of MDMA

Poster Presenter: Brittany Michael, M.D.
Co-Authors: Ana Reyes, Tessy Korah, M.D.

SUMMARY:

Molly is the crystal or powder form of MDMA (3,4-methylenedioxy-N-methylamphetamine), a chemical with well-known stimulant and hallucinogenic effects. MDMA, also known as Ecstasy, can produce positive effects of empathy, intimacy, euphoria, and heightened self-confidence and sensory perceptions. Acute negative effects of MDMA include tachycardia, hyperthermia, bruxism, psychosis, and even death. Ecstasy is commonly administered via oral ingestion of capsules or tablets, pulmonary inhalation, suppository absorption, or intravenous (IV) injection.1 To our knowledge, this is the first report of direct penile injection of MDMA by a patient and the complications thereafter. Herein, we present a case of a penile abscess developing after the injection of MDMA into the dorsal veins. The patient is a 60-year old homeless Caucasian male with a history of polysubstance use disorder who presented to the psychiatric hospital with hallucinations and suicidal ideation following ecstasy use one day prior. Over the past 1.5 months, the patient had been alternatingly injecting and snorting Molly every day, experiencing hallucinations with increased use. At presentation, he reported injecting into the veins of his anterior forearms. Three days after admission, the patient began to complain of pain in his penis. He revealed that he had injected Molly into his penis and noticed increased edema. The patient stated that Molly injections into his forearms were usually painful due to the crystallization of the drug upon injection. He opted to inject into his penis due to the “increased blood flow” resulting in reduced pain. A medical consult was placed, and a 1.5 cm abscess with minimal drainage and surrounding erythema was identified on the base of the penis. The treatment course consisted of PO Minocycline and IM Rocephin. Direct injection of drugs in substance use disorders is associated with a wide range of medical complications. Apart from tissue and bloodstream infections, other commonly reported complications include bacterial endocarditis, human immunodeficiency virus (HIV), viral hepatitis, organ edema, and an isolated case of penile lesion subsequent to local methamphetamine injection .2, 3 Existing literature on MDMA administration commonly reports on oral drug ingestion and associated psychiatric manifestations. In this case report, we present, to our knowledge, the first case of reported direct penile injection of MDMA. Further, we discuss the challenges of identifying uncommon administration sites among IV drug users as well as the importance of obtaining a thorough

history to prevent the spread of infection and its accompanying complications.

No. 22
Cannabis-Induced Periodic Catatonia
Poster Presenter: Hojun Yoo, M.A.
Co-Authors: Jasmine Lin, M.S., Rebecca L. Joyce, B.S., Vanya Jain, B.A., Najeeb U. Hussain, M.D.

SUMMARY:
Background: There is a substantial and growing body of evidence that chronic cannabis use is associated with psychotic disorders, both increasing the risk of later development of schizophrenia as well as exacerbation of symptoms of existing schizophrenia. Its long-term use has also been linked to the development of mood disorders, such as bipolar and depression, and anxiety disorders. Catatonia is a motor syndrome associated with psychiatric disorders marked by an inability to move normally. There have only been two reported cases of catatonia associated with cannabis use: one with waxing and waning symptoms of catatonia and another with cannabis-withdrawal induced retarded catatonia. Here we present a case of periodic catatonia with alternating symptoms of retarded and excited catatonia associated with chronic cannabis use. Method: A 21-year-old male with no past psychiatric or medical history and daily cannabis use for the last five years presented to the crisis psychiatric emergency department with symptoms of periodic catatonia lasting one month. The patient initially had a weeklong episode of excited catatonia with hyperkinesis and stereotypy, restlessness, and impulsivity. In the week afterwards, he became isolative, anxious, and paranoid, interrupted by brief episodes of mutism and staring. He then returned to baseline functioning for a few days, before returning to another period of excited catatonia with mutism, hyperkinesis, restlessness, and stereotypy. Upon presentation to the hospital, the patient displayed mutism, inhibited movement, posturing, negativism, and staring. After a positive lorazepam challenge test, the patient was admitted to the inpatient psychiatry unit and supportive management was started. He was started on oral lorazepam 4mg/day and after his symptoms resolved, he was discharged on the third day. Results: As stated, the patient had no past psychiatric history and no past medical history. There was no family history of psychiatric conditions. The patient's vitals were stable with no obvious signs of any systemic disease. Urine drug screen was positive for cannabinoids only, and the patient and multiple collaterals denied use of any other substances other than cannabinoids. All other investigations including EKG, CT head, complete metabolic panel including serum electrolytes and liver and renal function tests, and complete blood count with differential were found to be within normal limits. Conclusion: In this patient with normal vitals and lab values and no signs of infection, no medical history, and no personal and family psychiatric history, cannabis was the most likely cause of his catatonia. The patient responded positively to the lorazepam challenge test, validating the diagnosis of catatonia despite the unusual presentation with alternating symptoms of retarded and excited catatonia.

No. 23
Case Study of the Vivitrol Injection, an Effective Treatment for Opioid and Alcohol Use
Poster Presenter: Aaiza Malik, M.D.
Co-Author: Julie Teater, M.D.

SUMMARY:
Background: The opioid epidemic is worsening, with overdose deaths tripling between 1999 and 2014. The greatest increase in heroin-related deaths occurred in the Midwest. Various medications have been approved for treatment of opioid use disorder including Suboxone, Subutex, methadone, and naltrexone. Naltrexone is an opioid receptor antagonist that blocks the reinforcing effects of opioids and reduces alcohol consumption and craving. This case study will focus on Vivitrol, the injectable form of naltrexone. Though Vivitrol has also been FDA approved for alcohol use disorder in 2006, this case study focuses on vivtrol's indication for opiate use disorder and exploring its efficacy for maintaining sobriety from opiates combined with various therapy modalities at a Midwestern academic medical center. Methods: Patients must be opioid-free for 7-10 days prior to initiating Vivitrol injection, meaning that they must complete the opiate detoxification phase (2-5 days). At this point

patients were either started on oral naltrexone 50mg for several days to ensure that the medication was tolerated, or if the patient had had naltrexone in the past then they could be started on the Vivitrol injection. If the patient tolerated the first Vivitrol injection, then it could then be given every 28 days. Liver function tests were monitored at initiation and periodically during treatment. Patients were encouraged to engage in therapy (PHP, IOP, or individual counseling) at initial intake appointment when counseled about the Vivitrol injection. Data: As of November 2019, 58 patients are on the Vivitrol injection at a Midwestern Medical Center. Of these patients, 46 are being treated for opiate use disorder and 12 are being treated for alcohol use disorder. Of these, the 5 patients with the longest amount of time on the injection were for opioid use disorder. At the initial intake assessment patients were offered outpatient counseling, PHP, or IOP along with the Vivitrol injection after detoxification if indicated. Results: 55 out of 58 patients were engaged in some form of counseling or programming (individual counseling, IOP, or PHP) in conjunction with the Vivitrol injection. Interestingly, 2 out of the 3 patients who did not choose to engage in counseling were being treated for alcohol use disorder. As of November 2019, the patient receiving the injection for the longest period of time had received 19 injections. The amount of opioids that the patient was using at initial intake assessment did not seem to be correlated to how many injections they received or if they continued to follow up, though the longer the patient had already been sober from opiates prior to initial presentation did appear to correlate to how long the patient was maintained on the Vivitrol injection. Overall, the Vivitrol injection was effective in maintaining sobriety from opiates in this select patient population. It was more effective if used in conjunction counseling or programming.

No. 24

Designer Trouble: A Case Report on Flubromazolam

Poster Presenter: Bryan Youngwoo Yoon, M.D., Ph.D.
Co-Authors: Garima Garg, M.D., Raman Deep Krimpuri, M.D., M.B.A., Swapnil Khurana, M.D., Raman Marwaha, M.D.

SUMMARY:
Background: Designer Benzodiazepines (BZD) have quickly gained wide popularity for recreational use. They are not marketed as medications but exist for research. These drugs are highly potent and have immediate anti-anxiety and muscle relaxant effect. They are readily available over the internet, in different formulations and are extremely inexpensive. Case presentation: A 42-year-old female with past medical history of epilepsy and IV drug use and past psychiatric history of unspecified anxiety, unspecified depression and polysubstance use (stimulants, opioids and BZD) presented to the ED via EMS after she was found unresponsive. En route, patient received Narcan 4 mg IN and Narcan 2 mg IM without significant improvement. Upon arrival, patient was placed on supplemental oxygen via nasal cannula with mild improvement as she was saturating in mid 80s. She was tachycardiac at 104 and her urine toxicology was positive for BZD, fentanyl and amphetamine. She was eventually admitted to medicine ICU to be monitored for BZD withdrawal and placed on CIWA-Ar. Psychiatry was consulted for the suicide risk assessment. Patient's CIWA showed a downward trend from 9 to 2 by day 4 with stable vital signs. Patient admitted to have consumed 45 mg of Flubromazolam prior to admission for anxiolysis. Patient reported daily use for the last 2 months. There were no acute concerns for safety. Patient left AMA on day 4. Discussion: Data suggests that lethal dose of Flubromazolam is 3 mg daily [1]. Our patient reported using 15 times the lethal dose. Fortunately, patient remained stable through her stay in the ICU. Flubromazolam is a high potency synthetic BZD, with strong sedative and amnestic effects and overall carries a comparatively higher risk than other synthetic benzodiazepines [2]. The mechanism of action is similar to GABA agonism [3]. For the most part, due to their novelty, they remain undetected on routine urine drug screen even though our case showed detection. Conclusion: Flubromazolam is a relatively new designer BZD, highly potent, carrying serious adverse effects. Thus, it needs more research to achieve better understanding and pan education for the general public.

No. 25
Differential Diagnosis in a Patient With Persisting Psychosis After Alcohol Cessation
Poster Presenter: Molly Fels, M.D.
Co-Author: Dina Telis

SUMMARY:
Alcoholic hallucinosis, a subset of alcohol-induced psychotic disorder, presents with primarily auditory hallucinations that begin during or shortly after alcohol use and is distinct from withdrawal delirium. In patients who have recently discontinued alcohol use, the emergence of psychotic symptoms may be attributable to alcoholic hallucinosis or may represent a mood or psychotic disorder that was previously undetected due to concurrent intoxication. This presents diagnostic and treatment challenges in both acute and long-term management. We discuss a challenging case of differentiating bipolar mania with psychosis from alcohol-induced psychosis in a person with alcohol use disorder, as well as review of related literature. A 48 year old male with no formal psychiatric history presented with psychotic symptoms and erratic behavior after abrupt cessation of alcohol use 3 weeks earlier. He had previously been drinking 1-2 pints of liquor daily. He denied withdrawal symptoms but had been sleeping only 2 hours per night, praying for hours, and experienced auditory hallucinations. His wife reported that on the night of presentation, he told her the mob was coming to get them and ran out of the apartment. The differential diagnosis included bipolar mania and alcohol-induced psychotic disorder and he was admitted to the inpatient dual diagnosis unit. History from the patient's wife included periods of depression and irritability, with times over the past months where he was eating and sleeping more than usual, as well as times when he accused her of poisoning his food. It was unclear if he had a history of mania, hypomania or major depression outside of the context of active alcohol use, as he had not had significant periods of sobriety in many years. Chart review revealed that the patient had presented to the ED years earlier believing that he had been poisoned, but at the time this was attributed to his intoxication. He was started on valproic acid for mood stabilization and paliperidone for psychosis. His auditory hallucinations resolved and paranoia improved. He followed up at clinic 3 weeks after discharge, at which time he had maintained sobriety and did not have any mood or psychotic symptoms,, but was then lost to follow-up Patients with alcohol use disorder present a challenge in assessing if symptoms that occur after alcohol cessation are an alcohol-induced psychotic disorder, or if an underlying mood or psychotic disorder had gone undetected due to the effects of intoxication. In our patient, it became more clear during his hospitalization that his alcohol use had masked prior episodes of depression and mania, and that this was likely missed when he was evaluated years earlier in the ED for paranoid ideation. Longer-term evaluation of similar cases may lead to important clarification of diagnosis and treatment decisions for these patients.

No. 26
Exploring the Clinical Utility of Urine Screening for Kratom Use
Poster Presenter: Chad Percifield, D.O.
Co-Authors: Madhavi Latha Nagalla, William McBride

SUMMARY:
Kratom use has increased in the United States and abroad. Kratom is known to have stimulant-like effects in low doses and opiate-like effects at high doses. Although substances such as kratom are often perceived as safe due to being "natural" or available over the counter, there are significant adverse effects known to be associated with the use of kratom. Specifically, development of psychosis is known to be associated with chronic use of kratom. We present the case of a 20-year-old male with a history of Generalized Anxiety Disorder, who presented to the hospital with delusional thoughts, auditory hallucinations, visual hallucinations, and paranoia for 4 days. The patient reported ingesting large amounts of kratom during the preceding 4 months as well as alcohol, marijuana and dextromethorphan for 4 days prior to admission. His urine drug screen was negative for all substances. The patient's psychosis resolved with the administration of 300 mg of Seroquel nightly and he was discharged home. Urine screening for kratom in known or suspected users could be clinically advantageous for several reasons. First, urine "dip-

sticks" testing for kratom and metabolites are widely available commercially, cheap and easy to perform. Many kratom users do not understand the substance as being abusable or having health risks or addiction potential. The use of urine screening would allow for insight-oriented conversations with patients regarding kratom in the context of substance abuse. Furthermore, knowing whether symptoms of psychosis are kratom-induced or not may help to avoid inaccurate diagnoses such as schizophrenia and inform treatment decisions regarding the appropriateness and length of antipsychotic pharmacotherapy. Finally, kratom is associated with several drug interactions and verifying kratom use with urine screening could help avoid safety risks associated with co-use of kratom and many psychotropic medications. Considering the concerns described above, we discuss in this poster the potential role of urine screening for kratom use in clinical practice.

No. 27

From Psychiatric Admission to Neurosurgery Consult: CT Discovers Large Epidermoid Brain Cysts in Patient Admitted for Alcohol Detox

Poster Presenter: Brian D. Wright, M.D.
Co-Authors: Mary Margaret Blue, Sarah Kate Chambley

SUMMARY:
Our patient, who initially presented for voluntary alcohol detox, reported persistent jaw pain and unilateral loss of hearing, during his admission to psychiatry. His escalation of pain and history of fall prompted a medicine consult in order to obtain a CT of his head. The results showed a large fluid density lesion resembling an epidermoid brain cyst. Epidermoid cysts, although usually benign, can cause mass effect on the brainstem and cerebellum as in our patient. The patient was transferred from behavioral health to the medicine service, obtained a neurosurgery consult, and is awaiting treatment.

No. 28

Imodium Abuse and Opioid Withdrawal: A Case Report

Poster Presenter: Mohammed Faizur Rahman, M.D.
Co-Authors: Rushikesh Vyas, M.D., Vaibhav Vyas, M.D., Mehnaz Waseem, M.D.

SUMMARY:
Introduction: Imodium, generic name Loperamide, is an opioid receptor agonist and acts on the mu opioid receptors in the myenteric plexus large intestines; it does not affect the central nervous system like other opioids.[1] This drug affects the peripheral μ receptors, inhibiting its passage through the blood-brain barrier, which in turn prevents evident cerebral symptoms.[2] Many people are using Loperamide to self-medicate withdrawal symptoms associated with opioid use disorders. Rather than using Loperamide to simulate the euphoric high of opioid drugs, people are now taking the drug as a way to treat physical dependence to opioids. Loperamide abuse for this reason has become so pervasive and problematic it has been dubbed the "poor man's Methadone." Unfortunately, using Loperamide as a replacement for opioids also requires very high doses of the medication, which can lead to overdose. Ingesting large and frequent amounts of Loperamide carries a high risk of experiencing cardiac arrhythmias, such as ventricular dysrhythmias, prolongation of the QRS duration and QTc interval; and respiratory depression, which can lead to death.[3] Overdoses of loperamide have been steadily increasing in number and severity nationwide over five years.[4] Loperamide is not detected on routine blood and urine toxicity screens. A special assay, which is not readily available, is required for detection of loperamide in the serum which leads it for more abused.[5] We report a 38-year-old female who came in with cardiac arrythmia from Imodium abuse.

No. 29

It's the E: An Uncommon Presentation of Chronic Ecstasy Use

Poster Presenter: Maria Alejandra Gallo Ruiz, M.D.
Co-Author: Arun George Prasad, M.D.

SUMMARY:
Introduction Ecstasy/Molly is a "rave" drug which gained popularity among youth and adults in the early 2000s as an "enactogen". The active constituent is MDMA(3,4-

methylendioxymethamphetamine). It was estimated that approximately 11 million people reported using ecstasy in 2004. Rarely, ecstasy has been known to cause agitation. Case Summary Mr C is a 22 year old male who was brought in by Emergency Medical Services and police because he was threatening family members with a knife at home after consuming Ecstasy. He had a history of being diagnosed with Attention Deficit Hyperactivity Disorder (ADHD) as a child and had been on Strattera and Tenex. According to the patient, he was consuming ecstasy regularly two times a day for the last year. As per family, patient had been increasingly paranoid. exhibiting erratic behavior and had been increasingly aggressive and abusive. On evaluation, patient was emaciated, unkempt, had psychomotor agitation, rapid speech and labile affect. He would walk out of interviews and threaten staff. Of note in his labs, Urine toxicology was positive for amphetamines and cannabis. He would frequently explode, bang the telephone and the nursing station windows. He required emergent medications and 4 point restraints on multiple occasions. On day 6 of admission, his CPK was elevated (5850 Units) and he was admitted to the medical floor on 1:1 observation. Patient was sent back to the psychiatry floor after intravenous rehydration once his CPK had trended below 5000. On return to he was transferred back for fever and tachycardia and started on intravenous antibiotics and fluids. On day 3, he eloped. Police were notified but he was not found. Discussion The case presented unique challenges. Agitation and psychosis as the presenting feature for ecstasy use is uncommon. This symptom is something that may be important to keep in mind while dealing with patients with ecstasy related substance use disorder. Secondly, management of agitation in an emaciated patient who was not responding to medication alone was challenging. The case invokes thought of developing a treatment protocol for agitation management in patients with elevated CPK especially with the risks associated with Neuroleptic Malignant Syndrome and Rhabdomyolysis. One possibility may be to ensure adequate hydration. Another unique challenge of the case was the patient elopement which occurred from the medical floor. A feasible option may be to have trained staff and a room for administering intravenous fluids and antibiotics.

No. 30

K2 Induced Agitation Resistant to Medication Intervention

Poster Presenter: Madison Collins, M.D.
Co-Author: Daniel Thomas McGovern, M.D.

SUMMARY:

Mr. M is a 47 year old homeless male with past psychiatric history of unspecified schizoaffective disorder and alcohol use disorder who presented to the psychiatric emergency room brought in by EMS for assaulting a bystander with coffee. Patient presented severely agitated and violent requiring immediate chemical restraints. Patient’s urine toxicology was negative, however patient reported using K2 prior to being picked up by EMS. Patient was admitted to the inpatient psychiatric unit for safety and stabilization and required over 13 separate administrations of Haldol 5mg IM/Ativan 2mg IM/Benadryl 50mg IM and four locked seclusions over his 9 day stay. Response to as needed medications was inadequate and patient continued to be violent and destructive requiring repeated interventions. Prior hospital stays without suspected K2 use did not require this excessive use of medication interventions per records. This case demonstrated a substance induced agitation almost completely resistant to medication. There is no formal algorithm suggested for treatment of K2 induced agitation. Most patients respond well to first generation antipsychotics and benzodiazepines for sedation as the substance metabolizes. In this poster we present a unique case unresponsive to traditional methods and discuss alternative treatments.

No. 31

Kratom and Clindamycin Causing Dystonia and Tardive Dyskinesia

Poster Presenter: Harsimar Kaur
Co-Author: Jatinder Singh

SUMMARY:

Introduction: Kratom is a drug derived from the leaves of the tree Mitragyna speciosa, from southern Thailand. Kratom is consumed throughout the world for its stimulant effects and as an opioid substitute.

Studies showed affinity of kratom to μ, δ, and κ opioid receptors and to dopamine D1 receptors (1). The clinical manifestations of kratom effects are not well defined and the clinical studies are limited. Psychological manifestations are varied and range from euphoria to aggression, hostility, delirium and psychosis. On the other hand, clindamycin has been rarely associated with neurotoxicity. There is only one case report in the literature that describes abnormal body movements in children after taking clindamycin. In a recent animal study on hamsters, clindamycin caused a significant decrease in dopamine in the brain (cortex and medulla) and GABA in the cerebral cortex (2). Method: We present a case of a 26-year-old man with a history of daily use of Kratom (18 tablets/day) for many years but no significant medical issues. Results: He presented to the ER with altered mental status and agitation post a dental procedure and day 2 of starting on oral clindamycin 150 mg TID. His UDS and alcohol levels were negative, and clinical workup was insignificant. He developed significant tremors and painful dystonia in the upper and lower limb and tardive dyskinesia involving facial muscles leading to ICU admission for the management of agitation, dystonia and altered mental status. Patient made full recovery with supportive management and was discharged after 10 days. Patient remained abstinent from Kratom use for 1 year follow up and still reports daily flashbacks from the traumatic experience of dystonic reaction from his hospital admission. Discussion: Kratom is now widely available in health food stores and online and is considered an emerging drug of abuse. At present kratom is legal in the United States but has been implicated in 44 deaths (3). Kratom is also being used to treat opioid withdrawal without supervision of a licensed healthcare provider. Our case highlights the lesser but potentially serious toxicities and interaction of kratom with other commonly used medication.

No. 32
WITHDRAWN

No. 33
Legal Highs Lead to Dangerous Lows: Case Study of a Male With N2O Use Disorder and Subsequent Neurological Sequelae

Poster Presenter: Pooja Raha Sarkar, D.O.
Co-Authors: Kerry Marie Sheahan, D.O., Erin M. Johnson, M.D.

SUMMARY:
Nitrous oxide (N2O), most notable for its anesthetic properties, is also popular as a recreational drug, in the form of compressed air for cleaning electronics, or whipped cream cannisters (“Whippets”) to achieve a euphoric high. Recreational N2O use poses significant risk to users partly due to ease of access and limited screening for N2O recreational use by medical providers. Here we present the case of a 37 year old male with a past medical history of substance use (heroin, prescription opiates, marijuana, alcohol, tobacco and nitrous oxide), referred to outpatient psychiatry consult service by his family for concerns of significant depression. Evaluation revealed the patient self-medicated anxiety and chronic pain with substantial “Whippet” abuse, totaling upwards of 50 cannisters a day. However, the patient also noted his mood worsened the more he used N2O. Given concern for nitrous oxide-induced dorsal column degeneration secondary to vitamin B12 depletion, which could result in permanent brain damage or death, the psychiatry team strongly urged the patient to abstain from further use of Whippets. The team discussed the benefit of SSRIs to target symptoms of depression and anxiety, and furthermore advised him to enroll in detox the same day. Despite counseling, patient declined both SSRI and detox treatment. Unfortunately, the patient continued to use N2O, and presented less than 2 weeks later to the Emergency Department for acute-onset ataxia and ascending neuropathy in all four extremities that prevented ambulation. He required inpatient hospitalization, and extensive neurological workup. CT imaging of cervical and thoracic spine revealed extensive V shaped hyper-intense T2/T2 signals involving the dorsal column from C1 to T12, consistent with subacute combined degeneration, which can be attributed to prolonged nitrous oxide use. Labwork also correlated with N2O use, notably a normal B12 (307, range 232-1245) with elevated

homocysteine level (43.8, range 0-15) and methylmalonic acid level (893, range 0 to 378). After ruling out other causes, such as Guillain Barre, the medical team determined this presentation was indeed secondary to N2O use. The patient was treated with vitamin B12 supplementation, extensive physical therapy and close follow up. This case highlights the severity of neurological symptoms associated with Whippet use, as well as the development of substance induced mood disorder that resulted from repetitive N2O use. The severe sequelae noted in this case exemplify risks patients must be counseled on. As Whippet use grows more prominent, public knowledge of the very real and dangerous side effects lags. While N2O is typically most prevalent in adolescent populations due to ease of access, there is impetus to screen for inhalant use regardless of age in the psychiatric setting and to integrate discussion of N2O use into ongoing broader conversations about substance use.

No. 34

Mania With Psychotic Features Induced by Heavy Cannabis Use in a High Functioning Postgraduate Student

Poster Presenter: Harsimar Kaur
Co-Author: Ramnarine Boodoo, M.D.

SUMMARY:

Mr. S., a 27-year-old physically healthy Caucasian male with a past psychiatric history of bipolar disorder and schizophrenia, presented to the emergency room after having verbal outbursts. He tried to abscond from the emergency room and was physically aggressive, necessitating use of physical restraints. On arrival to the psychiatric inpatient facility he was disinhibited, elated, distractible, talkative, and exhibited flight of ideas. He was also experiencing grandiose delusions, believing that he was a famous actor. He reported using 2 bowls of cannabis daily for several weeks prior to hospitalization. According to information obtained from his father this was his 4th psychiatric admission; past admissions were similar in presentation and were always preceded by heavy cannabis use. Patient was started on quetiapine which was titrated up to a total daily dose of 600mg. Patient's elation, delusions, aggression and impulsivity quickly remitted, thought process became linear. His father felt that he had returned to baseline, and so he was discharged with strong recommendations to refrain from further cannabis use and to adhere strictly to prescribed medication regimen. Three days after discharge patient was returned to the emergency room by the police after punching a glass window and threatening to walk into the traffic. In the emergency room, he was verbally and physically aggressive and was sexually inappropriate. Patient was transferred to inpatient psychiatry and was again found to be euphoric, disinhibited, having grandiose delusions and auditory hallucinations. He admitted to resuming cannabis use just after discharge along with non-adherence to psychiatric medication regimen as prescribed on last discharge. He showed no insight into the link between his psychiatric condition and cannabis use. At this admission he was started on paliperidone, long acting injectable formulation. Medical cannabis use is legal in the majority of U.S. states and eleven states allow recreational use. Cannabis is used to refer to a plant that is used both recreationally as well as for various medical conditions that are not FDA-approved. There is an established causal relationship between cannabis use and acute psychosis and mania. (1) Although many studies have shown a dose-response relationship between cannabis use and psychosis, the evidence is less robust in bipolar disorder. There is also an association between cannabis use in bipolar disorder with younger age of onset, poorer medication adherence, and higher number and longer duration of manic or depressive episodes. (2, 3) As restrictions on cannabis use decrease, research into the neurobiological effects of cannabis as it relates to the development of psychiatric continues. In this poster, we discuss the challenges and importance of recognizing and treating cannabis induced bipolar disorder in patients with severe cannabis use disorder who are currently in the precontemplation stage of change.

No. 35

Methemoglobinemia Reversal Via Methylene Blue in a Patient on Antidepressant Therapy

Poster Presenter: Mary-Anne Hennen, M.D.
Co-Authors: Elizabeth M. Fam, M.D., Rashi Aggarwal, M.D.

SUMMARY:
Introduction: Methemoglobinemia (MH) due to incidental ingestion of poppers is a rare but reported phenomenon. “Poppers” are a class of volatile nitrites that are quick, short-acting vasodilators; when inhaled they produce a “rush” of warmth[v], and can have an aphrodisiac effect as well as a relaxing effect on smooth muscle. They are often used recreationally for the high they can induce, as well as to augment sex and facilitate anal sex.[i,ii] MH refers to hemoglobin (Hgb) that is oxidized to a ferric form that cannot bind oxygen as well as the natural ferrous form.[vi,vii] This leads to poor oxygen binding and can be fatal. Methods: We present the case of a middle-aged male on antidepressants who experienced acute MH following accidental ingestion of poppers, and we review the literature on nitrite-induced MH, its presentation and treatment. Literature review was conducted using PubMed with key terms: “poppers,” “volatile nitrites,” “methemoglobinemia,” “methylene blue,” and “serotonin syndrome”. Case Presentation: BB is a 44-year-old male with history of major depressive disorder treated with paroxetine (last taken morning of) and fluoxetine (last taken 4 days prior), who was brought to the ED after ingesting an unknown substance. He accidentally ingested poppers instead of inhaling them. The bottle label had a warning that it “may be fatal if ingested” and “do not drink, contains isobutyl nitrite.” He then began to have nausea, malaise, vertigo, palpitations, tachypnea, and cyanosis of the fingers and lips. On admission, his oxygen saturation was 91% on room air. Co-oximetry revealed elevated %met-Hgb (22.5), elevated %CO-Hgb (3.6), and decreased %O2-Hgb (42.2). He was diagnosed with MH. Given his history of recent antidepressant use, it was uncertain if administering MB would be appropriate, but as hyperbaric oxygen was not available, toxicology recommended giving MB and monitoring carefully for alarm symptoms of serotonin syndrome (SS). 10-15 minutes after receiving MB, the patient’s symptoms resolved. His skin resumed a flushed color, and his oxygen saturation was restored to 98% on room air. Discussion: There have been multiple cases of life-threatening MH as a result of popper use via both inhalation and ingestion.[i,iii,iv] MH is unresponsive to supplemental oxygen due to the ineffective ferric state of Hgb. First-line treatment is methylene blue (MB); alternative treatment for those who cannot tolerate MB is hyperbaric oxygen.[viii] There is a black box warning to avoid MB use in patients concurrently taking SSRIs, SNRIs, and MAOIs within the past 2 weeks, as it may cause SS. MB has been reported to cause SS due to its MAOI properties,[ix] especially when combined with other antidepressants. In MH patients with no other treatment modalities available, it may be necessary to use MB, but further studies are needed to determine the safety of this practice.

No. 36

New Onset Stutter in the Context of Severe Alcohol Withdrawal

Poster Presenter: Megan Maier, M.D.
Co-Author: Matthew Koster, D.O., M.B.A.

SUMMARY:
Substance use is a prevalent cause of both medical and psychological illness that continues to pose challenges for physicians diagnostically and clinically. It can be difficult to diagnose psychological illness that manifests as somatic issues, particularly when substances are known to exacerbate symptoms like anxiety and depression. In this case report, we examine a patient presenting with a new onset symptom of stuttering in the context of repeated alcohol withdrawal and detox. Specific to stuttering, there is little data in the literature that links stuttering to alcohol withdrawal, and little data on how stuttering and substance use and withdrawal coincide. Therefore, we examine other possible differential diagnoses, including conversion disorder, as the patient presented in the case was noted to have dramatic improvement by treating his anxiety and working to overcome the deep shame and embarrassment he felt as a highly functioning young adult who continued to have significant struggles with sobriety. The case presented demonstrates how psychological stressors and underlying psychological illness can often be masked or distorted by substance use, specifically during the acute presentation of withdrawal. This case further explains that it is important to consider the context of the patient’s presentation as well as the

presentation itself, both physically and psychologically.

No. 37
Nitrous Oxide "Whippet" Abuse Presenting as Acute Onset Psychosis, Suicidal and Homicidal Ideation, Delirium, and Ataxia in a 57-Year-Old Patient
Poster Presenter: Mohammad Qadri, M.D.
Co-Authors: Megan E. Acito, D.O., Cassandra Mary Nicotra, D.O., Ateaya Lima, M.D.

SUMMARY:
Mr. H is a 57-year-old male with no significant medical history, no prior reported history of psychiatric treatment/admissions, past history of Opioid Use Disorder (in remission), Alcohol Use Disorder (in partial remission), who presented to the emergency department with acute onset suicidal ideation, homicidal ideation, fluctuating psychotic symptoms, altered mental status, and gait disturbance in the setting of escalating frequency of recreational nitrous oxide use in recent weeks in the form of "Whippets." As per family, the patient was previously employed in the airline industry and was introduced to the substance at a party approximately five years prior to onset of psychiatric symptoms. He was admitted to the medical floors for evaluation of acute neurologic deficits, seen by the Consult-Liaison psychiatry team, and subsequently admitted to the adult inpatient psychiatric unit. His wide variety of symptoms included intrusive suicidal ideation, homicidal ideation directed towards family and hospital staff, visual hallucinations, paranoia, bizarre behavior, aggression, responding to internal stimuli, nightmares, hypomania, insomnia, and sundowning-like tendencies with disorganized behavior that was particularly prominent in the evenings. Neurologic deficits included sensory ataxia, defects in recent / remote recall, dysmetria, disorientation, and paresthesias, with a fluctuating presentation. Over the duration of his inpatient medical / psychiatric admission, he was treated with Seroquel (titrated to a TDD of 500 mg), Melatonin, and a limited course of Vitamin B12 (1000 mg x 2 doses) and Thiamine (100 mg x 4 doses). His lab / imaging studies included elevated Vitamin B12 level (1515), normal Methylmalonic Acid level (229), negative urine toxicology, CBC abnormalities (anemia, leukopenia), and MRI brain significant for mild microvascular ischemic disease and mild periventricular T2/FLAIR hyperintensity. In this poster, we explore this case of nitrous oxide abuse manifesting with variegated neuropsychiatric manifestations in a middle-aged male and a successful treatment regimen. Various cases of N2O abuse have been described in literature, with a wide variety of presentations; however, predominantly psychiatric presentations tend to be more common in younger patients, with a prior systematic review of the literature noting a median age of 26 years (Garakani et al. 2016). Notable points for consideration in this patient's case include the acute emergence of wide-ranging symptoms, a limited course of Vitamin B12 treatment, worsening psychotic presentation during the evenings, abnormally elevated levels of Vitamin B12 upon initial presentation, and the largely successful return to baseline mental status with high doses of Quetiapine. The patient was stabilized over approximately two weeks and ultimately discharged to an outpatient MICA treatment program.

No. 38
Outpatient Loperamide to Buprenorphine Induction Protocol
Poster Presenter: Jenny E. Lee, M.D.
Co-Author: Nassima Ait-Daoud, M.D.

SUMMARY:
Loperamide is an over-the-counter anti-diarrhea medication that has a recommended maximum dosage of 16 mg per day. It interacts with the intestinal mu-opioid receptors, and at high doses, it has central nervous system activity. There have been several case reports and papers describing loperamide misuse and abuse. Complications of high-dose loperamide have been documented, including cardiotoxicity, and death. The National Poison Control Database reported 179 cases from 2008 to 2016.1 In 2016, the FDA issued a warning about serious heart issues, including arrhythmias with the misuse or abuse of loperamide.2 The 2017 Report of the American Association of Poison Control Centers noted 1583 case mentions for loperamide, including 1162 single exposures, of

which 374 were intentional, and 4 resulted in death.3 In this poster we explore the mechanism of action of lopramide surrounding its addictive properties and describe an outpatient loperamide to buprenorphine induction. It is the case of a 34 year old male who was referred to the medication-assisted treatment clinic for buprenorphine-naloxone consideration due to uses of high doses of loperamide daily for almost 10 years. Patient was using up ----of loperamide a day as a way to control withdrawal symptoms from opioid discontinuation that happened 10 years prior. Because loperamide is available over the counter, it was easier for him to maintain his use over a decade and only became worried about it when he learned from his PCP that it could cause QTc prolongation. The patient stopped using loperamide approximately 18 hours prior to his induction. His initial Clinical Opiate Withdrawal Scale was an 18, and it was most notable for irritability. After a total of buprenorphine-naloxone 8-2 mg was administered, his COWS score dropped to 2. He continued to follow-up as an outpatient, and he reported full medication adherence, no cravings, and abstinence from any other substance use. Very little is known on the management of loperamide misuse and related addiction. There is one case report reviewing the induction of a patient that was abusing loperamide and exhibiting cardiotoxicity using buprenorphine and this was a limited 7-day taper because the patient was incarcerated. Another case was recently published describing inpatient treatment of loperamide associated opioid use disorder with buprenorphine. This is the first outpatient case presentation reporting and describing a safe loperamide
to buprenorphine induction protocol.

No. 39

Persistent Alcoholic Hallucinosis: A Case Report and Literature Review

Poster Presenter: Shivendra Shekhar, M.D.
Co-Author: Sachidanand R. Peteru, M.D.

SUMMARY:

Background: Alcoholic hallucinosis that is persistent is an unusual consequence of long-term alcohol use and happens during or after having increasing amounts of alcohol. It is marked by delusions, changes in mood, and auditory hallucinations along with a clear sensorium. Method: A literature review was conducted using the PubMed database. Keywords used were “alcoholic hallucinosis” and “schizophrenia” and “delirium tremens.” Case: A 34-year-old male presented to the medical ER with headache, nausea, tremors, anxiety, and auditory hallucinations. Psychiatry consultation and liaison team was consulted. The patient was anxious, had delusions of persecution, and auditory hallucinations. He verbalized the feelings of hurting himself but had no intention to kill himself or others. He was oriented to place, person, and partially to time. He denied any manic, hypomanic, or depressive symptoms. He reported to be a chronic drinker and had a history of drinking 1-2 pints of vodka almost daily for the last ten years. His most recent drink was two days ago. The patient had one past hospitalization for similar complaints. The patient was admitted on the medical floor for alcohol withdrawal and started on Lorazepam protocol along with other supportive treatment. On the third day of admission, his withdrawal symptoms subsided, was more alert, but continued hearing voices. He reported hearing such voices for more than six months on multiple occasions in the past, even after being sober. It appeared that the auditory hallucinations are persistent in nature and get escalated with drinking. He was started on IM Haldol 5mg every six hours PRN. He denied any active suicidal or homicidal ideation, intent, or plan but continued hearing these voices though they decreased in severity on day four. He was advised to quit drinking, switched to Haldol 5 mg PO bid, and was discharged. He was followed-up in the outpatient mental health clinic. Discussion and conclusion: It is important to differentiate alcoholic hallucinosis from conditions like delirium tremens and schizophrenia. The duration of alcoholic hallucinosis is typically less than six months and usually resolves with abstinence but could become chronic in 10-20% of cases. Neuroleptics are the treatment of choice for acute alcoholic hallucinosis. Other acute treatment alternatives include the use of Valproate. Limited knowledge is available on how long to continue treatment with these agents in cases like ours of persistent alcoholic hallucinosis. It is advised to treat such patients with antipsychotics and referred to an outpatient mental health clinic

upon discharge for the follow-up to prevent any self-harming behavior. Prospective studies on a large scale are required for better management of such cases.

No. 40

Rapid Cycling of Addiction: A Unique Presentation in Patient With Asperger's Syndrome

Poster Presenter: Khai Tran, M.D.
Co-Authors: Ingrid Haza, M.D., Rachel Schoolcraft, M.D.

SUMMARY:

Addiction transfer or cross addiction is a condition where one is substituting one form of addiction with another when the former is no longer a viable option. This is most frequently seen in obese patients that have undergone bariatric surgery and developed alcohol dependence later. It was previously assumed that the prevalence of substance use disorder (SUD) in autistic spectrum disorder (ASD) patients is low due to the nature of their illness. The presumption is that ASD patients are socially withdrawn, follow strict rules and this isolation makes them less likely to procure illegal substances. However, recent studies suggest the prevalence and risk for ASD patients having a comorbid SUD is at least four times higher than the general population. Our case describes his case describes a patient who has a primary diagnosis of substance use disorder as well as Asperger's syndrome. Case report: Mr X is a 22 year old man with a past psychiatric history of social anxiety, Major Depressive Disorder and alcohol use disorder who presented to Inpatient Rehabilitation Recovery after 3 weeks of inpatient psychiatric hospitalization for alcohol rehab. He initially presented to the Comprehesive Psychiatric Emergency Program (CPEP) for substance induced agitation with suicidal ideation and was subsequently admitted to the inpatient unit for further management. Further interview reviewed that patient has extensive history of substance use starting at the age of 15 starting with his father's Xanax and which made him feel "better". His alcohol use started at 16 and became problematic when he entered college. He had frequent blackouts and ER visits for intoxication. He had short periods of marijuana, Tylenol and other prescription drug use. The significant detail in his substance use history was that when he was using one substance, he appeared to be abstaining from others. With psychoeducation regarding substance use during his inpatient admission, patient was amendable to attend. Patient received Vivitrol injection as well as Naltrexone orally while in rehab; he was also given Klonopin and Zoloft to address his underlying psychiatric problem. Patient successfully completed the rehab and was able to return to school post discharge. Conclusion: Substance Use Disorders are difficult illnesses to treat alone and even more so when other psychiatric comorbidities are present. In this patient, the high frequency of addiction transfer, unconventional addictive behaviors and nonspecific preference for substances made it difficult to address his substance use. Ultimately, by combining psychotherapy with alcohol use treatment as well as addressing his underlying social anxiety, patient was able to show improvement and continued to do well. While the decision to prescribe him with Klonopin given his history of addiction was challenging, the team agreed that the benefits outweighed the risk and proved to be the appropriate choice

No. 41

Sage Smudge Sticks and Marijuana: A Recipe for Psychosis?

Poster Presenter: Kareem Seoudy, M.D.
Co-Authors: Keri Stevenson, M.D., Ariel Wilson

SUMMARY:

Psychosis resulting from cannabis overuse is commonly observed in clinical practices today. This is in large part due to the significant increase in cannabis use. All age groups have shown increases in past-month cannabis use since 2002, with the sole exception of adolescents between ages 12 and 17.(1) Further investigation is needed into the factors that contribute to the development of psychotic symptoms in some cannabis users while others remain symptom-free. Significantly less is known about the effects of another common plant – sage. The plant Salvia apiana (white sage, Lamiaceae family) is native to Southern California and parts of Mexico.(2) Some Native American tribes local to this region consider S. apiana to be sacred, and they burn

the leaves as incense for purification ceremonies. The plant has also been used to treat sore throats, coughs, chest colds, upper respiratory infections, and poison oak rashes. The aqueous ethanolic extract of S. apiana shows moderate CB1 activity (58.3% displacement).(2) While the association between Salvia divinorum and psychosis has been explored (3), the effects of S. apiana in conjunction with cannabis has not yet been documented. In this case study, we examine why a cannabis user who smoked a consistent amount of marijuana daily for more than 10 years experienced substance-induced psychosis. After she presented to the emergency department with acute onset psychosis, it was discovered that she was smoking marijuana while burning white sage (S. apiana) concurrently for the first time. She had no history of psychosis prior to this incident. She received haloperidol 5 mg and lorazepam 2 mg while in the ED, and her psychosis resolved within two days without further treatment. We suggest that there may be a potentiating relationship between cannabis and S. apiana, as S. apiana has moderate CB1 activity, a receptor that cannabis also occupies. This warrants further investigation into the relationship between cannabis and S. apiana, as well as the mechanism through which cannabis and S. apiana affect neurotransmission at various receptors.

No. 42

Sudden Onset Psychosis in a 40-Year-Old Man

Poster Presenter: Michelle A. McNally, B.S.N.
Co-Authors: Mehmet Camkurt, M.D., Caesa Nagpal, M.D.

SUMMARY:

Background: 'Folie D'ivrogne' or drunken madness was a term first used in 1867 by Marcel to describe a syndrome that is similar to what we know now as Alcoholic Hallucinosis. It presents 12 to 24 hours after a period of heavy alcohol consumption with hallucinations and delusions. We present the unique case of delayed onset of alcoholic hallucinosis in a 40-year-old African American male (AAM) who had a ten-year history of heavy alcohol abuse with no previous psychiatric history. He presented a week after alcohol cessation with increased psychotic symptoms. **Method**: Mr. A is a 40-year-old AAM with no previous psychiatric history was admitted to an acute psychiatric unit for increased psychotic symptoms a week after sudden alcohol cessation. He presented with paranoid delusions that armed assailants were waiting on the roof of the building to kill him. He reported auditory hallucinations of different people in the building telling him " We can see you" making him increasingly paranoid. He was started on Risperidone 1 mg/day, which was slowly titrated to 2 mg/day. Routine labs were drawn including TSH which were within normal limits and urine drug screen was negative. He denied any other substance use. After 8 days of hospitalization, his symptoms were much improved. He denied any auditory hallucinations and paranoia at discharge. His sleep and appetite improved and he agreed to go to inpatient rehabilitation after discharge. **Discussion**: Alcoholic hallucinosis is a psychiatric condition that presents as acute onset auditory hallucinations typically occurring during or 12 to 24 hours after heavy alcohol consumption in the absence of impaired consciousness. Auditory hallucinations predominate, though delusions and visual hallucinations may also be present. Although the pathophysiology is not understood, it is thought to share a neuropsychiatric background with schizophrenia and can be commonly misdiagnosed when presenting as delayed onset or as chronic. **Conclusion**: This case highlights the fact that although alcoholic hallucinosis typically occurs after acute alcohol cessation, it can have a delayed presentation that can be easily misdiagnosed. Additionally, it responds well to treatment with atypical antipsychotics, such as Risperidone.

No. 43

WITHDRAWN

No. 44

The Herbal Tea and Patches: An Uncommon Dermatological Manifestation of an Uncommon Drug

Poster Presenter: Kiran Jose, M.D.
Lead Author: Souparno Mitra, M.D.
Co-Author: Rachel Schoolcraft, M.D.

SUMMARY:
Introduction: Kratom refers to products from a tropical tree (Mitragyna speciosa) in the coffee (Rubiacea) family which is native to Southeast Asia. It is used around the world for its stimulant effects seen at a low dose and as an opioid substitute at higher doses. It has been gaining popularity in the United States for pain relief and controlling withdrawal symptoms from opioid cessation. It is commonly sold as a dietary supplement and consumed in the form of leaf, tablet, or powder. It is also found in other formulations such as topical creams, tinctures, or balms. The primary psychoactive components include mitragynine and 7-hydroxymitragynine which are partial agonist at ?-opioid receptors. Kratom is not a Drug Enforcement Agency (DEA) controlled substance and there are no federal regulations monitoring its sales and distribution. The Centers for Disease Control and Prevention (CDC) noted that poison control centers reported an increase in Kratom-related calls between 2011 and 2015. In the recent years, Food and Drug Administration has issued several advisory warnings regarding safety issues and dangers of products containing Kratom. Prolonged use of Kratom is noted to cause several adverse effects including dermatological manifestations such as jaundice, pruritis, numbness and skin hyperpigmentation. Case Report: We will discuss Kratom and one peculiar dermatological manifestation noted in a 23 year old man using Kratom. Patient started using Kratom to treat his opioid withdrawal symptoms. He presented as a walk-in to inpatient detox with complaints of anxiety, restlessness, nausea, body aches, and tremulousness. He was started on Chlordiazepoxide and Buprenorphine-Naloxone. On day 3, a hypopigmented skin rash on palms was reported and assessed. Patient was treated with Hydroxyzine and topical prednisone but the maculopapular rash spread further on palms, feet and back. Diphenhydramine and hydrocortisone were given in the unit with no effect, and patient was transferred to the emergency room(ER) for further evaluation. Patient was given Dicycloverine and ondansetron in the ER. Subjective improvement was subsequently reported. He successfully completed detox and rehab and continued substance treatment as an outpatient. Discussion: Continued use of Kratom causes numerous severe side effects such as intrahepatic cholestasis, arrhythmia, seizure, coma, and death. Reported symptoms related to withdrawal from Kratom include sweating, dizziness, vomiting, itching, mouth and throat numbness and sedation. Chronic use is also associated with weight loss, insomnia, skin hyperpigmentation, constipation, frequent urination, delusions, hallucinations, and extreme fatigue. Studies have shown individuals using Kratom as an opioid substitute at a minimum of 5g/dose. Several withdrawal symptoms and side effects are noted in patients with prolonged use of Kratom. Papers have found Kratom to cause hyperpigmentation, but none reported hypopigmentation.

No. 45

Vivitrol Associated Delirium: A Case Report

Poster Presenter: Sukhmanjeet Kaur Mann, M.B.B.S.
Lead Author: Poorvanshi Alag, M.D.
Co-Author: Neera Gupta, M.D.

SUMMARY:
Extended-release injectable naltrexone, Vivitrol, is a microsphere formulation of medication naltrexone. It is a nonspecific, competitive, long-acting opioid antagonist that exerts its effect on all three receptors- κ, μ, and d. It is used in the maintenance of alcohol dependence and detoxified opioid dependent patients. Injectable naltrexone, Vivitrol, should be administrated every 4 weeks by deep intramuscularly injection at a dosage of 380 mg, to improve adherence. Unlike oral naltrexone, injectable naltrexone does not undergo first-pass metabolism in the liver. The side effect profile of Vivitrol is similar to that of oral naltrexone and is dose-dependent. The common side effects are nausea, headache, reaction at the injection site, dizziness, loss of appetite, myalgias; while other serious adverse effects include depression, thoughts of suicide, hepatotoxicity, delirium, and even death. This case report focuses on the rare but serious adverse effect known as Vivitrol-induced delirium. 56-year-old male resident of the Salvation Army with history significant for depression, anxiety, alcohol use disorder, and opioid use disorder was brought to the emergency department for altered mentation. The patient was reporting visual

hallucinations. Vitals were consistent hypertension, tachycardia, tachypnea, and febrile. An intravenous line was placed and the patient was started on fluids, thiamine, dextrose, vitamin B12, and folic acid. The patient's laboratory values were unremarkable except for mild elevation of AST. The patient was started on the CIWA protocol. Over the course of 48 hours, no significant changes in the vitals were observed. It was decided to lower the dose of lorazepam, secondary to patient experiencing excessive sedation. On day 3, the patient's mentation and vitals improved significantly. Once the patient became more alert and oriented, additional history was gathered. The patient denied any recent alcohol or drug, including opioid use. He reported having been sober from opioids for over a year. He informed the team regarding recent discharge from an inpatient treatment program. With the patient's consent, the hospital was contacted and it was confirmed, the patient had received Vivitrol injection prior to discharge which was consistent with his report. Vivitrol was approved by the FDA in 2006 to treat alcohol dependence and opioid dependence in 2010. Opioid antagonists, such as naltrexone, bind to opiate receptors and block the activation of the opioid receptor. Although the pathophysiology of naltrexone associated delirium remains unclear, health care providers should be aware of the potential emergence of delirium associated with Vivitrol.

No. 46

A Classic Case of HIV-Associated Mania

Poster Presenter: Margaret O'Brien
Co-Author: Caesa Nagpal, M.D.

SUMMARY:

Background: AIDS mania is a disorder associated with the spread of the HIV virus to the brain. It mostly occurs in the later stages of HIV. Prevalence of manic symptoms is more common once CD4 count is lower than 200. We present the unique case of HIV-associated mania in a 40-year-old African American female (AAF) with no previous psychiatric history who presented with psychosis and hyper religiosity in the setting of untreated HIV. **Method**: Ms. G is a 40-year-old AAF with past medical history of untreated HIV and no previous psychiatric history was admitted to an acute psychiatric unit for aggressive behavior towards others, paranoid, spitting at the delivery man at home, thinking they are out to hurt her. She was very hyper religious, paranoid of AA staff and peers, called them homosexuals, and positive for loud self-talk for hours at a time. She was started on Quetiapine 100 mg Po q am and 100 mg PO qhs. Over days she continued to do worse, Quetiapine was increased to 300 mg per day. She got emergency meds Olanzapine 10 mg IM x1 on Day 3 for being very loud, agitated, threatening, not verbally redirectable. Meds were then changed to Olanzapine 5 mg Po q am and 10 mg PO qhs for psychosis and mood to avoid polypharmacy. Olanzapine was increased to 10 mg PO q am and 15 mg PO qhs. She remained very hyper religious, talking to God, giving references, chanting out loud, irritable. She was then started on Divalproex DR 500 mg PO q am and qhs for mood. Routine labs were drawn including CD4/CD8 ratio profile which showed a CD4 count of 256 and a CD4/CD8 ratio of 0.43. After two weeks of hospitalization, her symptoms were much improved, no agitation/self-injurious behavior was noted by staff. Patient was more stable and organized with less preoccupation with the delusions and less paranoid. She was referred to HIV clinic after discharge to be started on HAART. **Discussion**: AIDS Mania most commonly occurs in untreated HIV with a CD4 count of less than 200. Early detection and treatment is very important as it can affect the prognosis of HIV and psychiatric problems. Psychiatric medications can be used to control mood and psychotic symptoms along with highly active antiretroviral therapy initiation. **Conclusion**: This case highlights the fact that although HIV-associated mania typically occurs with a CD4 count of less than 200, it can present in individuals not treated with antiretroviral therapy even in the setting of greater CD4 counts.

No. 47

Methamphetamine, Cannabis and Gammahydroxybutyric Acid Abuse in a HIV-Positive Homosexual-Identifying Male

Poster Presenter: Nada Alyousha, M.D.
Co-Authors: Lujain Alhajji, Jessica Lydiard, Vanessa L. Padilla, M.D.

SUMMARY:
Mr. R is a 28 year old Hispanic homosexual veteran male diagnosed with HIV, treated with Biktarvy (bictegravir, emtricitabine, and tenofovir alafenamide) for the last 5 years. He presented to the outpatient psychiatry clinic with a 3-month history of irritability, insomnia, crying spells, and depressed mood, associated with verbal and physical aggressive behaviors. Due to symptoms, Mr. R had interpersonal difficulties with his partner, for which the relationship ended. He also received a warning letter at work due to repeated absences. Initially, patient adamantly denied any substance use but later on, he admitted to actively using methamphetamine, GHB, and cannabis. Patient stated using methamphetamine concomitantly with GHB then followed by cannabis to treat his withdrawal symptoms from the aforementioned drug. His mood symptoms correlated with his increase in recreational drug abuse. Patient was referred to the outpatient substance abuse clinic after he refused voluntary admission for detoxification. In this poster, we discuss the challenges in mental health management of cases with methamphetamines and GHB use among homosexual-identifying patients with co-morbid HIV. Several studies describe Gamma-hydroxybutyric acid (GHB) and methamphetamines are drugs of abuse potentially leading to unsafe sexual behaviors and contributing to the spread of HIV infection among homosexual individuals. Recreational drug use increases viral replication of HIV and interacts with antiretroviral treatment.

No. 48

Psychosis or HIV Associated Neurocognitive Disorder (HAND)? An Unusual Presentation of Immune Deficiency

Poster Presenter: Anum Khan, M.B.B.S.

SUMMARY:
In this poster we will present a case of a 32 year old male who presented in our emergency department for manic symptoms and visual hallucinations after a discharge from another medical facility, where he had been treated for cellulitis. On examination in the Emergency department, he was noted to have bilateral parotid swelling. Psychiatric symptoms varied but predominantly included -irritability, insomnia, overspending, disorganization, grandiosity and visual hallucinations of a “guy telling him to “do this and look here.” These symptoms had an onset which coincided with the hospital discharge after protracted treatment for cellulitis. Labs showed pancytopenia and HIV positive antigen with CD4 count of 64 U/Liter. Brain CT scan did not show any cerebral attenuation but MRI showed- Mild nonenhancing confluent T2/FLAIR hyperintense signal abnormalities involving the frontoparietal centrum semiovale and corona radiata, periventricular white matter and subinsular regions bilaterally. Mild involvement of the pons. Imaging findings may reflect an element of acquired HIV encephalitis. CT scan of the parotid glands showed bilateral cystic swellings and lymph nodal enlargement. He was diagnosed with HAND. Patient was placed on symtuza for HIV which caused an improvement in his disorganization. He was discharged on symtuza and PCP prophylaxis. On follow up, there was some residual edema noted on repeat CT and CD4 count had improved to 114.

No. 49

Attention-Deficit-Hyperactivity Disorder, Autism Spectrum Disorder and Down Syndrome: A Pediatric Case Report

Poster Presenter: Fabrício P. C. Miskulin
Co-Authors: Aline Miskulin, Karime Choueiri, Rosana Antunes

SUMMARY:
Case Report: N.R., male, brazilian, 5-year-old with Down Syndrome comes to the psychiatric appointment in Campinas, Brazil after six months of insomnia. His parents also stated he had shown inattentiveness, motor agitation, lack of social interaction, mutism, and aggressiveness for more than a year. During the appointment, the patient was unable to remain seated and he threw objects at the floor. The SNAP-IV Scale demonstrated severe hyperactivity and inattention symptoms. He was diagnosed with Autism Spectrum Disorder (ASD) and Attention-Deficit-Hyperactivity Disorder (ADHD). The pharmacological therapy started with Risperidone 0,5mg per day during the first two weeks of

treatment and then increased to 1mg per day. After this period, the patient showed great improvement of insomnia and social interaction features, including visual contact and signs of affection. Moreover, he was significantly less aggressive and hyperactive. Then, Methylphenidate was introduced – 10mg every morning. One week later, he started to vocalize his first syllables and he did not gain weight as a side effect. The patient remains on medical treatment, speech therapy and occupational therapy. Discussion: Down Syndrome patients might present an overlap of different neuropsychiatric conditions besides their own variable degrees of cognitive impairment, and the risk of presenting such conditions is higher if compared to the general population. It is believed that low development is associated with limited cognitive function, thus creating impaired coping, communication and adaptive abilities, which may also be affected by environmental and genetic factors[1]. The estimated prevalence of Down Syndrome associated with ADHD varies from 25% to 34%, and there is a correlation between dopamine receptor 4 gene and ADHD[1]. It is known that 42% children with Down Syndrome have ASD and 64% of children with DS and Attention-Deficit–Hyperactivity Disorder also have ASD[2]. The only published report about pharmacological treatment for ADHD patients with Down Syndrome recommended Guanfacine 0,1mg/kg/day as first choice medication[3]. However, Guanfacine is still not available in Brazil. Therefore, Methylphenidate was the most adequate pharmacological treatment. ADHD diagnosis is usually postponed mostly due to the inattentive behaviour mistaken for other Down Syndrome characteristics. Conclusion: As presented before, ADHD and ASD are common pathologies among Down Syndrome patients and the prevalence of both diseases combined is significant. A thorough anamnesis and the use of the right tools to screen the patient can help diagnose these conditions. Hence, the correct treatment improves patient and family quality of life and facilitates the improvement of cognitive and developmental abilities. Finally, adequate recognition, diagnosis and treatment is critical to help individuals with Down Syndrome and these associations.

No. 50

Autism and Gender Dysphoria: A Case Report and Review of the Literature

Poster Presenter: Alessandra Santamaria, M.D.
Co-Authors: Andrew Bradshaw, M.D., Michelle Thorpe, M.D.

SUMMARY:

Autism Spectrum Disorder (ASD) and Gender Dysphoria (GD) are two chiefly distinct psychiatric phenomena that are observed to have a modest concomitant association with one another. We present the case of a 17-year-old male, self-identifying as a 17-year-old female with atypical GD-ASD features. This case report is used for educational purposes and to elucidate some less reported behavioral aspects of the comorbid adolescent. We report this grossly negative and aggressive behavioral phenotype to illustrate one possible clinical manifestation of a rare dual diagnosis. We first briefly review the available literature on mood and cognitive presentations in the GD-ASD adolescent to describe our patient within known parameters. We then describe novel behavioral subtypes of our patient as a reference for the diagnostician.

No. 51

Effectiveness of Sulforaphane From Broccoli in Autism Spectrum Disorder: A Systemic Review

Poster Presenter: Usman Ghumman, M.D., M.P.H.
Co-Authors: Eileen Martin, Marrium Ghumman, Carla Alvarado

SUMMARY:

Objectives: Autism Spectrum Disorder (ASD) is defined by DSM-5, as having persistent deficits in social communication and social interaction in multiple contexts as well as displaying restricted and repetitive patterns of behavior, interests, or activities. While there is no medication to treat the core symptoms, recent research shows that broccoli extract rich in Sulforaphane can cause improvement in impaired behaviors. Sulforaphane can be protective against oxidative stress, inflammation, and DNA damage, all of which have been implicated in ASD in different studies, and thus taking Sulforaphane may become an essential tool for

helping with disruptive behaviors in this population. **Methods**: An extensive literature review was conducted on Pubmed, PsychInfo, ERIC, Scopus, and CINAHIL for studies using the keywords "Sulforaphane" and "Autism Spectrum Disorder" which resulted in 4 studies. One study had 44 participants who then participated in a follow-up study 4 years later, while the other study had 15 participants. **Results**: In our review, it was observed that the intake of Sulforaphane leads to decreased scores on the Aberrant Behavior Checklist (ABC), Social Responsiveness Scale (SRS), and also Clinical Global Impression Improvement Scale (CGI-I). It was interesting to note that Sulforaphane intake not only showed short term improvement but also showed good results in 63 % of the population were in the follow up due to favorable outcome. We also observed that there was a positive correlation between urinary metabolites and improved behavior with decreased ABC and SRS scores. **Conclusions**: It has been shown that pharmacological intervention can lead to troublesome side effects which can be a burden for the ASD population and their families. Alternative medicine like Sulforaphane from broccoli sprouts, which has shown to have fewer side effects, should be studied in more depth. The studies which have been done to date on Sulforaphane have shown promising results.

No. 52

Out of Focus: Challenges of Removing a Diagnosis for a Camera Avoidant Patient

Poster Presenter: Kerry Marie Sheahan, D.O.

SUMMARY:

Background: Reassessing a diagnosis of ASD in a higher functioning cohort can be welcoming for some families and extremely anxiety provoking for others. For the later there is often a fear that, without the diagnosis, their child will lose services and there is a paucity of literature to help providers with navigating this. We are often called upon to reassess diagnoses of higher functioning ASD children with co-morbidities, which is additionally challenging with today's accelerated use of Telehealth and a rate of 20% of ASD diagnoses that are missed virtually. Despite these challenges, we present ways to address some gaps with the following case. Case Report: TL is a 10 year old male with a past medical history of Waardenburg Syndrome and ASD struggling with irritability, bullying, social distancing, untreated ADHD, and depression. During the assessment he was slow to respond to questions, camera avoidant, and showed deficits in social-emotional reciprocity, eye contact, and nonverbal communicative behaviors which were complicated by intrusiveness from ADHD and self-consciousness. TL reported avoiding eye contact and cameras due to embarrassment from the facial features of WS, one factor in contributing to uncertainty around his ASD diagnosis in addition to a lack of hypersensitivities or stereotyped movements. In review of his IEP and prior neurological testing they continued services for ASD despite a not meeting threshold on ADOS. His testing indicated extremely low scores in working memory, cognitive proficiency, and processing speed but not meeting criteria for intellectual disability. Components of his testing profile were consistent with ADHD and did provide some guidance around our observations and questioning of ASD as an appropriate diagnosis. Results: Due to limitations such as inability to watch in vivo social interactions, internet bandwidth, connectivity difficulties, sound quality, and external distractions we cannot definitively remove diagnosis of ASD for TL. We suspect his symptoms were not consistent with ASD but more likely due to a combination of ADHD and a unique cognitive profile. Strategies to engaging TL in treatment and increase our opportunity to observe TL on the telehealth platform were: obtaining outside testing, TL turning off the self-view function, calling parents if TL loses attention, and creating a distraction free area. Conclusion: Studies have shown that children who no longer met ASD criteria maintain residual symptoms and continue to need educational support. Despite our confidence in our diagnosis of TL, his family is fearful of losing services and there are clear limitations for reassessing ASD virtually. Therefore, we highlight this case to show the limitations of telehealth in re-evaluating ASD as well as creativity to increase engagement and highlight the implications for some of diagnoses that allow services in the educational setting.

No. 53
Teasing Out Autism Spectrum Disorder in CHARGE Syndrome: A Case Report
Poster Presenter: Diana Margaret Wang, M.D.

SUMMARY:
10-year-old male with CHARGE Syndrome (CS) having multiple medical sequelae, including an intellectual disability, was referred for a behavioral evaluation due to self-injurious behaviors (hitting himself to the point of leaving bruises). He was previously evaluated for an Autism Spectrum Disorder (ASD) at 32 months old due to being a high risk patient but did not meet the criteria at that time. At his current evaluation, patient was found to have significant deficits in all realms of the ASD Diagnostical and Statistical Manual of Mental Disorders (DSM) 5 criteria based on the history obtained from his family and from clinical observations. The patient presented with social deficits, inconsistent eye contact, speech delay, repetitive mannerisms (tapping), ritualistic behaviors (sitting in front of each house for 5 minutes when walking in the neighborhood), rigidity (difficulty with transitions), fixated interests (obsessing over calendars and hotels), and sensory issues (visual stimming behaviors, sensory aversions, inability to orally tolerate food). Given these findings, the ASD diagnosis was made. Applied Behavioral Analysis (ABA) therapy was recommended and Risperidone was prescribed to reduce patient's self-injurious behaviors. The patient's ASD symptoms were previously unrecognized and so his behavioral issues were not appropriately addressed. Providers likely associated his behaviors to his intellectual disability and CS sequelae including impaired vision, bilateral hearing loss. This case illustrates the importance as well as difficulty in recognizing ASD in CS patients. Rates of ASD are higher in the CS population, and while patients with CS commonly display autistic-like behaviors, those without comorbid ASD have much better social and communication skills than those with ASD. In this poster, we discuss the challenges and importance in diagnosing ASD in the CS population.

No. 54
WITHDRAWN

No. 55
WITHDRAWN

No. 56
Case Report: Clozapine-Induced Transaminitis
Poster Presenter: Khaled Said, M.D.
Co-Authors: Casey Lenderman, D.O., Zackary G. Byard, D.O.

SUMMARY:
Clozapine is a second-generation antipsychotic approved for management of treatment-resistant schizophrenia (Novartis, 2010). Its most severe documented side effects include agranulocytosis, myocarditis and seizures (Novartis, 2010). However, there are relatively fewer cases reporting hepatic impairment secondary to clozapine usage (Safferman, Lieberman, Kane, Syzmanski & Kinon, 1991; Gokaraju, Alkhatib, Hariharan & LaChance, 2015). Though it is less common than the conditions above, it is still a significant complication that clinicians should be aware of. In this presentation, we describe a case of Clozapine-induced hepatitis, including the clinical picture and its management.

No. 57
Psychiatric Manifestations in a Patient With Hyperparathyroidism
Poster Presenter: Krupa R. Nataraj, M.D.
Co-Author: Traci Carroll, M.D.

SUMMARY:
Mr. H., a 54-year-old African-American male with a past psychiatric history of alcohol use disorder, bipolar disorder, and anxiety, presented to the psychiatric clinic with suicidal ideation, homicidal ideation, depression, increased aggression, and anxiety. Upon chart review, relevant past medical history was found to include kidney stones and hyper-parathyroid hormone. An incidental finding of elevated serum calcium was noted. Clinical correlation between his psychiatric presentation and this history prompted further investigation. Mr. H was found to have radiographic evidence of bone demineralization, a compression fracture in his

thoracic spine, and a parathyroid adenoma in the right inferior parathyroid gland. Upon evaluation and recommendation by the surgical team, the patient underwent a right parathyroidectomy. Consequently, the patient reported an improvement in depression, homicidal and suicidal ideation, and aggression within a few weeks of surgery. Numerous neuropsychiatric symptoms are associated with primary hyperparathyroidism, including anxiety, depression, personality changes, psychotic symptoms, and cognitive impairment. Some evidence suggests that aggressive behavior, suicidal ideation, and homicidal ideation can be associated with hyperparathyroidism. Subclinical hypercalcemia may be present for a prolonged period prior to identification of hyperparathyroidism. Neuropsychiatric symptoms often go unnoticed when there is a lack of follow up appointments. During the global pandemic, patients have limited access to their doctors and have been coping with stressors, making it more likely to miss appointments with psychiatrists. In this poster, we discuss the importance of evaluating patients with neuropsychiatric symptoms for co-morbid hyperparathyroidism and related symptoms, especially during these difficult times.

No. 58

Tacrolimus Induced Hallucinations, Paranoia, and Migraines

Poster Presenter: Hirsch K. Srivastava, M.D.
Co-Authors: Valeriy Zvonarev, M.D., M.P.H., Fei Cao, M.D., Ph.D., Muhammad Farhan

SUMMARY:

Mrs. L, a 39-year-old Caucasian woman with a known genetic predisposition to mental illness and substance abuse and past psychiatric history of anxiety, agoraphobia, panic attacks, and heavy alcohol abuse as a teenager and adult leading to a liver transplant in 2017 who presents to the psychiatric consult service after a suicide attempt by Benadryl overdose following alleged domestic abuse at home with collateral information revealing bizarre home behaviors including non-reality based paranoia. On inpatient admission, it became clear one of her aggravating psychogenic stressors was a history of severe migraines onset after her liver transplant 3 years prior. Over the years various contributing factors have been investigated into the sudden onset of severe migraines including side effect from immunosuppressive Tacrolimus, donor liver being 4 cm3 larger than original liver causing abdominal neuroma affecting posture leading to myofascial pain, and occipital neuralgia. Various treatments for migraine such as NSAIDs, APAP, Triptans, Antihypertensives, CAM, CGRPR inhibitors, and occipital nerve blocks were tried – all of which have proven unsuccessful. During her inpatient admission for suicide attempt it became clear that the migraines are associated with increased stress and anxiety, and in particular became much more frequent after the onset of COVID-19. There have been increasing instances of psychiatric pathology including auditory hallucinations three months prior to admission and paranoid delusions immediately before admission. In this poster we discuss immunosuppressive therapy impact on patient's underlying psychiatric pathology potentially leading to paranoid delusions and the resulting psychogenic stress causing or significantly contributing to migraine headaches which suddenly started post-hepatic transplant.

No. 59

"I Was Hanging in Till the Quarantine Started. This COVID-19 Threw Me Off!" A Case of First Episode Mania in a 40-Year-Old Female With Cannabis Use

Poster Presenter: Jawad Manzoor, M.D.
Co-Author: Raj Addepalli

SUMMARY:

JK is a 40-year-old African American woman with no previous psychiatric history brought into the Emergency Department by emergency services called by her brother. The patient barricaded the door and attempted to burn something on the stove. Per the patient, her brother and sister in-law have been doing black magic on her. "They did it a few months ago, and my right leg was paralyzed. I was trying to do white magic to repel black magic by burning sage on the stove." Patient also reported that she was stalked by her family on her Facebook because she was posting critical commentary about the world events. She reports periods of lack of sleep, increased goal directed activity, and racing

thoughts. During the interview, the patient was irritable and grandiose. At times, the patient goes on to state that "I bet you I am smarter than all of you here." The family also reported that patient recently started to wear braids. All of these things were out of her character per the family. Patient had no past psychiatric history. Patient was admitted for further investigation and stabilization. While on the inpatient unit, the patient admitted that ever since the start of COVID-19, her marijuana use had increased. She also reported difficulty with sleep, stress, and anxiety due to COVID-19. Patient only accepted supportive psychotherapy. Her manic symptoms resolved to the extent that she was discharged to her family. During the COVID-19 pandemic and resulting economic downturn, social distancing, closure of schools and businesses, shelter-in place, and increasing isolation have led to an increase in anxiety and stress across the population. This was also the case with our patient. Having been confined to home, telecommuting to work, and increased workload led to increase in stress and anxiety for our patient. Based on the recent data, 47% people reported that isolation, worry and stress over the virus has negatively affected their mental health. Patients with underlying genetic predisposition and family history of bipolar disorder are at risk of worsening the course of bipolar disorder over time with marijuana use. Research supports multidisciplinary approaches to addressing the first episode of mental illness, such as individual or group therapy, family support and education, and medication. In our case, the biggest impact on clinical outcome was associated with involvement of family, education about mental illness, and individual and group therapy participation. The significance of individual and group therapy was that the patient became more aware of the nature of her mental illness and connected with her peers who were also dealing with their own mental issues. From a psychological point of view, it allowed the patient to cope with her own experience in the context of shared experience with her peers. What this case teaches us is that we should be more attuned to the patient's psychosocial factors in times of COVID-19 pandemic.

No. 60

A Case of Rapid Cycling Dexamethasone-Induced Mania

Poster Presenter: Hassaan Gomaa, M.D.
Lead Author: Aum A. Pathare, M.D.
Co-Authors: Harsimar Kaur, John Garman, Sanjay Yadav, M.D.

SUMMARY:

A case of rapid cycling dexamethasone-induced mania Introduction: Dexamethasone is a widely used corticosteroid due to its potent anti-inflammatory and immunosuppressive effects. It has a variety of adverse effects such as hyperglycemia, Cushing syndrome, leukocytosis, increased risk for infections, thrombosis, osteoporosis, and neuropsychiatric disturbances. Mania is reported as an uncommon side effect of dexamethasone that is usually associated with higher doses of this agent. Methodology: We present a case of dexamethasone-induced mania in a 20-year-old non-binary individual who was diagnosed with Hodgkin's lymphoma grade VIA, unfavorable due to bulky disease in the left neck and left axilla, with extra-nodular disease in the subcutaneous tissue, and started on chemotherapy cycles of brentuximab vedotin, doxorubicin, vinblastine, dacarbazine, and dexamethasone (12 mg). Results: The patient had two episodes of mania after the first and second chemotherapy cycles, and a mixed episode in between, in the span of a 5-6 weeks. The first episode was treated with olanzapine 20 mg with resolution of symptoms. However, the patient stopped the medication abruptly as they suspected that it was making them depressed. The patient relapsed into mania and had an interrupted suicide attempt where they tried to overdose on olanzapine. Patient was admitted to the oncology service, psychiatry was consulted, and patient was started on risperidone that improved the manic symptoms. Eventually, they were admitted to the inpatient psychiatry unit and risperidone was switched to quetiapine which was titrated to 300 mg twice daily. Dexamethasone was stopped after the fourth cycle of chemotherapy in the setting of rapid cycling medication-induced bipolar and related disorder. Conclusion: Dexamethasone in moderate doses can induce mania that can be rapid cycling. Dexamethasone-induced mania can be treated successfully with antipsychotics alone and not

limited to lithium or valproic acid monotherapy. Further studies with a larger power and other corticosteroids are needed.

No. 61

Delusional Parasitosis and Paresthesias Versus Bipolar Disorder: A Case Report and Literature Review

Poster Presenter: Kripa Balaram, M.D.
Co-Author: Lendita Haxhiu-Erhardt, M.D.

SUMMARY:

Background: Psychosis can present in the setting of a primary psychiatric illness or secondary to an underlying medical condition. Among these medical conditions, cyanocobalamin, or vitamin B12, deficiency can lead to neuropsychiatric disturbances. These new-onset symptoms, often with no previous history, can include paresthesias, sensory deficits, irritability, mood changes, insomnia, and even psychosis. As with other causes of secondary psychiatric symptoms, treatment would include addressing the underlying medical condition. The neuropsychiatric manifestations of B12 deficiency often respond very slowly to treatment and may even be irreversible. Case Report: We present the case of a 36-year-old female with no psychiatric history who presented to the ER with new-onset symptoms of insomnia, irritability, impulsivity, and suicidal ideation. On examination, her affect was labile and tearful and her thought process was racing. Collateral from family was also concerning for personality and mood changes. She also complained of a widespread rash and reported feelings of "things crawling" on her body. She was admitted to inpatient psychiatry with a diagnosis of bipolar I disorder, most recent episode mixed. Her labwork ordered at the time of admission indicated a cyanocobalamin level that was significantly decreased. It is likely that she was interpreting her B12 deficiency-associated sensory paresthesias as symptoms of delusional parasitosis. She was started on a mood-stabilizing agent and B12 supplementation and discharged to outpatient follow-up. Literature Review: A search of the pre-existing literature indicated that vitamin B12 deficiency is often found in patients presenting with symptoms of depression. Similarly, high levels of serum vitamin B12 levels are associated with better treatment outcomes in MDD. A literature review indicated that there was one previous case report of an elderly patient who presented with classic symptoms of mania in the setting of decreased B12 levels. A retrospective case study discovered that a large majority of patients with vitamin B12 deficiency presented with neuropsychiatric symptoms, including mood changes, behavioral disturbances, and cognitive deficits. There were no trials, reports, or reviews on secondary symptoms of mania or psychosis occurring specifically in younger patients or in women. Conclusions: There is a great amount of data relating vitamin B12 and folic acid deficiencies to neuropsychiatric changes. Currently, there is limited data on cyanocobalamin deficiency leading to mania, hypomania, or psychosis. The link between depression and B12 levels has previously been established, along with the fact that mood symptoms or neurological deficits are often slow to respond to treatment or even irreversible. Therefore, it is essential that providers screen for these vitamin deficiencies as part of the workup to identify any possible underlying medical etiologies of new-onset psychiatric symptoms

No. 62

Electroconvulsive Therapy Plus Haldol in the Treatment of Delirious Mania in Adolescent: A Unique Case Report

Poster Presenter: Dinesh Sangroula, M.D.
Co-Authors: Robin Kimberly Caron, D.O., M.P.H., Mihika Nepal, Rikesh Chakradhar

SUMMARY:

Introduction: Delirious mania (DM) is a severe neuropsychiatric syndrome associated with high morbidity and mortality in Bipolar illness. Despite the high prevalence of delirium in Bipolar disorder (15-20%), DM is often underdiagnosed. Moreover, it is not included as a DSM diagnosis, is highly resistant to treatment and has no definitive treatment protocol. Case Presentation: We present a case of a 16-year old Caucasian, male with average intellectual functioning and a past history of Bipolar 1 disorder, ADHD, and Cannabis use disorder who had been stable on Olanzapine 10 mg/day for about a year. He presented to the inpatient unit for manic

episode with bizarre/disorganized behavior (in a trance-like state, staring into space, perseveration) accompanied by severe agitation, violent behavior, and confusion. In the hospital, he was required a higher level of care for safety as he had total of 61 episodes of personal safety emergencies for violent and assaultive behavior. He also developed several episodes of catatonia. On his mental status exam, he had irritable mood with labile affect, rapid and pressured speech, episodes of agitation and violence, disorientation and disorganized behavior (urinating and defecating, and eating his own feces, disrobing spontaneously). Full neurological work-up (MRI, LP, EEG) were done without any significant findings and he was diagnosed with mania with psychosis and delirium (DM). Medication tried without success were Olanzapine (20mg /day), Risperidone (4 mg /day), Quetiapine (400 mg/day), Lithium ER (2259 mg/day), and Gabapentin (1200 mg /day). The patient was found to respond partially when administered Haloperidol PRN for agitation which was continued as a standing dose of 10 mg at bedtime. The patient responded well to the combination of ECT (3 times/week) plus Haloperidol which was converted to long-acting Decanoate100 mg every 4 weeks. Maintenance ECT was recommended weekly post-discharge. Discussion: DM typically presents with a rapid onset of severe manic episodes with psychosis, confusion, fluctuating level of sensorium, and/or catatonia. Ensuring safety followed by medical/neurological consultation with comprehensive medical work-up should be the priority. Based on the limited data evidenced on case reports or case series reports, the most effective treatment recommendation are ECT and/or Lorazepam, Valproate or Lithium. Antipsychotics are generally not recommended but our case responded with Haldol for aggression. Conclusion: It is important to monitor for the symptoms of delirium, catatonia, and psychosis in patients with acute severe mania with agitation. A trial of mood stabilizers with Benzodiazepine such as Lorazepam is worthwhile if diagnosis is confirmed. Most importantly, ECT should be considered early with or without pharmacotherapy to reduce morbidity and mortality. Larger controlled studies are recommended for developing and implementing evidenced based protocol for treatment of DM.

No. 63

Frozen in Fear: A Case of Malignant Catatonia

Poster Presenter: Gauri Wable, M.D., Ph.D.
Co-Authors: Jeffrey McBride, M.D., Caesa Nagpal, M.D.

SUMMARY:

BACKGROUND: Malignant catatonia is a life threatening manifestation of catatonia. It presents with behavioral changes, movement disturbances and autonomic dysregulation. Early intervention helps decrease mortality and morbidity in patients with malignant catatonia. We present such a case of a 24 year old woman with malignant catatonia. METHOD: Ms. A is a 24-year-old Afro-Hispanic female was admitted to an acute psychiatric unit for increased psychotic symptoms. She initially presented to a medical facility on an emergency detention order. She was hearing voices telling her to hurt herself and other people. A neighbor called in a disturbance stating a female was screaming for her life. Her younger sister thought she was possessed. This has been ongoing since 3 months. She was started on Risperidone 0.5 mg PO bid for psychosis. In first two days of admission, she received multiple antipsychotics, Geodon 10 mg IM repeated x 3, Quetiapine 100 mg PO qhs, Olanzapine 10 mg IM. She was also continued on Risperidone. Impaired attention and memory was seen on day 4 along with increase in agitation for which she continued to receive higher dosages of antipsychotics. On day 5, she reported feeling like a butterfly and jump off the bed. Her blood pressure was increased, pulse was increased to 130-160. CK levels were drawn and were 1772. She stopped taking meds, stopped talking. Malignant catatonia was suspected and all antipsychotics were stopped. IV fluids were given with IV Lorazepam. On day 8, was noticed to have improvement in catatonia and was started on Quetiapine 25 mg PO q am and 50 mg PO qhs and was transferred to the acute inpatient psychiatric facility. She continued to be very psychotic and paranoid. Quetiapine was increased to 200 mg PO qhs. Her course was complicated again at the inpatient psychiatric facility after switching antipsychotics to Haldol 5 mg PO q am and qhs. She took 2 dosages of Haldol and

presented with increased agitation, catatonia and autonomic dysregulation. She was then transferred to the medical facility. DISCUSSION: Malignant catatonia is a life threatening manifestation of catatonia. It presents with behavioral changes, movement disturbances and autonomic dysregulation. It can present as catalepsy, stupor, mutism, waxy flexibility, negativism, posturing, rigidity, fever and autonomic dysregulation. Early diagnosis and intervention is often challenging. It is thought to be due to disturbances of the dopamine and GABAergic receptors. Benzodiazepines and ECT remain the mainstay treatment. CONCLUSION: This case highlights the fact that early diagnosis and intervention for malignant catatonia improves mortality and morbidity.

No. 64

Lithium Induced Hypercalcemia and Parathyroid Disorders. a Case of Long Term Lithium Treatment, a Parathyroid Adenoma and Hypercalcemia

Poster Presenter: Julia Danielle Kulikowski, M.D.
Co-Author: Lawrence Samuel Martin, M.D.

SUMMARY:

This case reviews a patient on long term lithium carbonate treatment for bipolar disorder who developed a parathyroid adenoma suggesting the benefit of periodic monitoring of calcium and parathyroid hormone (PTH). A 43-year-old man with a history of bipolar I disorder presented to a mood disorders clinic for a consultation regarding medication recommendations. The patient was diagnosed with bipolar disorder in 1992 after a manic episode and was initiated and maintained on lithium carbonate 900 mg daily. Medical history was relevant for lithium induced hypothyroidism managed with levothyroxine. Within the last year, the patient noticed increased thirst, muscle pain, cognitive clouding, frequent urination and worsened emotional blunting. Blood work revealed elevated levels of serum and ionized calcium, 2.72 (2.18-2.58 mmol/L) and 1.37 (1.05-1.30mmol/L), respectively. PTH level was 15.4 (1.6-9.3 mmol/L) and 24 hour urine revealed hypercalciuria. Vitamin D, phosphorus, magnesium, alkaline phosphatase, creatinine and GFR were within normal limits. A PET scan demonstrated increased uptake in the left superior parathyroid gland indicating a parathyroid adenoma. Medication options were discussed including weaning lithium carbonate to alleviate symptoms of hypercalcemia. The risk of mania discouraged the patient from switching mood stabilizers. Lithium levels remained therapeutic between 0.68 and 0.71. Ultimately, the patient was referred for a parathyroidectomy. Biopsies were taken on four glands and revealed hyperplasia in the left superior gland. PTH and calcium returned to normal values following surgical resection as well as a general decline in symptoms related to hypercalcemia. The case describes a parathyroid adenoma likely unmasked by lithium carbonate. Lithium associated parathyroid adenoma was first described in 1973. Research suggests elevated PTH levels in individuals as a result of treatment with lithium carbonate. There is debate in the literature as to whether lithium causes hyperplasia or accelerates the growth of pre-existing adenomas. The mechanisms by which lithium carbonate causes elevated PTH levels include action on modulators within the parathyroid system that increase the set point which detects calcium levels. Other mechanisms suggest increased reabsorption through the loop of Henle. Symptomatic hypercalcemia is characterized by polydipsia, polyuria, fatigue and weakness. Hyperparathyroidism is associated with hypertension, cancer, renal failure, and fractures. Considering the elevated risk of lithium associated hypercalcemia and hyperparathyroidism and parathyroid dysfunction, periodic monitoring of calcium and PTH levels should be incorporated into care to target the potential functional impairment from hypercalcemia and sequelae of parathyroid dysfunction.

No. 65

WITHDRAWN

No. 66

WITHDRAWN

No. 67

Mixed State Bipolar Disorder in Adolescent With Tuberous Sclerosis

Poster Presenter: Celena Ma

SUMMARY:
Tuberous sclerosis is a multisystem genetic disorder commonly comorbid with neuropsychiatric disorders. This is the first case of a patient with tuberous sclerosis with mixed episode bipolar disorder with psychotic features. JR is a 19 year old tuberous sclerosis and bipolar disorder patient who was admitted to inpatient psychiatry after presenting with suicidal ideations, grandiose delusions, depressed mood, hopelessness, low self-worth, and physical agression. He has been experiencing auditory and visual hallucinations during depressive episodes for 3 years. His seizures began at 4 months old as infantile spasms, and he subsequently was diagnosed with tuberous sclerosis and focal epilepsy. A recent EEG showed left temporal seizure focus. His last MRI was significant for bilateral temporal, frontal, and parietal lobe hamartomas and bilateral lateral ventricle subependymal nodules. During the course of his hospital admission, JR showed improvement of his symptoms while on a regimen of aripiprazole, topiramate, and carbamazepine. Theories for bipolar disorder's comorbidity with tuberous sclerosis include epilepsy, structural brain lesions, and genetics. Seizures, which occur in 90% of children with tuberous sclerosis, may explain bipolar disorder in such patients. Seizure originating from the temporal lobe, which controls emotions and memory, are associated with mood disturbances and aggression. Studies have theorized that mania could be a result of left hemisphere overactivity or right sided underactivity. One study evaluating patients with temporal lobe epilepsy (TLE) showed a 70% frequency of lifetime psychiatric disorders, especially mood disorders. The frequency of psychosis in TLE is around 19%, and there is an increased risk if seizures affect the dominant hemisphere, usually the left side. JR's symptoms could be attributed to left sided overactivity caused by uncontrolled seizures based on his EEG, especially given his history of medication noncompliance. There is an association between subcortical lesions and both manic and depressive episodes and an association between cortical lesions and manic episodes. Mania is associated more frequently with right hemisphere lesions while depression is associated more frequently with left hemisphere lesions. Mania is also more frequent in those with temporal and frontal lesions, regardless of sidedness. JR's manic symptoms could therefore be explained by his numerous frontal and temporal tubers and subcortical hyperdensities on MRI. His mixed affective could also be attributed to the bilateral presentation of his lesions. The causes of bipolar in tuberous sclerosis patients are multifactorial. Future studies studying environmental risk factors, neuroimaging, and genetics can reveal more concrete causative mechanisms and may help identify high risk patients for early interventions.

No. 68
New Onset Bipolar I, Manic Episode Following Heavy Cannabis Use in a 61 Year Old Male: A Case Report
Poster Presenter: Michael Holcomb, D.O.
Co-Authors: Thomas Finstein, D.O., Evan Allen, Peter Rudlowski, M.D.

SUMMARY:
Intro: Cannabis use is becoming more prevalent in today's population with the co-occurring push for decriminalization and legalization across the United States1. With the increase in prevalence, we can reasonably expect an increase in psychiatric conditions that may be attributed to or exacerbated by cannabis use. While cannabis use is linked as a causal risk factor for the development of psychosis, a dearth of evidence is available demonstrating its association with bipolar mania2. Case: We report a case of a 61-year-old patient with new onset of manic symptoms in the context of cannabis use. This is a previously high functioning U.S. Marine Corps retiree who denied previous manic or psychotic symptoms. This individual reported recent heavy cannabis use followed by manic symptoms to include irritability, insomnia, excessive spending, flights of ideas, and pressured speech. Initial laboratory and imaging work-up did not show any abnormalities to suggest a medical cause for the manic symptoms. A diagnosis of bipolar I disorder, manic episode was made based on DSM-5 criteria. Medication therapy was initiated with Risperidone PO every night, Divalproex PO twice every day, and Trazodone PO as needed at night for sleep. Symptoms of mania subsided over his hospitalization and he was discharged with follow up at an intensive

outpatient program.   Discussion: Due to the advanced age of the patient and recent cannabis use, he was thought to have a manic episode that was induced and/or worsened by his cannabis consumption. Cannabis has been linked, through a number of studies, to development psychosis; however, an association between cannabis and mania is not clearly defined. Because of the possible overlapping genetics of psychosis and bipolar disorder, it is theorized that cannabis use may induce mania through a mechanism of action similar to cannabis induced psychosis3. However, a primary bipolar disorder that was previously undiagnosed cannot be fully excluded because substance use is overrepresented in people with bipolar disorder. Patients commonly abuse substances in order to "self-medicate" to treat bipolar disorder4. Therefore, it is essential that providers complete a thorough history when caring for these individuals. None of the authors identify any conflict of interest. The views expressed in this manuscript are those of the authors and do not reflect the official policy or position of the Department of the Army, Department of Defense or the U.S. Government.

No. 69

Oral Ketamine for the Management of Severe Treatment-Resistant Bipolar Depression

Poster Presenter: Prajeeth Kumar Koyada, B.S.
Co-Authors: Kristin L. Smoot, B.S., Evan Cordrey, M.D., Mudhasir Bashir, M.B.B.S.

SUMMARY:

Introduction: Treatment-resistant bipolar depression (TRBPD) is one of psychiatry's most challenging clinical conundrums to manage. We present a case where 0.5 mg/kg oral ketamine followed by 1.0 mg/kg oral ketamine one week later produced a robust antidepressant response in a patient with severe bipolar depression refractory to 19 medications and at least 120 life-time electroconvulsive therapy (ECT) sessions.   Presentation: Ms. A, a 62-year-old Caucasian female with a past psychiatric history of Bipolar I Disorder presented to the psychiatric consult service with neuro-vegetative symptoms and suicidal ideation (SI) with intent and a plan in the setting of a bipolar depressive episode without psychotic features. Over her 10 admissions in the past two years, her bipolar depressive episodes were resistant to treatment with 19 different medications and only mildly responded to 76 total ECT sessions. She was admitted to undergo ECT, and she completed a total of 15 sessions over the next 40 days with no improvement of her symptoms. ECT was discontinued and a 10-day trial of memantine and trauma-focused narrative therapy showed no effect. On hospital day 52, following escalation of her SI through self-injurious behavior, she was given 0.5 mg/kg oral ketamine solution (pre-treatment HDRS/MADRS 33/44) with no adverse effects. Afterwards, she denied SI for the first time during her stay (post-treatment HDRS/MADRS 7/18). Over the course of her inpatient stay, she continued to deny SI while her neuro-vegetative symptoms improved (HDRS 18 and 7 on hospital days 53 and 54, respectively). She returned to an improved baseline by hospital day 60 (pre-treatment HDRS/MADRS 26/45) and showed further improvement in her symptoms following 1.0 mg/kg oral ketamine (post-treatment HDRS/MADRS 2/3). Post-discharge, she will have close follow-up for weekly oral ketamine dosing for six weeks with her outpatient psychiatrist.   Discussion: This report aims to add to the paucity of literature on the efficacy of oral ketamine for TRBPD by describing, to our knowledge, the first case of oral ketamine producing a robust antidepressant response in a patient with bipolar depression refractory to almost 20 different medications and 100+ life-time sessions of ECT. Furthermore, as oral ketamine costs less than $10 for a month's supply, produced no adverse effects peri- and post-administration, and resulted in symptomatic improvement much faster than in previous admissions (1-2 weeks vs. 1-2 months) for our patient, we show that oral ketamine may represent a viable alternative to ECT for a variety of reasons such as cost, side effect profile, and reductions in length of stay and prolonged hospital courses.   Conclusion: Oral ketamine shows promise as a safe, tolerable, and affordable alternative to ECT in the treatment of TRBPD. In this poster, we discuss the potentially potent role of oral ketamine in the psychiatrist's armamentarium in the management of this disease.

No. 70
Secondary Mania After Thalamic Stroke: Case Report
Poster Presenter: Matthew T. Forster, M.D.
Co-Authors: Alejandro Chapa, Roshan Chudal, Ph.D., M.B.B.S., M.P.H., Kendra Anderson, Teresa Pigott, M.D.

SUMMARY:
Background: Mania can present secondary to neurologic, metabolic, toxic and infectious causes (Satzer and Bond 2016). Organic mania secondary to stroke is rare and seen only in 1-1.6% of cases (Santos et al. 2011). We present a case of a 46 y/o male with no previous psychiatric history and history of thalamic stroke that presented with first episode mania. Case: A 46 y/o male with a history of right testicular cancer (diagnosed 2011, s/p resection 2016), bilateral thalamic stroke secondary to patent foramen ovale (07/2019) without any past psychiatric history presented to an outside hospital (OSH) with law enforcement due to recent erratic behavior. Pt was started on Risperidone 2 mg and Lorazepam 2mg at the OSH for 3 days prior to being transferred to the inpatient psychiatric hospital. On admission, patient was unkempt with limited eye contact, expansive affect, and noted grandiose delusions. He endorsed a decreased need for sleep, hyperverbal/rapid speech, increased energy, recent impulsive behaviors and euphoria over the past three weeks. Physical and neurological exams were unremarkable. Routine laboratory examination was grossly within normal limits, and urine drug screen was positive for cannabis. Pt was started on Aripiprazole 5 mg qam for mood stabilization. After 5 days of hospitalization, patient was compliant and responding well to medication regimen. Neuropsychological testing was completed prior to his discharge on Day 7 of
hospitalization. Discussion: Neuropsychiatric manifestations post-stroke include various mood and behavioral disorders in up to 30 % of post-stroke patients (Hackett ML et al. 2014). Although differentiating the clinical presentations of primary and secondary mania is difficult, several factors point towards a secondary cause (Krauthammer et al.1978). This patient's clinical profile is consistent with previous findings associated with post-stroke mania including: being male with no personal psychiatric history, late onset relative to primary bipolar disorder, at least one vascular risk factor, and a history of right hemispheric infarct with involvement of the ventral limbic circuit. On Neuropsychological Testing, cognitive impairments in verbal and visual memory retrieval were found secondary to deficits in basic attention and complex executive functions. Conclusion: The similarity of mania symptoms in both primary and secondary mania coupled with varying temporal relationship between stroke and onset of mania can delay the identification and management of this infrequent post-stroke neuropsychiatric disorder. Evaluation for new onset mania should include a thorough medical history, neurological examination, neuroimaging and laboratory tests for underlying secondary causes. With this patient, monotherapy treatment with Aripiprazole 5mg daily was successful in treating acute mania secondary to post-thalamic stroke.

No. 71
Sexual Dysmorphia in an Adolescent With Tuberous Sclerosis
Poster Presenter: Celena Ma
Co-Author: Najeeb U. Hussain, M.D.

SUMMARY:
Tuberous sclerosis is a multisystem disorder comorbid with neuropsychiatric disorders such as intellectual disability, epilepsy, and hyperactivity. Gender dysphoria is clinically significant distress caused by the incongruence between one's assigned gender at birth and one's experienced gender. The structural brain changes found in this first known case of a tuberous sclerosis patient with sexual dysmorphia suggests a possible causal mechanism of atypical gender identity development. JR is a 19 year old tuberous sclerosis patient with bipolar disorder, focal epilepsy, and multiple past psychiatric admissions for self mutilation and suicidal ideations. He was admitted presenting with abdominal pain following the insertion of carrots into his anus as a form of self harm. JR was 16 years old when he first started to identify as a heterosexual transgender woman. He even attended therapy at the transgender health clinic with the intention to start hormone therapy. However, he would frequently switch from viewing himself as a heterosexual male

one day, and a heterosexual transgender female the next. JR was diagnosed with tuberous sclerosis and focal epilepsy during his childhood. His last MRI from 4 years ago was significant for bilateral temporal, frontal, and parietal lobe hamartomas and bilateral lateral ventricle subependymal nodules. T2/FLAIR showed hyperintense foci throughout the cortex and subcortical white matter. Studies have proposed that gender dysphoria is associated with a fronto-occipito-parietal disconnection between neuronal pathways that process the self perception and body ownership via the fronto-occipital fasciculus (IFOF) (1). Self perception primarily involves the right IFOF, and those with lesions encompassing such areas have problems with self-referential thoughts and developing a coherent model of self (2). Body ownership primarily involves the right parietal lobe, and those with such lesions have been reported to be in denial of motor deficits and develop disturbances with body schema (3). Transgender individuals were found to have atypical IFOF compared to cisgender individuals, with differences more prominent in the right hemisphere (1). Thus, neuroanatomical findings in transgender groups can help explain the incongruity between self and body that those with gender dysphoria experience. In JR's case, his hyperintense foci throughout his cortex and subcortical white matter suggests he is at increased risk for having aberrant IFOF leading to fronto-occipto-parietal disconnection. In addition, his right sided hamartomas found in the temporal, frontal, and parietal lobes are located in areas involved in ego-centricity and body ownership. JR's neural findings are likely causal factors to his sexual dysmorphia and difficulties developing a coherent, stable identity. Future neuroimaging studies can therefore reveal more concrete causative mechanisms of gender identity as well as other elements that shape self perception.

No. 72
WITHDRAWN

No. 73
Treatment of Bipolar Disorder With Psychotic Features in the Setting of Familial Long Qt Syndrome

Poster Presenter: Matthew Joseph Johnson, D.O.
Co-Authors: Lainey Bukowiec, Andrew Malanga, D.O.

SUMMARY:
Long QT syndrome (LQTS) is a rhythmic disorder than may occur in patients without any symptoms or in patients presenting with syncope, seizures, or even cardiac arrest. A number of mutations have been identified in patients with familial LQTS. Phenotypic clinical syndromes that fall within the umbrella of inherited LQTS include an autosomal dominant form with primarily cardiac manifestations known as Romano-Ward syndrome, which is more common, and an autosomal recessive form associated with sensorineural deafness known as Jervell and Lange-Nielsen syndrome, which has a worse prognosis. The prevalence of inherited LQTS presenting in infancy is estimated to be approximately 0.05%, and due to the high penetrance of familial LQTS in early life, this estimate may be used to approximate the prevalence of this disorder in the general population. Treatment includes avoidance or cessation of mediations known to prolong the QT interval, aggressive treatment of electrolyte imbalances, beta-blockers, and implantable cardioverter-defibrillator (ICD) placement, with patient-specific tailoring of therapy as appropriate based on presenting symptoms and risk factors. We describe a case of a 37-year-old female who presented with bizarre behavior after ceasing use of latuda secondary to angioedema. The patient decompensated into a manic state with paranoia and delusions. After admission, the patient had an ECG with a QTc of 529 at which point the patient was transferred to medicine for telemetry monitoring with psychiatry consulting for the patient. The patient was started on depakote, and once stabilized medically, was transferred back to inpatient psychiatry for psychiatric stabilization. QTc ranged from 488-529 during hospital stay. During trial of depakote, the patient's mood stabilized and psychotic symptoms dissipated without need for an antipsychotic medication. The patient was medically and psychiatrically optimized for a safe discharge home with a plan for continued outpatient follow-up with both psychiatry and cardiology.

No. 74

Worsening Bipolar Disorder Following a Cerebral Vascular Accident

Poster Presenter: Megan Spelman
Co-Authors: Paul Wells, Greg Sullivan, M.D., Adam John Fusick, M.D.

SUMMARY:

Mr. S is a 61 year old, Caucasian, left-handed, married male with a past psychiatric history of Bipolar Disorder Type II who presented to the hospital after a possible Transient Ischemic Attack. While in the hospital, the patient was noted to have racing thoughts, pressured speech and decreased need for sleep consistent with his diagnosis. He was currently being treated with Lamotrigine and Psychiatry was consulted for assistance. Overall, the patient was unable to provide sufficient details about his psychiatric state which required both a review of his records and obtaining collateral information from his wife. His history was remarkable for a nearly 30 year history of Bipolar Disorder Type II where he would experience one hypomanic episode a year lasting 4-5 days. His daughter also is diagnosed with Bipolar type II and displays the same pattern of one hypomanic episode per year. Notably, a year prior to his recent hospital admission, Mr. S suffered an infarct in the right subinsular region. Prior to this event, Mr. S did not require treatment with mood stabilizers for his Bipolar II Disorder as his mood episodes had been manageable without medical treatment for nearly 30 years. Since the event, Mr. S experienced a worsening in his psychiatric illness with waning depressive episodes and hypomanic episodes now occurring 6 times in the last year with each episode lasting 7-8 days. Furthermore, Mr. S's mood disorder now caused such disruption to his personal life that he required intervention with mood stabilizers. Mr. S's diagnosis had changed to Bipolar II Disorder, Rapid Cycling. Ultimately, Mr. S's presentation along with his Rapid Cycling specifier constituted an abrupt change in his mental illness following his cerebral vascular accident. The case of Mr. S highlights the complex interplay of vascular eti ology and psychiatric pathology. While depressive disorders account for the most frequently occurring psychiatric disorder post-stroke, secondary bipolar disorder, or in this case clinically significant worsening of a pre-existing bipolar disorder, is often reported anecdotally (Sater 2016). Since little is understood about the precise mechanism, the authors intend to expand the understanding of this pathology by exploring the Vascular Mania Hypothesis believed to account for this phenomenon's etiology (Vasudev 2010). In addition, the authors highlight known brain structures and functional neuroanatomy responsible for emotional regulation and associated with post-stroke Bipolar disorder in order to provide clinicians a better comprehension of vascular etiology in psychia tric illness.

No. 75

"I Am an Inserter": Polyembolokoilamania and Self-Embedding in Adolescent Girls

Poster Presenter: Fiona Diviya Fonseca, M.B.B.Ch., B.A.O., M.S.
Co-Author: Andrea Joanne Steele, D.O.

SUMMARY:

Polyembolokoilamania is the phenomenon of the self-inflicted insertion of foreign objects into one orifice or more. Insertion might also refer to the introduction of objects through the skin subcutaneously, as self-embedding behavior. Interestingly, not all cases of foreign object insertion are associated with underlying psychiatric pathology. However, when applicable, it is critical to promptly address any psychiatric problems. Although not uncommon, there is a marked paucity of information on self-injury by insertion in children and adolescents in the absence of developmental delay or attention-deficit hyperactivity disorder. This poses a significant obstacle to the delivery of high-quality care and treatment for child and adolescent patients presenting with such symptomatology. In this poster, two adolescent patients with self-injury by foreign object insertion, as well as their histories and treatment trajectories are presented. Our patients share a commonality in that both of them were sexually abused by a relative. They also have a history of suicide attempts. This poster illustrates

the rationale behind and challenges to the management of this form of self-injury. Predisposing factors for polyembolokoilamania and self-embedding are also described and discussed. The motivation for such behavior ranges from self-exploration to autoeroticism, to self-harm, to reenactment of sexual abuse. Treatment necessitates the employment of an integrative lens, particularly for patients with a history of sexual trauma. Psychotherapeutic and pharmacotherapeutic approaches, as well as harm-reduction strategies, are discussed. Through these case presentations, this poster offers insight into improving the quality of patient care for children and adolescents presenting with self-injury by insertion.

No. 76

"I Am Haunted by Momo": A Case of a 10 Year Old With a Traumatic Past

Poster Presenter: Jason I. Koreen, M.D.
Co-Authors: Raj Addepalli, Santiago Castaneda Ramirez, M.D.

SUMMARY:

The "Momo Challenge" was a dangerous "suicide game" targeting children on social media and enticing them to perform a series of dangerous tasks. Momo was a terrifying character based on a Japanese sculpture, which took the internet by storm in 2018. This case depicts NW, a 10-year-old African American boy in foster care, who was removed from his biological mother in 2018 due to physical and emotional neglect, and possible abuse, and who was well until two months prior to his presentation. The patient was brought into the pediatric emergency department by emergency services accompanied by his foster mother directly from his usual weekly therapy appointment. NW had reportedly attempted to harm himself by breaking toys and a chair over his head and by grabbing a knife before hurting himself. NW had been discharged from his second inpatient hospitalization earlier that day. On evaluation, he confirmed that he tried to hurt himself because he "didn't want to be alive anymore." He reported that he had been tormented by "Momo" after being exposed to her by a friend approximately 6-7 weeks prior. The patient described Momo as a "chicken lady with big eyes and a scary mouth" who would tell him and children to kill themselves. On clarification, he described Momo more as a thought and not a hallucination. He reported that although he was no longer exposed to Momo he was still "haunted" by her, having frequent nightmares, and feared being home alone where he thought of her the most. NW reported that prior to being exposed to Momo he was feeling well and had no problems. Collateral stated that one week following the exposure he was hospitalized twice, each for two weeks, having been discharged from the second admission the day of his presentation. As per his foster mother, NW had been compliant with Fluoxetine 20mg, Risperidone 0.5mg BID, Prazosin 1mg qHS, and melatonin 5mg qHS and weekly psychotherapy. The foster mother confirmed that prior to the patient's exposure to Momo he was feeling well and had no issues, but that following the exposure the patient became agitated, aggressive towards his foster siblings, and had difficulty sleeping. The patient's foster agency was contacted a few months later and it was discovered that due to the patient's continued difficulties in the community and need for a higher level of care he had entered a Residential Treatment Facility. In this poster, we discuss the potential harm that suicidal games and provocative videos can have on children, especially in those who are more vulnerable due to a prior history of neglect, abuse, and unspeakable upbringings.

No. 77

A Clinical Perspective on Video Game-Related Violence: A Case Series of Adolescents Who Presented to the Psychiatric ER After Playing Video Games

Poster Presenter: Kushagra Nijhara, M.B.B.S.
Co-Authors: Daniel Antonius, Ph.D., Victoria L. Brooks, M.D.

SUMMARY:

Videogames have been increasingly popular in the modern era and are being used more frequently by children of all ages. Given the widespread use of videogames, there has been a growing concern in media and the public about the possible negative effects of violent videogames on the younger generation. Observational studies and lab-based

experimental studies have demonstrated increased aggression in children who play videogames but there are only a few clinical studies on the impact of videogames on psychiatric patients. To understand more about aggression associated with the use of videogames in psychiatric patients, we reviewed charts of three adolescents who presented to the ER with aggression shortly after playing a videogame. Case one is an 11-year-old Caucasian male with a previous diagnosis of attention deficit hyperactive disorder (ADHD) and oppositional defiant disorder (ODD) who was brought to the ER for evaluation after an episode of physical aggression towards his brother over a videogame. Case two is a 14-year-old African American male with no psychiatric history who was brought to the hospital for an emergency mental health evaluation mandated by the police following an episode of physical aggression that occurred after his mother confiscated his videogame console. Case three is of an 11-year-old Caucasian male with a previous diagnosis of ADHD and ODD who was brought to the hospital by the police for an emergency mental health evaluation. The patient had become physically aggressive towards his mother without provocation after losing in a videogame With these cases in mind, we present a real-life model in which children and adolescents might be negatively affected by videogame use. This report also illustrates the predisposing factors for videogame related aggression and the type of aggression seen with videogame use. We discuss the need for future research on this topic which would help make guidelines for videogame use, especially in children and adolescents with preexisting risk factors for aggression.

No. 78

Actions Speak Louder: When Innocence Turns Into Animal Cruelty

Poster Presenter: Megan Lin, D.O.
Lead Author: Estefany Cristina Garces Uribe, M.D.
Co-Authors: Pooja Yudhishthir Palkar, M.B.B.S., Graham Dersnah, Karl Zate, M.D.

SUMMARY:
Childhood animal cruelty is a complex and multidimensional act. Increase in reports of childhood animal cruelty worldwide has sparked an interest in understanding the graver issues underlying this behavior. This includes undiagnosed or worsening of mental illness, exposure to any abuse, neglect and domestic violence (1). Animal cruelty is currently used as a diagnostic criterion in DSM 5 for conduct disorder however there is paucity of research backing the significance of such behavior. Both intentional and unintentional acts of cruelty may reflect underlying mental health problems that need to be addressed (2). We present evidence from cases of two children aged 6 and 10 years who presented with violent acts resulting in fatality of their pets. Careful assessment and history taking revealed several psychosocial stressors, significant psychiatric family history and history of abuse in both cases surfaced. We aim to highlight why clinicians should be aware and perform meticulous evaluation in children presenting with animal cruelty as it is significantly associated with development of antisocial personality disorder, antisocial personality traits, conduct disorder and substance use (3).

No. 79

Combined Impact of Prenatal MDMA Exposure and Overcrowding on Intermittent Explosive Disorder

Poster Presenter: Ulziibat Shirendeb Person, M.D., Ph.D.
Co-Authors: Karl Zate, M.D., Albulena Ajeti, B.S.

SUMMARY:
MDMA is an indirect monoaminergic agonist and reuptake inhibitor that primarily affects the serotonin system (1). Prolonged exposure to MDMA causes serotonin depletion (2) and it may adversely affect fetal development as serotonin is involved in morphogenesis of serotonergic neurons (3). Low levels of cerebrospinal fluid 5-hydroxyindoleacetic acid-metabolite of serotonin has been correlated with impulsive aggression (4-6). We present the case of a 10-year-old boy with past psychiatric history of ADHD, on Vyvanse who was hospitalized for aggression, attempting to drown his sibling in a swimming pool. He had anger outbursts twice a week over three months. The patient also exhibited aggression and hyperactivity, had history of destroying property and banging his head. He behaves well between outbursts and after

aggressive episodes he is remorseful. Patient has history of truancy and enjoys playing violent video games. On evaluation, the patient appeared shorter than stated age. He was cooperative, but with poor eye contact. He had psychomotor retardation. His speech was slow, low in volume, and impoverished. Mood was “ok” affect was constricted. Thought process was linear and goal-directed. Thought content devoid of delusions and perceptual disturbances. He denied wishes to harm his brother, and reported that he was simply teasing him. His memory and concentration were intact. Patient’s insight, judgment and impulse control were poor. He lives with ten other biological siblings, maternal grandmother and shares a bed with five. Both parents are drug users and homeless. Mother used MDMA, morphine, and tobacco during her pregnancy. Family history indicated anger issues and mother had bipolar disorder. The patient used to cry a lot during neonate stage, which may indicate neonatal abstinence syndrome. His speech was delayed but didn’t need special education. The patient was diagnosed with intermittent explosive disorder (IED). The Vyvance was discontinued due to ineffectiveness, side effect and due to possibility that the amphetamine may be activating and making him more irritable. He was started on Abilify 2 mg and titrated up to 5 mg daily. During his stay patient didn’t have behavioral outbursts. He tolerated the medication well and was discharged to follow up in outpatient clinic. The patient didn’t demonstrate any key signs of ADHD on unit such as, inattention, hyperactivity or impulsivity, which is why he was on only Abilify monotherapy. Discussion: Prenatal MDMA exposure may have affected the development of his serotonergic neurons, which contributed to psychopathology of IED. Poor housing conditions and crowding can disturb children’s sleep and lead to negative mood and behavior. (7). R. Lee et al discussed that aversive parenting associated with the development of IED (8). Additionally, unfavorable childhood environment and family history of ongoing substance use may have perpetuated his aggression.

No. 80

Can Violence and Self-Harming Behavior Result When Healthy Socialization Is Switched With Video-Gaming and Screen Life: The Case of a Teenager

Poster Presenter: Courtney Beth Kusler, M.D.
Co-Authors: Ulziibat Shirendeb Person, M.D., Ph.D., Ijendu Peace Korie, M.D., Tazeen Azfar, M.D., Karl Zate, M.D.

SUMMARY:

Background: Decades of research links excessive use of video games to poor mental health outcomes in children and adolescents. It is associated with depressive disorders, anxiety disorders, aggressive behaviors, and decreased empathy (1). Exposure to violent media, including violent video games, can lead to an increase in violent and aggressive behaviors, such as assault or domestic violence. There is not yet enough information to conclusively associate violent media with more extreme behaviors such as homicide or rape due to the infrequency of these crimes causing small sample size (6). However, literature reveals possible neurobiological correlations with addictions that can potentially be extended to include video gaming and self harm addictions. Most studies have shown a link between excessive screen time and the prevalence of depressive and anxiety disorders. Objective: The purpose of this case report is to hypothesize that when healthy socialization is replaced with video gaming and extensive time online, violent and self harming behavior may result. Through this report we hope to reinforce the importance of limiting screen life in the pediatric population to improve their mental health. Case Report: Here we present the case of a 15 year old male, CJ, with a 9 year history of excessive video game use who was admitted for intense homicidal ideation and self-harming behaviors. CJ has no past psychiatric or medical history. Upon admission CJ’s parents presented a journal along with two butcher knives they had found in CJ’s room. Excerpts included graphic illustrations of people hanging, drawings of a person stabbing others, and drawings of a person smiling while standing over dead bodies. Notably, all excerpts were drawn or written in CJ’s blood. Inpatient neuroimaging showed no acute cerebral changes. While on the unit it was revealed that CJ was playing violent video games inappropriate for

his age group for up to 7 hours per day on weekdays and even longer on weekends. CJ's parents had no limitations on their son''s gaming hours. On the unit, therapeutic milieu was initiated, CJ was started on 10mg Prozac and was discharged after over 3 weeks of inpatient treatment with 40mg Prozac. Conclusion: In our current society, children are exposed to screens and electronics at increasingly younger ages for longer periods of time. Almost half of children exceed the recommended 2 hours per day of screen time. Past research has shown that this excessive exposure to media leads to poor mental health outcomes for children and lower capacity for empathy. Thus in this case, the patient's nine year history of excessive video game use may have been a risk factor for his self-harming behaviors and homicidal ideation. It is vital for clinicians to stress to parents the importance of monitoring the content and timing of their child's media consumption so that these possible negative outcomes may be prevented.

No. 81
Challenges and Best Practices for Transitional Age Youths Entering College in the COVID-19 Era
Poster Presenter: Julie Kim
Co-Authors: Asha D. Martin, M.D., Laura Sickles, M.D.

SUMMARY:
Ms. C., a 17 year old female, recent high school graduate with plans to enter college in the fall, with past psychiatric history of bipolar 1 disorder, generalized anxiety disorder and cannabis use disorder, with 1 prior inpatient and partial hospitalizations, initially presented to the ED accompanied by her parents for an interrupted suicide attempt of running towards the balcony with intent to jump. Patient's attempted suicide occurred in the context of worsened depressed mood and isolation given COVID-19 social distancing requirements and also self-discontinued psychiatric treatment a few weeks prior. After 10 days of psychiatric hospitalization, she was referred to our hospital's Adolescent Partial Hospitalization Program (APHP) for ongoing stabilization and continued medication titration. Initial treatment focused on mood and safety. Once Ms. C's mood was stabilized, her anxiety about her upcoming transition to college came to the forefront and became a major area for treatment intervention. In general, Transitional Age Youths (TAYs) face many unique obstacles that bar them from maintaining adequate psychiatric treatment, or worsen existing psychiatric symptoms. TAYs who go to college must be able to balance academic challenges and navigating new and different systems of mental health care, all while developing greater independence and a sense of identity, which is made even more challenging during the COVID-19 era; these in totality can culminate in increased stress and exacerbated psychiatric symptoms. For Ms. C's care, various interventions for TAYs were implemented in coordination with her outpatient psychiatrist and therapist. In this poster, we discuss both the stresses of transitions as well as best practices for TAYs, especially noting unique obstacles and opportunities in the current COVID-19 era.

No. 82
WITHDRAWN

No. 83
Challenges in Managing Mood Dysregulation in Children With Many Adverse Childhood Experiences: A Literature Review
Poster Presenter: Fauzia Zubair Arain, M.D.
Lead Author: Aiman Tohid, M.D., M.P.H.
Co-Authors: Nastacia Chavannes, M.D., Marilena Adames-Jennings, M.D.

SUMMARY:
Background: Disruptive behavior combined with mood dysregulation is one of the most common presenting complaints of children to the ER.1 For instance, a 10yearold African-American boy with past psychiatric history of attention-deficit/hyperactivity disorder (ADHD), oppositional defiant disorder (ODD), and two previous psychiatric hospitalizations, presented with acute exacerbation of aggressive behavior and homicidal ideation towards his parents. Home medications include methylphenidate 27 mg once daily, clonidine 0.1 once daily, and risperidone 0.5 mg twice daily. Treatment was complicated by non-compliance to medications. There was a history inconsistent

parenting, predisposing him to poor attachment. His father had been incarcerated during the time of the patient's birth and returned home when patient is 8 years old. The patient lived with his aunt for two years. During this time, he had multiple visits to the comprehensive psychiatric emergency program (CPEP) and cases involving child protective services. We did a systematic review to interpret associations between adverse childhood experiences (ACEs) and behavior dysregulation in children.   Methods: Our search of databases primarily included Pubmed, Psychinfo, APA psychnet and Medline. We reviewed 35 articles and included 5 in this systematic review. The first study was a meta-analysis which reported increased risk of substance use, violence, and physical health conditions associated with ACEs. The second study analyzed data of 64,329 youth within the Florida Department of Juvenile Justice to look for suicide attempts associated with the presence of ACEs. The third study was a systematic review of 42 articles related to ACEs. The fourth study analyzed data collected for 22,575 youth of Florida Department of Juvenile Justice about childhood abuse, trauma, neglect, criminal behavior, and other risk factors for ACEs. The fifth study used data from 64,000 juvenile offenders in Florida.   Results: ACEs increase the risk of psychological conditions, developmental problems, and risk taking behaviors.1 The results of the second study showed that the children with ACEs were at increased risk of all health outcomes in comparison to the children with no ACEs.2 Furthermore, the relationship between childhood difficulties and suicide is interceded by individual characteristics, especially with the development of maladaptive personality traits in adolescents. 3 Lastly, ACEs increase the risk of becoming a chronic and serious juvenile offender by 35.4 Increased exposure to ACEs differentiates early-onset and sustained criminality from other forms of criminality.5   Conclusion: ACEs such as child maltreatment, traumatic experiences, neglect, exposure to domestic violence, frequent relocations, etc., can affect the development of a child in multiple ways including suicidal behavior, violence, aggression, impulsivity, criminality, school difficulties and substance abuse.

No. 84

Challenges in the Management of Psychiatric Manifestations in Sturge Weber Syndrome: A Literature Review

Poster Presenter: Fauzia Zubair Arain, M.D.
Co-Authors: Nastacia Chavannes, M.D., Jose Arturo Sanchez-Lacay, M.D., Celine C. Corona, M.D., Marilena Adames-Jennings, M.D.

SUMMARY:

Background: Sturge-Weber Syndrome (SWS) is a rare neurocutaneous disorder typically characterized by unilateral facial nevus flammeus in the trigeminal nerve distribution, congenital glaucoma, and pial angiomas in the ipsilateral brain and meninges.1 Although 75-90% of children with SWS present with epilepsy, SWS syndrome is also associated with severe behavioral and academic problems in childhood such as behavioral disorders (50%), social communication difficulties (45%), sleep difficulties (26%), autism spectrum disorder (24%), and academic difficulties.2 Previous studies of individuals with SWS have mainly focused on the medical aspects of this syndrome with less attention on the psychobehavioral issues.3 To address this, we did a literature review to assess the challenges in the management of neuropsychological and behavioral problems of children with SWS. Methods: A Pubmed search was done using keywords "SWS in children", "management", and "Psychiatric and behavioral problems". The search results yielded 65 articles and 6 pertinent studies comprised of retrospective population-based studies and a case-control study. These were selected for this review based on high quality and internal validity. Results: A study by Turin et al. aimed to screen for psychiatric diagnosis and included 16 children, age 3-34, with SWS. He found that the most frequent diagnoses were mood disorders (31%), disruptive behavior disorder (25%), adjustment disorder (25%), and impulse control disorder. These patients often need management for problems with mood, attention, sleep, learning and substance abuse.4 Another study by Madaan et al. had shown that while developmental milestones and neuroimaging are usually normal, half of the patients with SWS are believed to develop mild to moderate intellectual disability, requiring mental health treatment and special education.1 A study by Raches et al. had also shown that behavioral and academic

problems in childhood were concomitant with the seizure disorder common in SWS; children with seizures were 10 times as likely to have received special education services.5 Even those with normal MRI and EEG findings with absent or mild epilepsy may experience difficulties with learning, social communication, sleep and behavior.2 Conclusion: Although SWS classically presents with a facial port wine stain, glaucoma, seizures, and cognitive impairment ranging from mild learning disabilities to more global cognitive impairment, the psychobehavioral features are prevalent in this population but rarely studied.4,6,7. Autism Spectrum Disorder, Social Communication Difficulties, Impulse Control Disorder, Disruptive Mood Disorder, Sleep and Behavioral Disorder, Learning Disabilities and Developmental comorbidities occur in a high proportion1 limited number of studies exploring the challenges associated with management of psychobehavioral problems of children with SWS, this topic warrants further exploration.

No. 85

Clonidine for Reduction of Agitation in Delirium in a 17 Year-Old Female Diagnosed With Presumptive Anti-NMDA Receptor Encephalitis

Poster Presenter: Mehdi Elmouchtari
Co-Authors: Mira Nicchitta, Ryan Matthew White, D.O., Kiran Khalid

SUMMARY:

Background: Anti N-methyl-D-aspartate receptor encephalitis (anti-NMDARE) can present with unpredictable neurological and psychiatric manifestations [1]. Currently, the pharmacological management of behavioral symptoms in anti-NMDARE includes second-generation antipsychotics (SGAs), benzodiazepines, and alpha-2 agonists such as clonidine [2,3,4]. However, the literature supporting these treatments is limited. We present a case of a 17-year-old female treated with clonidine and SGAs for agitation in presumptive anti-NMDARE. Case Presentation: S is a 17-year-old African-American female with past medical history of asthma and obesity who presented to the emergency department with new-onset seizures and confusion, and a one-month history of headaches, visual disturbances, and decreased hearing. On admission her temperature was 100.2F, with tachycardia and tachypnea. She received midazolam in the ambulance and 1500 mg levetiracetam in the emergency department. EEG showed mild background asymmetry and intermittent right parietal and occipital slowing. MRI was within normal limits. Lumbar puncture suggested a non-infective inflammatory process. On hospital day (HD) 4, empiric treatment was initiated for anti-NMDARE. Her mental status deteriorated during hospitalization: she exhibited reduction in response to verbal commands, insomnia, and agitation (pulling at IVs, absconding from bed, pushing family and staff) alternating with sedation. Psychiatry was consulted for recommendations. Haloperidol was initially chosen as an alternative to as-needed benzodiazepine due to midazolam-associated agitation after sedated MRI. Haloperidol 1 mg was discontinued on HD 7 after two doses, due to oromandibular dyskinesias, and replaced with olanzapine 2.5 mg as needed. Scheduled psychopharmacologic support was required for agitation secondary to corticosteroid administration. Despite evidence of benefits of lorazepam in autoimmune encephalitis [4] and due to initial worsening of agitation on midazolam and parental concerns, clonidine was scheduled for its favorable side-effect profile, long half-life, and its use in similar cases [3], with a lorazepam trial planned in the event of inefficacy. Dosage was titrated to 0.2 mg at bedtime with 0.1 mg morning and afternoon doses. Over the next three days, the primary team reported significantly reduced agitation, reduced insomnia, and daytime somnolence. Clonidine was tapered over three days to 0.1 mg at bedtime, 0.05 mg in the morning, and no afternoon dose. Symptomatic worsening occurred on HD 11, and nighttime dose was increased back to 0.2 mg. On HD 13, the patient was transferred to a hospital system with in-house pediatric neurology support. At the time of submission, she remains hospitalized for further treatment with rituximab. Anti-NMDAR levels are pending. Discussion: This case provides an example of clonidine used as a safe and effective pharmacologic support for agitation in the setting of anti-NMDARE delirium.

No. 86

Conversion Disorder Post Suicide Attempt With SSRI Overdose

Poster Presenter: Laura Planche, M.D.
Lead Author: Sophie Esther Weinberg, M.D.
Co-Author: Sagarika Ray, M.D.

SUMMARY:

Conversion Disorder in the DSM-V, also known as Functional Neurologic Disorders in the general medical community, is a disorder that features neurological symptoms which cannot otherwise be explained by a medical condition. Even though the source of this disorder is not structural and the cause is unknown, the symptoms are still experienced by the patient. The symptoms often bring great suffering and cause true loss of functioning to both the patient and their families. Contrary to general thought, the treatment includes close follow up by all medical practitioners involved, primary medicine, psychiatry, and psychology. Early diagnosis and increased support by medical team is proven to improve and hasten recovery. The symptoms of this disorder vary from person to person, but all involve the neurological system, such as paralysis, weakness, tremors, loss of balance, non-epileptic seizures, unresponsiveness, loss of taste or smell, inability to speak, issues with vision, or even deafness. The trigger for these symptoms cannot always be identified. Sometimes they may be triggered suddenly by a stressful event, or a trauma. Sometimes there may be secondary gain identified, but not always. The patient is usually unaware and lacks insight into the trigger or the cause of the onset of the symptoms. There are certain risk factors that can increase the risk of this disorder. Other than recent or past emotional, sexual, or physical trauma, other risk factors include already being diagnosed with epilepsy, migraines, tinnitus, other mental health disorders, or having a family member with this disorder. Untreated conversion disorder has a poor prognosis, with poor quality of life, similarly to those with identifiable causes of neurological disease. In this discussion, we identified a female adolescent patient who suffered from severe anxiety and depression, with a history of sexual abuse, family conflict, and tinnitus, no prior history of seizures, who presented to the emergency room after a suicide attempt via overdose of her prescribed SSRI. Once admitted, she had an episode of abnormal movements suggestive of seizure, likely due to the SSRI overdose. Subsequently, this patient continued to suffer from multiple episodes of non-epileptic seizure activity in the weeks to come. She was evaluated by Neurology multiple times, but the cause remained unknown. The poster highlights an unique occurrence of pseudo seizure like symptoms following a suicide attempt with an actual seizure episode due to the SSRI overdose in an adolescent girl.

No. 87

Covid-19 and Social Media as Precipitating Factors for Inpatient Psychiatric Hospitalization in an Adolescent Male

Poster Presenter: Mehdi Elmouchtari
Co-Author: Abhishek Reddy, M.D.

SUMMARY:

Background: The global coronavirus disease 19 (COVID-19) pandemic has necessitated the use of quarantine to prevent further spread. Past quarantines, including those related to the SARS outbreak of 2003, have been associated with increased rates of psychological distress[1]. Additionally, some studies have found an increase incidence of PTSD symptoms among people quarantined in the midst of infectious disease crises[2]. For children, the disruption of in-person schooling, the isolation imposed by quarantine, and the socioeconomic instability inherent to this crisis have already been seen to affect mental health[3], a finding consistent with prior public health crises[2]. Case Presentation: ER is a 16 year old male with no past psychiatric history, who presented to the inpatient child psychiatry unit after an aborted suicide attempt by hanging the previous evening. He admits to feeling low occasionally in the past but otherwise had no past psychiatric history. Four months prior, in March of 2020, he broke up with his girlfriend. After briefly reprising the relationship they had officially ended the relationship two months prior to admission. He states that the isolation imposed by quarantine, along with the end of his relationship, had led to him feeling that he had lost all of his friends and supports, making it difficult to cope with the breakup. He endorsed worsening

depressive symptoms, and in July 2020 he initiated treatment with escitalopram 10 mg. In early August 2020, upon seeing an image of his ex-girlfriend "moving on" on social media, he began to attempt suicide by asphyxiation with an electric cord. He decided mid-attempt to instead seek help at his outpatient psychiatric appointment the next morning, and at the appointment was encouraged by his outpatient psychiatrist to seek inpatient treatment. ER's clinical course in the inpatient unit was uncomplicated. His escitalopram was titrated up to 20 mg and he was sent home after significant symptomatic improvement with a safety plan and close outpatient follow-up. Further investigation during his hospital stay revealed that social media, in this case a surrogate for social interaction, exacerbated ER's underlying depression and psychosocial stressors by providing a warped view of his peers and their own experiences of quarantine. Instead of being a potentially protective factor and alleviating the loneliness of quarantine, his interactions via social media were detached from the emotional realities of his peers' isolation and instead offered a series of joyful façades. Discussion: This case highlights the need to appreciate the roles social media plays in adolescent social development, and how this influences mental health in the context of quarantine during the COVID-19 pandemic.

No. 88

Cultural Considerations in Psychiatric Treatment of Children and Adolescents of Immigrant Parents

Poster Presenter: Mandar Jadhav, M.D.
Co-Author: Esther S. Lee, M.D.

SUMMARY:

In an inner city academic pediatric medical center in the northeast/mid-Atlantic United States, the growing numbers of immigrant & refugee families over the years has been correlated with an increase in children and adolescents from these families being treated for psychiatric concerns. While many of the diagnostic and treatment considerations for these youth are similar to those of youth from families who have been acclimated to this social environment for generations, there are some cultural differences that bear a significant impact on their treatment. Some of these factors are examined through the lens through a small selection of such youth herein for illustration in the background of previously published academic work in this domain. Additional avenues for interventions that may decrease the duration & severity of youth and family distress are also identified for further research.

No. 89

Disulfiram-Induced Psychosis in an Adolescent Treated for Chronic Lyme Disease: A Case Report and Review of Related Literature

Poster Presenter: Christina Michael, B.S.
Co-Authors: Kenny Hirschi, M.D., Ramnarine Boodoo, M.D., Daisy Shirk, M.D., Jasmin G. Lagman, M.D.

SUMMARY:

Introduction: Disulfiram (DSF) is a commonly prescribed medication for the treatment of alcohol use disorder. DSF has been recently studied in the treatment of Lyme Disease but with minimal data and contrasting results. Treatment has shown significant psychiatric side effects and has even resulted, in the adult population, in acute psychiatric hospitalization during treatment. We present a case of a 16 y/o male that was hospitalized status post treatment of Chronic Lyme disease with DSF that developed fulminant psychosis. Objectives: To discuss the presentation of overt psychosis in an adolescent on disulfiram for chronic Lyme disease. Case Presentation: A 16-year-old male with a history of chronic Lyme disease presents to the emergency department (ED) for altered mental status (AMS). Patient was found running naked in the woods when the police were called. At the ED the patient stated he was "running from God" and reported auditory hallucinations. Past history includes an inpatient stay last year when he had presented to the hospital with AMS. His behavior at the time was described as having inappropriate laughter, grandiose ideas, delusions and pressured speech. He was given antibiotics and presented back to the hospital when his symptoms did not improve. Workup at that time yielded a diagnosis of Lyme disease. Lyme IgG was positive. Head CT showed no abnormalities. He was on antibiotics for a year where he was reported to be "stable", then followed up with a Lyme disease specialist who recommended switching treatment to DSF. He was taken off of DSF

after three weeks of treatment, a few days prior to presentation - at which he presented with overt psychosis. During his inpatient stay, he was sexually and religiously preoccupied, disorganized and exhibited aggressive behavior. He responded minimally with Olanzapine and responded better with the addition of valproate. Discussion: Disulfiram is an irreversible aldehyde dehydrogenase inhibitor and in the context of alcohol use results in increased serum levels of acetaldehyde, which can precipitate symptoms of diaphoresis, palpitations, facial flushing, nausea, vertigo, hypotension, and tachycardia with the goal of discouraging further alcohol use. This is referred to as a DSF reaction and, due to the variability in half-life of this medication, has been seen in patients up to 2 weeks after discontinuation of therapy. There are also commonly associated dermatologic, psychiatric, and cardiac side effects. A lesser known mechanism of action of DSF is that it also inhibits dopamine beta-hydroxylase (via metabolite of DSF; Diethyldithiocarbamate) which is an enzyme that converts dopamine (DA) to norepinephrine (NE). This lesser known mechanism of DSF results in an increase in DA within the brain and is the principle mechanism implicated in psychosis seen with DSF dosing. To our knowledge, there have been no studies regarding adolescents presenting with psychosis secondary to disulfiram.

No. 90

Does Recurrent Mood Dysregulation Predict Obesity? Observations Made in an Adolescent Inpatient Psychiatric Unit

Poster Presenter: Megan Lin, D.O.
Lead Author: Pooja Yudhishthir Palkar, M.B.B.S.
Co-Authors: Estefany Cristina Garces Uribe, M.D., Sagarika Ray, M.D.

SUMMARY:
The prevalence of obesity in adults with psychiatric disorders is known to be twice as high as compared to those without psychiatric disorders. Obesity in adults is defined as a body mass index (BMI) ≥ 30 kg/m 2 (body weight in kilograms divided by height in meters squared). Obesity in adolescents is defined as BMI ≥ 95th percentile of the sex- specific BMI for age which is 20.5 % in the United States of America . Childhood obesity is known to be one of the most serious public health challenges of the 21st century . In the United States, incidence of childhood obesity has more than doubled and quadrupled in adolescents in the past 30 years. About 80% of adolescents with obesity are said to continue to have this condition as an adult . Obesity is associated with several medical conditions like hypertension, hyperlipidemia, metabolic syndrome that can lead to long term complications such as cardiovascular disease. Research has yielded significant association between mood disorders and childhood obesity. Obesity is excessively prevalent among adolescents with mood disorders and is associated with consequences such as increased illness severity, poor quality of life, emotional and behavioral disorder, poor self- esteem and even suicidality. In adolescents with mood disorders, excess weight gain may add to disease burden by increasing stigmatization, decreasing self-esteem, decreasing social function and reducing self-management behaviors such as adherence to medication regimens. Thus, it is vital to prevent or arrest obesity especially in the high risk population of children and adolescents with mood disorders to minimize short and long term complications of obesity. We present our observations from cases of 3 adolescents with prior psychiatric history of mood disorders and baseline obesity needing frequent psychiatric hospitalizations owing to de-compensation in mood symptoms with prominence of continued weight gain. We emphasize on the vicious cycle of multiple factors such as genetic predisposition, impulsivity, exposure to more than two psychotropic classes, binge eating behaviors and environmental factors that in turn contribute to increase in BMI correlating to heightened psychiatric and medical burden in these patients . Through the presentation of these cases, we urge clinicians to take a cohesive and strategic approach to tackle obesity in children with mood disorders to prevent disastrous outcomes.

No. 91

Efficacy and Tolerability of Ziprasidone Use in Children and Adolescents: A Systematic Review and Meta-Analysis

Poster Presenter: Catherine Soeung, M.D.

Co-Authors: Ingrid Haza, M.D., Abhishek Wadhwa, M.D., Aditya Sareen, M.D., Inmaculada Peñuelas-Calvo, M.D.

SUMMARY:
Objectives The aim of our study is to examine the efficacy and tolerability of ziprasidone in children and adolescents. Ziprasidone is an atypical antipsychotic that has demonstrated efficacy for the treatment of bipolar disorder and schizophrenia with less propensity for neurological side effects, metabolic side effects, and weight gain in adults. There is some preliminary evidence for ziprasidone use in children and adolescents with several open-label studies and some randomized control trials; therefore, it is advantageous to understand where ziprasidone lies in the treatment algorithm of children and adolescents. **Methods** We conducted a literature search consisting of open-label or randomized controlled trials that report on ziprasidone use in children on the PubMed database. We found 13 studies (11 open-label and 2 randomized controlled trials) that met our inclusion criteria. Our outcome measures included efficacy measures, such as the Brief Psychiatric Rating Scale (BPRS), Young Mania Rating Scale (YMRS), Clinical Global Impression-Severity (CGI-S), and adverse effects such as weight gain, increase in BMI, QTc prolongation, sedation, dizziness, and extrapyramidal symptoms (EPS). We conducted a random-effects meta- analysis and meta-regression of potential moderators including age, gender, race, dosage, and study duration. Publication bias was assessed with funnel plots. **Results** Data from 13 studies were meta-analyzed (total n = 560; mean age = 13.16 years; male = 70.35%) that reported the use of ziprasidone in children and adolescents with psychosis, bipolar disorder, autism spectrum disorder (ASD) and Tourette's disorder. The mean ziprasidone dose was 80.76 mg, and the mean study duration was 3.38 months. We found that ziprasidone was efficacious in children and adolescents in measures of BPRS (–13.493; $p < 0.05$), YMRS (–14.225; $p < 0.05$), and CGI-S (–1.430; $p < 0.05$). In measures of adverse effects, ziprasidone was not found to cause any significant weight gain (0.164; $p > 0.05$) or change in BMI (–0.159; $p > 0.05$). QTc prolongation was found to be significant (13.122; $p < 0.05$). The most common side effects were sedation (49.3%), followed by EPS (17.9%) and dizziness (15.5%). **Conclusions** Results from the current analysis demonstrate that ziprasidone is an efficacious option for use in the child and adolescent population. It does not cause significant weight gain; however, QTc prolongation and sedation were found to be the most significant side effects of ziprasidone use. Therefore, baseline ECG and a thorough history must be obtained before prescribing ziprasidone in children and adolescents.

No. 92
WITHDRAWN

No. 93
LSD Induced Psychosis: Still Relevant
Poster Presenter: Qais Zalim
Co-Authors: Marwa Salam, Khaled Said, M.D.

SUMMARY:
We herein report a case of a 16 year old male who presented with acute onset psychosis following ingestion of LSD. Patient reportedly consumed two "pills" of LSD, following which he developed remitting and relapsing symptoms of paranoia, agitation and mood instability. He had no past psychiatric history but did have an intermittent history of cannabis use. Initially, attempts were made to manage his symptoms on an outpatient basis in the community. However his symptoms of paranoia and agitation increased, with four visits to the ED within one week, following which he was admitted to an inpatient adolescent psychiatric unit. He was discharged, after a three week hospitalization, on Risperidone 4 mg daily, with resolution of his presenting symptoms. The association of LSD with mood instability and psychosis has been well documented and rare associations with suicide and homicide have also been reported (1). However there has been a recent resurgence of interest and research in the use of LSD in the treatment of "several types of mental illnesses including depression, anxiety, post-traumatic stress disorder, and addiction that are refractory to current evidenced based therapies" (2). There is even literature reporting the use of LSD as "anti-anxiety agent, a creativity enhancer, a suggestibility enhancer, and a performance enhancer" (3). As

demonstrated in this case and numerous prior reports, even a single time use of LSD may be associated with considerable psychiatric morbidity. Thus there is need for extensive further research and caution with regard to the widespread adoption of psychedelics in the future.

No. 94
Melodic Medicine: Positive Response to Music in an Adolescent With Catatonia
Poster Presenter: Cecily Lehman, D.O., M.A.
Co-Authors: Steven Nemcek, M.D., M.S., Meghan Schott, M.D., Alvi Azad, D.O., M.B.A.

SUMMARY:
Catatonia is a behavioral syndrome associated with both psychiatric and medical disorders. Catatonia is diagnosed by the presence of a disturbance in behavior and movement including catalepsy, waxy flexibility, stupor, agitation, mutism, negativism, posturing, mannerism, stereotypies, grimacing, echolalia, and echopraxia. Untreated catatonia can have deadly outcomes. First line treatment with benzodiazepines can improve behavioral disturbances but may not fully alleviate symptoms. There is little to no information looking at the effects of alternative therapies, specifically music therapy, in patients with catatonia, and even less research looking at music therapy in catatonic youth. However music therapy has shown efficacy in older patients with neurological and movement disorders like Alzheimer's disease, Parkinson's disease, Huntington's disease and stroke. Can the positive response from music therapy seen in adults with neurological and movement disorders be translated to adolescents suffering from catatonia? We present the case of a 15 year old Nigerian male diagnosed with bipolar disorder I who developed negative symptoms of catatonia during hospitalization. The patient had a moderate response to benzodiazepines, but the patients parents were hesitant about using too much medication, which led to a search for alternate treatments. It was noted that the positive effects of the benzodiazepines were enhanced when the patient listened to music specific to his Nigerian culture. During music sessions the patient was able to dance, laugh, and interact with staff and peer. Once the music session was over the patient regressed and his catatonia worsened. This case highlights the importance of understanding the cultural backgrounds of our patients and that more research is needed into alternate treatments for catatonia. It also serves as a reminder that medication is only one part of the therapeutic toolbox.

No. 95
OCD Like Symptoms in a Patient With Arnold-Chiari Malformation: Case Report
Poster Presenter: Rooshi Amit Patel, M.D.
Co-Author: Marwa Mohamed Salam, M.B.B.S.

SUMMARY:
Arnold-Chiari Malformation is a general term used to describe a condition in which the cerebellar tonsils extend downwards through the foramen magnum into the upper spinal canal (1). This is typically caused by congenital structural defects in the base of the skull or cerebellum, however, it can also be acquired from trauma, infection, or disease. The most common symptoms include, but are not limited to: headaches, hearing and balance issues, difficulty with motor coordination, speech difficulties, gait imbalance, nausea, dizziness, and motor or sensory deficits (1). However, there are only a few cases documenting the neuropsychiatric manifestations associated with Chiari Malformation (3-6). These manifestations included: attention deficit hyperactivity disorder (3), anxiety (3), and depression (3), deceased performance in visuospatial memory (4), executive functioning and processing speed (4), dementia (5), and psychosis (6). We report a case of an 8-year-old girl, evaluated in an outpatient child psychiatric clinic, who presented with a recurrence of obsessive-compulsive disorder (OCD) -like symptoms with a new onset of psychotic features

No. 96
Olfactory Hallucinations in Cannabis-Associated Psychosis Suggests Underlying High-Risk Structural Brain Abnormality
Poster Presenter: Nastacia Chavannes, M.D.
Co-Author: Marilena Adames-Jennings, M.D.

SUMMARY:
Background:Studies on adolescent marijuana use have demonstrated that adolescents are more likely to experience subclinical psychotic symptoms during and after years of regular use. These cannabis-associated psychotic-like experiences have recently been correlated with two specific brain anatomical regions, the parahippocampal gyrus and uncus, in otherwise healthy individuals. The objective of this case is to highlight the importance of obtaining a detailed substance use history, a timeline of psychotic symptoms, and imaging and EEG studies in the evaluation, risk stratification, medication management, and disposition of psychotic patients. Clinical Vignette:17-year-old African American male with a history of learning disability, presented to the psychiatric ER after his mother had observed increasingly bizarre behavior over a 5-day period. On evaluation, the patient appeared restless, tremulous, was breathing heavily, and frequently scanned the room. Speech was staccato with thought blocking and repeated complaints of smelling gas. Patient expressed that he believed he had witnessed the assault of a family friend. As a result, he was fearful that the perpetrators were planning to harm him and his family. Collaterally, the family assured their safety and patient's fears were attributed as paranoid delusions. Prior to onset of symptoms, the patient reported smoking marijuana. Laboratory values at time of admission were grossly within normal limits. Brain MRI showed no abnormalities. EEG was unremarkable. Patient was initiated on second generation antipsychotic medication, Risperidone, to address psychosis. Lorazepam was also initiated due to severe anxiety and panic attacks. Paranoia and anxiety symptoms persisted throughout inpatient stay. Olfactory hallucinations were also slow to resolve, transforming from patient smelling gas to smelling "rape" with preoccupations that he recalled his sister had been sexually assaulted 3 days prior to his inpatient admission. Discussion:Delta-9-tetrahydrocannabinol, the main psychoactive constituent of cannabis, stimulates cannabinoid receptors type-1, which are highly expressed in the olfactory lobe, hippocampus, parahippocampus, and amygdala regions. The uncus, located at the junction of the hippocampus, amygdala, and olfactory lobe, has been implicated in olfactory hallucinations and memory impairments. Among youths identified with ultra-high risk for psychosis, several cross-sectional and longitudinal MRI studies have demonstrated volumetric and structural abnormalities in hippocampal formation and the uncus, while functional MRI studies noted less activation than controls in the parahippocampal gyrus during memory encoding. In this case, direct correlation is limited by access to more robust imagining studies. Nonetheless, clinical suspicion of possible underlying structural brain abnormalities can suggest an increased risk of developing a full-psychotic disorder, impacting treatment plan and prognosis.

No. 97

Overcoming Complications in Management of a Difficult to Treat Adolescent With Schizoaffective Disorder

Poster Presenter: Michelle Miller
Co-Authors: Nadege Barbe, M.D., Raul Poulsen, M.D.

SUMMARY:
Background: Schizoaffective symptom onset in early adolescence is associated with a particularly poor prognosis and increased likelihood of treatment resistance. These patients may require multiple trials of potent antipsychotics and mood stabilizers, requiring physicians to navigate a path through various adverse drug reactions and potential medication toxicities. Case: J was a 17 year-old adolescent female with a history of schizophrenia and major depressive disorder, who was involuntarily admitted to an inpatient child and adolescent psychiatry unit for aggression, agitation, psychosis, and mania. Upon admission, she was started on Risperidone 1mg twice daily for psychotic symptoms and continued on home medications Clonidine 0.1mg daily for aggression and Sertraline 100mg daily for depressive symptoms. J subsequently developed extrapyramidal symptoms and Benztropine 0.5mg twice daily was initiated. Benztropine was later replaced with Diphenhydramine 25mg daily and 50mg at bedtime for extrapyramidal symptoms and insomnia. Psychosis, mania, and agitation persisted on increasing doses of Risperidone, and Sertraline was tapered to discontinuation for potential contribution to mania. Additional collateral information obtained

from mother, and observations by the treatment team prompted a change in diagnosis to schizoaffective disorder, bipolar type. Divalproex 500mg at bedtime was initiated for mood stabilization and gradually increased to 1250mg at bedtime. On this dose of Divalproex, psychotic and manic symptoms significantly improved, but serum Divalproex level was supra-therapeutic. Divalproex dose was decreased to 750mg at bedtime, but psychotic and manic symptoms worsened. Divalproex was discontinued and Lithium 300mg twice daily was initiated for mood stabilization. Risperidone was further increased, without improvement in psychotic symptoms. Diphenhydramine was discontinued due to possible contribution to altered mental status. Clozapine 25mg at bedtime was initiated with Metformin for weight gain prophylaxis. As Clozapine was gradually increased with cross-taper decrease of Risperidone to discontinuation, J became catatonic. She responded to Lorazepam challenge and symptoms resolved on standing Lorazepam 1mg twice daily, which was eventually tapered to discontinuation. Lithium was increased to 300mg daily and 600mg at bedtime, and Clozapine was titrated upward as tolerated. As Clozapine increased to 100mg daily and 125mg at bedtime, J's psychotic symptoms began to significantly improve. Adverse effects of intermittent sialorrhea and dry mouth were tolerable at this dose. J was discharged on day 42 of hospitalization. Discussion: This poster will discuss the myriad of complications that may arise when attempting to identify an effective antipsychotic to treat adolescent schizoaffective disorder, including extrapyramidal symptoms, catatonia, medication-induced delirium, and potentially toxic serum medication levels.

No. 98

A Case of Psychosis in an Adolescent Male using CBD Kief Nugs

Poster Presenter: Jacqueline Tucker
Co-Authors: Connie Ling Koons, M.D., Daisy Shirk, M.D., Kenny Hirschi, M.D., Jasmin G. Lagman, M.D.

SUMMARY:

Introduction: Cannabidol (CBD) is an ingredient in cannabis (marijuana), and can also be derived from the hemp plant, which is a type of cannabis plant. However, CBD is thought to be non-intoxicating, lack psychoactive activity, and have no detrimental effects on memory. THC is the main psychotropic constituent of cannabis. Current medicinal uses being studied for CBD include chronic pain, resistant epilepsy, nausea and vomiting from chemotherapy, anxiety, post traumatic stress disorder, and schizophrenia. CBD has a contrasting mechanism of action to THC, and due to THC's psychotropic and intoxicating effects, it is important to ensure the purity of CBD. **Objectives**: To discuss possible explanations for CBD induced psychosis and examine purity standards for CBD **Case Presentation**: Patient was a 17 year old male adolescent who presented to the inpatient psychiatry unit with chief complaints of worsening anxiety and visual hallucinations. He reported current drug use of smoking up to 6 grams of hemp flower per day (equivalent to 2,400 mg of CBD) for the last two weeks. The hemp flower the patient used reportedly contained 400mg of CBD per gram. He denied any psychoactive cannabis use stating that it made him psychotic in the past. Urine drug screen (UDS) was positive for metabolites of THC upon arrival. During hospitalization, the patient was started on olanzapine which was titrated to 7.5mg daily with reduction in hallucinations. Diagnosis was consistent with substance-induced psychotic disorder. **Discussion**: Cannabidol has been studied and reported to not have any intoxicating or psychoactive effects. However, this case presents a 17-year-old male with hemp flower induced psychosis. To our knowledge there have not been previous reports of CBD induced psychosis. Similarly, CBD has been reported to have antipsychotic effects in schizophrenic patients. Commercially available hemp flower must be below 0.3% THC to be sold legally in the United States. Given the large amount of hemp flower the patient was using, the total amount of THC contained in the product could account for psychotic symptoms, even if allowable THC is below federal limits. Previous studies have shown that commercial products of CBD are commonly contaminated with THC. It is important that providers are aware of CBD products possibly containing some amount of THC, and if used in large doses, could result in psychosis.

No. 99

Re-Experiencing of Trauma During the Covid-19 Pandemic: A Literature Review

Poster Presenter: Fauzia Zubair Arain, M.D.
Co-Authors: Aiman Tohid, M.D., M.P.H., Celine C. Corona, M.D., Urenna Anyeji, M.D., Jose Arturo Sanchez-Lacay, M.D.

SUMMARY:

Introduction: Natural disasters and periods of economic turmoil are associated with increased violence against children.1 The forced quarantine due to the COVID-19 pandemic has caused severe psychological impact on children's mental health.2 The sudden isolation due to closures of schools and restriction on social interactions with peers had been challenging and put them at higher risk of physical, sexual, domestic and emotional abuse.3 In times of community wide turmoil, family members (abusers) are at home, schools are closed, and there is a lack of interaction with doctors. Financial distress is also a contributing factor. In a community hospital in NYC, we had a case of a 16-year-old Hispanic female with no past psychiatric history who presented with depression, suicidal ideation and self-inflicted injuries (cutting her left forearm). Due to isolation, the she had experienced flash backs and insomnia from her own experience of sexual molestation and witnessing domestic violence. The patient was started on fluoxetine 40 mg daily and psychotherapy. The purpose of this study is to review the unmasking of depression, anxiety, and traumatic stress in children due to the forced isolation during the COVID-19 pandemic. Methods: Our search of databases primarily included Pubmed, Psychinfo, APA psychnet and Medline searching for words "adolescents, disasters, COVID-19, pandemics, and mental disorders." We reviewed 30 articles and included 5 in this systematic review. The first 3 articles were meta-analyses of articles on the impact of COVID-19 on families and children. The fourth and fifth study conducted tests on group distinctions and employed multiple regression analyses to evaluate the relationships between COVID-19 risk factors, demographic characteristics, risk factors to mental health, protecting factors, parental burnout, and child abuse probability. Result: The first article showed that the structures usually provided by schools that promote well being in mental health had been disrupted by widespread stay-at-home orders.1 The second study explained that children and adolescents reported psychological stress, depression, and anxiety during the pandemic.2 The third study described that giving attention to children and adolescents during the pandemic can prevent the incidence of mental disorders.3 Fourth and fifth studies revealed that COVID-19 related stressors, anxiety, and depression are linked with higher parental observed stress and in turn higher child abuse potential.4, 5 Conclusion: Isolation, physical distancing, and financial shutdown will continue to threaten the mental health of children and adolescents. Absence of friends and increased stress are chief concerns. Another threat is the greater probability for parental mental disorder, domestic violence and child abuse. This is a very challenging time especially for children with disabilities and preexisting mental health problems, and low socioeconomic status.

No. 100

Role of Vitamin E in Olanzapine Induced Hepatotoxicity

Poster Presenter: Hiren Patel, M.D.
Co-Author: Daisy Shirk, M.D.

SUMMARY:

Introduction: Elevated transaminases are a common complication of many drugs, and occurs in up to 27% of patients taking the atypical antipsychotics medications. (3) For patients who have no other options than remaining on certain antipsychotics such as Olanzapine, this presents a challenge for physicians as they weigh the risks vs. benefits of continuing antipsychotic medications. The aim of this study is to present a case study in which low dose Vitamin E therapy successfully reduced the damaging effects of Olanzapine on liver enzymes. Case Presentation: This case reports the course of a 15-year-old adolescent with DMDD, RAD ad PTSD as well as intellectual disability. The report is interesting in that when Vitamin E was discontinued there was a recrudescence of the transaminases. At the time of admission, baseline labs were within normal limits including AST (17 U/L) and ALT (20 U/L). One month after beginning olanzapine, ALT was increased to 110 U/L and AST to 53 U/L. Having

ruled out other etiologies, olanzapine and cetirizine were deemed the most probable causes of the elevated transaminases. Cetirizine was discontinued and Vitamin E 100 mg/day was initiated to treat elevated transaminases as documented in a prior single case study. (2) Ten days later ALT dropped to 43 U/L and AST to 28 U/L. Vitamin E was discontinued to determine whether ongoing treatment was necessary. Cetirizine was not restarted. Seven days later his ALT had risen to 62 U/L and his AST to 34 U/L, therefore Vitamin E was restarted and was part of his discharge medication regimen. Four weeks later, he was still taking Vitamin E and recheck of transaminases showed, ALT at 20 U/L and AST at 24 U/L. Discussion: Olanzapine has been shown to cause asymptomatic transaminases elevation in approximately 27% of patients. (3) Vitamin E has potent antioxidant properties by protecting the integrity of membranes by inhibiting lipid peroxidation and other therapeutic effects that can retard hepatic fibrosis and may prevent cirrhosis by modulating inflammatory response, cell injury, cellular signaling, and cellular proliferation. (1) The single case study referenced above used a dose of 400 mg/day of Vitamin E to reverse olanzapine-induced liver damage but due to concerns about Vitamin E toxicity, we used 100mg/day and found a similar reduction in both ALT and AST. As a result of our study, we feel that lower dosages of Vitamin E alone may be effective in reducing olanzapine-induced hepatic inflammation. The present study duplicated the results of this earlier study in reversing olanzapine-induced elevated liver enzyme and helped to determine a lower dose of Vitamin E would be as efficacious as the higher dose used in the previous study. (2)

No. 101

Ruling Out Medical Etiologies of Atypical Globus Sensation: A Case Report of Globus Hystericus in a Child With Anxiety and Food Aversion

Poster Presenter: Lindsy Pang
Co-Authors: Romil Sareen, Amanda Gorecki

SUMMARY:

Globus hystericus, also known as globus pharyngeus or globus sensation, is characterized by the physical sensation of a mass in one's throat. Globus sensation makes up 4% of otolaryngology visits1 with peak age of onset of 35-54 years.2 Of children and adolescents diagnosed with conversion disorder, globus hystericus makes up 7%.3 Patients with globus sensation score higher on neuroticism, introversion, anxiety, and depression.4 However, not all patients with globus sensation have psychiatric abnormalities. Globus sensation is also more common in adults and reported more rarely in children. Thus, it is important to share an atypical presentation in children and highlight the necessity of ruling out other organic causes. A seven year old Caucasian girl with no prior psychiatric diagnoses presented with reported anxiety eating solid foods and preoccupation with the sensation of food stuck in her throat and mouth, which started one year ago. The patient's fear of eating solid foods started at the movie theater. She was eating popcorn and a muffin when she suddenly felt a mass stuck in her throat. Afterwards, she refused solid food intake for fear of choking. She was concomitantly diagnosed with streptococcal pharyngitis around the same time. However, the feeling in her throat and her anxiety persisted long after her strep infection resolved with antibiotics. After meals, she was anxious, cried, paced back and forth, and ran to the bathroom to spit out her food. She pointed to her throat implying she sensed a mass. She also complained about feeling food stuck in her teeth, and once she spit out a small hard pellet. She stated that she could feel particles from her liquid meals trapped in her teeth and she had the urge to floss and brush her teeth multiples times per day to remove it. Throughout the day, she spat in a Ziploc bag or cup, especially after a meal when she thought there were food particles that remained in her mouth. In addition, she was afraid of going to sleep alone without her parents, dying in her sleep, and seeing monsters in the dark. Various medical causes were explored. Follow-up throat culture swabs were negative and laryngoscopy was unremarkable. Though it was found that she had minor hiatal hernia and possible small tonsillar stones, her doctors stated it would not explain her difficulty swallowing, globus sensation, and anxiety. Further medical monitoring is warranted for these findings as we directly address her compulsive thoughts and behaviors around globus sensation. The present case study elucidates

the process of ruling out medical etiologies of atypical globus sensation in a young female with anxiety and food aversion. We share effective treatment of compulsive behavior associated with anxiety based on our past clinical experiences. To guide future clinical management, we also provide a condensed review of the differential diagnoses of globus sensation in the pediatric population reported in past literature.

No. 102
Separation Anxiety Disorder in Children Mistaken for Autism Spectrum Disorder: Psychosocial Correlates and Clinical Evidence
Poster Presenter: Valeriy Zvonarev, M.D., M.P.H.
Co-Authors: Anisha Chinthalapally, M.D., Ethan Johnston, Judith V. Ovalle Abuabara, M.D.

SUMMARY:
This case study describes a 12-year-old preadolescent boy who was diagnosed with autism spectrum disorder when he was 3.5 years old and with other psychiatric diagnoses, including ADHD and anxiety disorder, by three different providers over a period of 8 years. Patient records reflect a long and clear history of poor interaction, a lack of interest in social relationships, inflexible adherence to repetitive nonfunctional behaviors, a focus on selected areas of interest, high energy and impulsivity, and disruptive behavior, but without marked language or cognitive delays. Interestingly, he would constantly look for his mother and always respond to others' interactions, though not in a positive manner. He was placed in special classes for children with autism, but his behavioral issues did not significantly improve. Reviewing the patient's history, it is evident that the main factor in his behavioral issues was the presence or otherwise of his mother, rather than his autistic behaviors. When assessed at the age of 11, it was noted that he demonstrated excessive emotional distress when anticipating separation from his mother, which had started many years previously (e.g. unrealistic worries about possible harm befalling her, excessive clinging, recurrent temper outbursts, detrimental comments, and the inability to sleep without his mother present in the same room, requiring frequent reassurance about his safety). Although he was initially agitated in the office while his mother paid attention to others, and he threatened to leave, he was, over time and through play therapy, able to interact and cooperate with others when talking about topics he found engaging. The patient tried many different medication regimens over the years, including antipsychotics and stimulants, with only marginal improvement. Only when his separation anxiety disorder was ultimately managed with lamotrigine, bupropion and sertraline [1], we were able to further proceed with psychodynamic therapy and improve his mother's engagement in the treatment process in order to get his behavioral issues under control [2]. His mother's participation - another vital part of his overall treatment - has contributed to progressive improvement in his independent behaviors, an increased frustration threshold, decreased irritability with changes in his routine, and increased social interactions and verbal communication with others [3-4]. In this poster, we highlight the overlap in symptomatology and differences between ASD and separation anxiety disorder and demonstrate the relevance of establishing a therapeutic alliance and interacting with patients to comprehend the underlying dynamics between patients and their main attachment figures [5]. We also emphasize the extrapolation of those dynamics to patients' interactions with others to better understand their presenting problems and clarify the differential diagnosis, which is of crucial importance due to the effectiveness of early intervention.

No. 103
Side Effect Versus Protective Factor? A Challenging Treatment Decision With Usage of Isotretinoin in Acne Vulgaris and Underlying Major Depression
Poster Presenter: Krishan Chirimunj, M.D.
Co-Author: Matthew DeLuca, M.S.

SUMMARY:
Ms. R., a 13-year-old female with past psychiatric history of major depressive disorder, multiple suicide attempts and hospitalizations presents to the emergency department after endorsing a suicidal statement to her psychologist. The patient's clinical course appears to have followed her perceived betrayal and abandonment by her childhood friend

one year ago, whom the patient had been close with since she was 4 years old. On examination, the patient displayed depressive symptoms and anhedonia accompanied by feelings of hopelessness, helplessness and worthlessness. Her mood is “sad” and she endorses passive suicidal ideation, saying “I want to die. I do not have a plan but I don’t see the point of living.” Her academic performance has begun to decline. and has a history of psychotropic trials of sertraline, escitalopram, fluoxetine, and duloxetine which yielded minimal clinical improvement. Her first psychiatric hospitalization was in March 2019, after she made a video of herself swallowing 25-30 fluoxetine tablets and saying “goodbye”. Four months before the current presentation, the patient’s dermatologist started her on isotretinoin (30 mg qAM, 40 mg qPM). The patient does not feel it is contributing to her sad mood or suicidal ideation and says, “it clears up my acne and at least allows me to look in the mirror.” Given the reported association between isotretinoin, suicidality, and depression, we considered the appropriateness of continuing the medication for this patient. We accounted for the fact that the patient’s psychiatric symptoms significantly predate her beginning isotretinoin and that she endorses positive feelings towards the improvement it has had on her appearance. We then undertook a literature search of the most recent evidence concerning this association. Our overall impression was that the data on this association is inconsistent, and its interpretation is limited by inherent confounders (including the independent association of acne vulgaris and psychiatric symptoms) as well as questions as to causal direction and biological plausibility. These topics have been treated extensively in several noted reviews, including Ludot et al., 2015 and Bremner et al., 2012. Overall, we concluded that, on balance, there was not sufficient evidence to justify discontinuing isotretinoin in this patient. In this poster, we will discuss the literature on isotretinoin and suicidality.

No. 104

SSRI Induced Activation Syndrome: Case Report

Poster Presenter: Columban Heo, D.O.
Co-Authors: Suporn Sukpraprut-Braaten, Ph.D., Andrew J. Powell, M.D., Herman R. Clements, M.D.

SUMMARY:
CLINICAL VIGNETTE ABSTRACT SSRI Induced Activation Syndrome: Case Report Columban Heo D.O. PGY-4, Andrew Powell M.D., Herman Clements M.D., Suporn Sukpraprut-Braaten, MSc, MA, Ph.D. Unity Health White County Medical Center Introduction: Activation syndrome, also documented as jitteriness/anxiety syndrome, is characterized by a combination of excessive emotional arousal or behavioral activation that can arise during the course of antidepressant, specifically SSRI, treatment. The psychiatric signs and symptoms include irritability, agitation, anxiety, panic attacks, restlessness, hostility, aggression, insomnia, disinhibition, emotional lability, impulsivity, social withdrawal, akathisia, odd behavior, hypomania/mania, and paranoia or other psychotic symptoms . Case Description: The patient is a 13 year old white female admitted to the inpatient adolescent unit for worsening depression and suicidal thoughts. She reported having suicidal thoughts for the past year with a plan to hang herself but denied any previous suicide attempts. She reported a history of self harm in the form of cutting her palms with knives and also biting her arms when upset and feeling stressed from bullying. She reported an overall depressed mood with feelings of worthlessness, sleep disturbances, decreased appetite, decreased energy, and a decreased interest in her hobbies for the past 3 weeks. She denied any period of time experiencing an increased/elevated mood and/or irritability or a decreased need for sleep. She was treated with sertraline 50 mg but experienced adverse effects after titrating the dose to 75 mg, that appeared to be consistent with symptoms of activation syndrome. She was started on another SSRI, escitalopram 5 mg, and experienced similar adverse effects but to a lesser extent. Despite these adverse events, the patient’s overall mood improved during her stay secondary to learning new coping skills and participating in group therapy. She denied any depression or suicidal thoughts upon discharge. Due to these adverse effects, the patient was not discharged on any antidepressants and was to follow up with outpatient psychiatry. Discussion: The primary teaching points with this case are to monitor for adverse events secondary to SSRI treatment and to titrate these medications slowly, especially in the

child and adolescent population. Activation syndrome can affect treatment efficacy and outcomes. The use of clinical scales in the outpatient setting to monitor symptoms of activation syndrome can help prevent early treatment discontinuation and improve treatment adherence. Authors' contact information: Columban Heo D.O., PGY-4 columban.heo@unity-health.org (702) 324-3982

No. 105
WITHDRAWN

No. 106
WITHDRAWN

No. 107
The Osteopathic Touch: Using Osteopathic Manipulation to Address Mental Health and Back Pain
Poster Presenter: Ernesto P. Henderson, D.O., M.S.

SUMMARY:
In Osteopathic Medicine, rational treatment is based upon an understanding of the basic principles of body unity, self-regulation, and the interrelationship of structure and function. Somatic Dysfunction (SD) is defined as an impairment or altered function of related components of the body framework system. The Autonomic Nervous System (ANS) controls visceral physiology through a reflex arc. Viscerosomatic reflexes (VSF)/Somatovisceral reflexes (SVR) are the correlative relationship between the ANS and SD which in turn interact with visceral pathologies. SD has also been shown to have psychological implications. During treatment with Osteopathic Manipulative Treatment (OMT) patients report smells, sounds, changes in muscle tension not entirely explained by manipulation, signifying a potential underlying emotional component to the patient's SD. This case follows the assessment and treatment of an 18 year old white male with significant past history of scoliosis and pain. He endorsed, for more than 1 year period, excessive worry, restlessness, fatigue, difficulty concentrating, irritability, muscle tension, sleep disturbances, as well as heart palpitations/accelerations, sweating, trembling, shortness of breath, chest pain and nausea with significant abdominal distress. Additionally, he reported feeling sad, hopeless, and anhedonic. Behavioral scales such as: SCARED, PHQ-9, Beck Depression Inventory II showed depressive and anxiety related disorders. Radiography demonstrated mild thoracolumbar scoliosis between T4- L3 noting "mild scoliosis of the thoracolumbar spine." He had multiple SD in the Cranial, Cervical, Thoracic, Lumbar, Innominate and Sacral regions, Generalized Anxiety Disorder with Panic Attack, and Major Depressive Disorder, Mild, Single, without psychotic features. Patient was treated with OMT including: Myofascial Release, Muscle Energy, Balance Ligamentous Tension (BLT)/, High Velocity Low Amplitude (HVLA), and Osteopathy in the Cranial Field. Symptoms were tracked through subjective report, photographs, and behavioral scales. There was marked improvement in SD, pain and psychiatric symptoms over the course of 3 months. Treating VSR/SVR with manipulation can be helpful, with full resolution only occurring when all aspects of the reflex arc are addressed such as the patient's psychiatric symptoms. Additionally, OMT, can facilitate emotional release. The causative relationship is difficult to ascertain: does OMT affect psychiatric symptoms; could psychiatric symptoms improve due to confounding external factors which in turn positively impact the SD. This relationship requires more research.

No. 108
Trauma-Induced Versus Primary Psychosis in Children and Adolescents—a Diagnostic Dilemma: A Case Report and Literature Review
Poster Presenter: Thejasvi Narayana Lingamchetty, M.D.
Co-Authors: Shivnaveen Bains, M.D., Rochaknaveen Singh Bains, M.D.

SUMMARY:
Background: Extreme stress exposure could result in profound changes in human cognition and behavior. Childhood trauma (CT) is defined as experiencing distressing event or situation that is beyond one's capacity for coping or control. The evidence suggests that CT along with Stressful Life Events (SLE's) significantly increases the risk for severe mental illness like mood disorders and psychotic disorders. Childhood and adolescent PTSD typically is a

heterogenous disorder with complex symptom presentation. Dissociation has been most commonly implicated as a mediating factor between CT and psychosis in later life. It has been hypothesized that trauma may produce psychological vulnerability leading to the development of psychotic experiences. Case Report: We present the case of a 12 y o female with a past psychiatric diagnosis of adjustment disorder with mixed anxiety and depressed mood and PTSD in relation to witnessing a significant trauma. when she was five, she witnessed the murder of her dad's friend. She presented with panic attacks, nightmares, flashbacks, anhedonia, lethargy, insomnia and poor appetite since then. Patient was observed to be withdrawn, paranoid and avoidant. Eventually, she started reporting psychotic symptoms in form of auditory hallucinations of a male voice telling her to cut herself and visual hallucinations of dead bodies and people killing themselves. She was started on Zoloft for mood, Prazosin for nightmares and Seroquel for psychosis. Pt continued to report mood-incongruent psychotic symptoms, although she reported transient improvement in nightmares. She was referred to start trauma focused CBT sessions. Literature Review: A search of the pre-existing literature review indicated a correlation between childhood adversities and some psychotic symptoms. Some studies show that childhood sexual abuse was associated with hallucinations, while victimization was more related to paranoid behavior. A maladaptive cognitive processing style results in feelings of guilt and worthlessness, which provides positive feedback during trauma to worsen current symptoms. It is possible that under certain individual-specific conditions, the defense and coping mechanisms break down at a level of psychotic manifestations in the form of delusions and hallucinations and this worsens the affective symptoms. Conclusions: There are many factors responsible for symptoms that occur in response to a traumatic event, including cognitive, physiological, affective and environmental. There is an argument that psychosis itself may be a response to trauma. This accounts for the high co-morbidity between PTSD and psychosis and high levels of trauma in patients diagnosed with psychosis. In these cases, it is helpful for clinicians to ask about the temporal course of their symptoms, signs of systemic illness, or recent environmental change, and to obtain collateral information from caregivers.

Poster Session 2

No. 1
WITHDRAWN

No. 2
Covid-19 and Clozapine: A Case of Recurrent Infection

Poster Presenter: Brandon Jacobi, D.O.
Co-Authors: Sean T. Lynch, Lidia Klepacz, M.D., Stephen John Ferrando, M.D., Sivan Shahar

SUMMARY:
Background: As COVID-19 decimates the US, the ramifications are just beginning to be fully elucidated. Patients with low income, ethnic minority groups, or mental health issues have increased risk for developing infection.1,2 This is potentially most clearly seen in patients who suffer with the schizophrenic umbrella of mental disorders. Many patients reside in homeless shelters, which likely increases their risk in developing COVID-19.3,4 In addition to exposure risk, patients may be at risk due to their medications, namely clozapine. Researchers have commented how patients treated with clozapine had an increased risk of COVID-19 compared with those who were on other antipsychotic medication (adjusted hazard ratio HR=1.76, 95% CI 1.14 - 2.72).5 One case study from the United Kingdom, discussed a patient on clozapine who developed symptoms of COVID-19 and was found to be COVID-positive on an inpatient psychiatric unit and exhibited signs of Clozapine toxicity.6 Recommendations for monitoring and treating patients who are receiving clozapine during the pandemic included: reducing the frequency of ANC to every 3 months, evaluating patients with alarm symptoms (cough, fever, flu-like symptoms, etc.), and looking for symptoms of clozapine toxicity.7,8 Case Report: We present a 57-year-old male with schizophrenia who was treated with clozapine. The patient was found to be COVID-positive, and after two negative COVID-19 tests was transferred to our Behavioral Health Center. While on the inpatient unit, he was treated with clozapine,

and 2 weeks after admission, he developed a fever of 100.2, with laboratory studies showing a WBC of 16.2, an ANC of 13.6, positive COVID-19 testing, ESR of 35 and CRP of 3.20. He was continued on his psychiatric treatment, in addition to Fluticasone and Tiotropium inhalers for respiratory symptoms. Discussion: This case demonstrates the importance of monitoring patients being treated with clozapine during the pandemic. This patient likely had an impaired immune response, as he tested negative twice before testing positive again, without having findings of agranulocytosis. We postulate that clozapine likely led to immune dysfunction, as it is known to cause immunosuppression.9 Reports have suggested that false-positive COVID-19 tests have occurred due to viral shedding, however we do not believe this is the case here, as our patient displayed symptoms and abnormal laboratory findings. Conclusion: Our findings show the need for increased awareness regarding patients on clozapine during the pandemic. While no mechanism has been identified at this time demonstrating how it directly predilects patients to infection, future studies will hopefully identify the mechanism. Clinicians should feel comfortable discussing with their patients the increased risk for developing COVID-19 while on clozapine. More research on potential outcomes for this group of patients needs to be conducted in order for further recommendations to be made.

No. 3

Taking Telepsych Outdoors: A Case Study Using Nature Therapy in the Treatment of Depression

Poster Presenter: Yonatan Kaplan, M.D.

SUMMARY:

Background: Nature therapies are a broad category of non-pharmaceutical interventions that involve immersing a subject in a naturalistic environment to promote positive health outcomes. Environments range from urban greenspaces to old-growth forests to coastal beaches. Interventions may be immersion alone or accompanied by directed exercises such as cognitive-behavioral-therapy, mindfulness techniques or physical activity. Preliminary research suggests that nature based therapies may be effective, easily accessible, low cost adjuvants to standard of care treatment for variety of mood and anxiety disorders. Case Reports: Ms. M is a 23 y.o. woman with a history of major depressive disorder with anxious distress and cluster B and C personality traits. She was referred to the outpatient psychiatry resident clinic after discharge from a voluntary admission to the acute inpatient unit for suicidal ideation. She was started on mirtazapine for depression and anxiety. She has been seen on a weekly basis for the past two months for medication management and psychotherapy. Patient reports she illustrates as a hobby and stress relief. As part of the patient's therapy, she was instructed to go outside three times per week to a park near her house and practice a nature-based mindfulness exercise by drawing three different subjects from the outdoors. Patient reports subjective relaxation, relief from her anxiety, and serenity from these exercises and discusses the objects she illustrates in each weekly session. Discussion: There is a growing scientific interest in the role of nature therapies counterbalance to the negative mental health associations of urbanization. Though there is a long history of urban planners associating green spaces with improved mental health, from Cyrus' gardens of 2500 BCE to Olmsted's forested psychiatric institutions in the 19th century, scientific investigation of this phenomena is a recent innovation. The last decade has seen a surge of innovative experiments seeking to isolate different aspects of nature and quantify their impact on mental health. Thought these studies are often limited by small sample sizes, the preliminary results are promising and ripe ground for future development and exploration. Nature therapy studies is emerging as a rapidly growing multidisciplinary field of clinicians, urban planners, public health, and environmental scientists. Fallout from COVID19 is predicted to increase need for mental health services. Though pandemic precautions may limit patient's access to physical offices, they offer an opportunity for innovative solutions. Psychiatrists are poised to take a leading role in the emerging field of nature therapy studies by helping patients access the outdoors as part of their psychiatric care.

No. 4
“My Sister Has Claws”: Case Report and Systemic Literature Review on Co-Occuring Multiple Sclerosis and Psychosis
Poster Presenter: Souparno Mitra, M.D.
Co-Authors: Aditya Sareen, M.D., Samuel J. Rothman, M.D., Soroush Pakniyat-Jahromi, M.D., Ralph Amazan

SUMMARY:
Background: Multiple Sclerosis (MS) is a neurological disorder with demyelination of neuronal matter especially of white matter, with multiple episodes occurring temporally. It has been associated with multiple neurological and psychiatric sequelae. Depression and other affective symptoms are commonly associated with MS. However, prior research has alluded to co-occurring psychotic symptoms as well. Our poster presents a case report and literature review of a patient with co-occurring MS and psychosis. Methods: A case report was prepared on the patient admitted to the inpatient unit. Subsequently a systematic literature review of literature was carried out based on the PRISMA model on 3 databases: PubMed, Embase and PsycINFO. Search terms included (MS OR multiple sclerosis) AND (Psychosis OR schizophrenia OR schizoaffective disorder OR psychotic OR hallucination OR delusion). Papers published between 1990 to 2020 were included in this literature review. Case Report: The case report is of a 27-year-old male who carried a diagnosis of Schizophrenia for 5 years and was being managed with Haloperidol. He had multiple inpatient hospitalizations initially which was a result of paranoid delusions that his sister was trying to kill him with her “knife-like claws.” Following initial hospitalizations, patient had been managed in outpatient for 5 years. Subsequently, he began to have these delusions again and also complained of blurring of vision. These delusions led to an inpatient hospitalization again. An MRI of the Brain revealed lesions suspicious of MS. Follow up with Neurology and Ophthalmology has led to confirmation of this diagnosis. The patient is being managed parallelly for MS and Psychosis. Results: The literature review led to an initial discovery of 2711 hits on Pubmed, 1276 hits on PsycINFO and 5429 hits on Embase. Duplicates were removed and abstracts and full text was reviewed for relevance. Result from finally included text showed co-occurrence of psychosis and MS to be 2-3 times higher than the general population. Some patients were diagnosed with MS at an earlier age with later onset of Psychosis, while some were initially diagnosed with Psychosis (or Schizophrenia) first and subsequently MS. Common psychotic findings included persecutory delusions, lack of insight, delusions of reference, auditory hallucinations, grandiose delusions and passivity. Commonly used antipsychotics included risperidone, olanzapine, quetiapine and aripripazole. Discussion: The case report and literature review emphasize the importance of ruling out medication conditions that may manifest as psychosis. MS has been found to have co-related psychosis as discussed and it is important to evaluate co-occurring symptoms of MS. This case also emphasizes the importance of MRI Brain not just for first onset psychosis but also for any sudden change in a patient with a comparatively stable course. Psychosis may also impact treatment adherence in MS.

No. 5
“If You Smell Smoke…”: Evaluating and Treating Patients With Olfactory Hallucinations
Poster Presenter: Helen L. Dainton-Howard

SUMMARY:
Hallucinations are a common question for any psychiatric consult-liaison service. However, patients with olfactory hallucinations can have other important physiologic problems that are important to detect. In this paper we present two cases of olfactory hallucinations, then discuss some important considerations and workup in these patients. Given the context of inpatient consultation for emergent changes in mental status, the focus is on seizure, which can be a dangerous etiology to miss. In addition, we are able to add another case to the literature of a patient with olfactory hallucinations responding well to valproate.

No. 6
A Case of Autoimmune Hypothyroidism, Depression, and a Potentially Lethal Suicide Attempt
Poster Presenter: Melanie Garcia, M.D.

Co-Authors: Samantha Savite, Psy.D., Laura Francesca Marrone, M.D., Vincent Chou, D.O.

SUMMARY:
Depression can be the presenting symptom in a number of general medical conditions. Comorbid medical and depressive illness or depression secondary to a general medical condition can have potential physiologic and psychologic contributions to presenting symptoms warranting timely diagnosis and aggressive treatment especially when associated with suicidality and severe hopelessness. Here we present the case of a 20 year old active duty service member without previously diagnosed medical or psychiatric conditions who presented with depression and acute suicidality brought to emergent medical attention for increasing and worsening suicidal thoughts. He expressed feeling depressed and “numb” for many years but within the last 3 months felt that ending his life was the only thing that “made sense.” He was amenable to admission and trial of antidepressant as his last option while still endorsing serious consideration to ending his life. On admission, screening TSH was elevated, which prompted further medical workup during the hospital course. He was diagnosed with primary hypothyroidism due to Hashimoto’s Thyroiditis. In light of the diagnosis, he reported feeling like he had a new outlook on life and was extremely relieved there was a medical condition that likely explained the way he had been feeling. While the patient had endorsed several depressive symptoms without a clear inciting stressor, he denied other classic signs of hypothyroidism. It is known hypothyroidism can often mimic depression, and that thyroid autoimmunity has been linked to depression symptoms. This case emphasizes the need for evaluation of general medical conditions, highlights the importance of a collaborative and multidisciplinary approach to patient care, and illustrates elevated suicide risk in cases of newly diagnosed medical and psychiatric disorders. The patient had full resolution of his suicidal thoughts once he had a medical explanation for his symptoms and was started on an antidepressant and thyroid hormone replacement therapy but nonetheless engaged in a serious suicide attempt. Here we review and discuss the approach this clinical case and lessons learned.

No. 7
A Tale of Two Double-Edged Swords: Serotonin in Anxiety and Hyper-Suggestibility in Conversion Spells

Poster Presenter: Aniruddha Deka, M.B.B.S.
Co-Authors: Katrina E. Burns, M.D., Charles Hebert, M.D.

SUMMARY:
Background: Complementary and alternative medicine (CAM) offers many remedies for depression and anxiety. Some of these agents have serotonergic properties and can interact with prescribed antidepressants [1]. Emergent anxiety in response to initiation of serotonergic psychotropics is a well-known phenomenon [2]. Anxiety presents in many forms, including as conversion spells. Frequently, conversion phenomena have elements of hyper-suggestibility which accompany these spells [3]. We describe a case of emergent anxiety and conversion spells in a patient with concomitant use of antidepressants and pro-serotonergic supplements. Case: A 69-year-old woman presented with worsening anxiety after new-onset panic attacks which started three months prior for which she had tried various medications with minimal benefit. During her medical hospitalization, she was noted to have “spells” consisting of varied motor movements associated with ego-dystonic intrusive thoughts about hurting herself and others. Her primary team characterized these spells as being “suicidal” and “homicidal”, and the patient adopted these descriptions even though this did not appear to be an accurate conceptualization of the phenomenon. She reported using supplements containing 5-hydroxytryptophan and L-tryptophan in addition to venlafaxine. She was started on low-dose olanzapine and all pro-serotonergic agents were discontinued. Three months later, the patient’s spells had largely improved with some residual social anxiety. Discussion: We postulate that patient’s underlying anxiety was worsened by concurrent administration of pro-serotonergic supplements with serotonergic antidepressants. One rodent model [4] demonstrates the roles of 5-HT1A receptors in anxiety with distinct roles for pre- and post-synaptic receptors which provides evidence regarding the

dual nature of serotonin in alleviating and worsening anxiety. Evidence for conversion of heightened anxiety states to spells is lacking in the literature; however, it is noteworthy that the patient's worsening spells coincided with worsening anxiety. The use of charged, inaccurate language such as "suicidal" and "homicidal" adversely affected the interaction between the patient and her team. The intensity, frequency and distress around these spells correlated with the response of observers [5]. We liaised to help mitigate the patient''s hyper-suggestibility by reframing these gestures as a request for help which allayed her and the team's anxieties. Implications: Two implications arise from this case. Firstly, more information is needed about the possible serotonergic nature of CAM supplements. Patients' use of these products should be routinely investigated prior to initiating serotonergic antidepressants. Secondly, in conversion phenomena, examiners must be vigilant about the double-edged nature of hyper-suggestibility and be able to utilize lexical reframing to help alleviate the spells.

No. 8

Acute Pulmonary Embolism Associated With Paliperidone Palmitate in a Young Patient With Few Other Risk Factors: A Case Report

Poster Presenter: Kinza Tareen, M.D.
Co-Authors: Donald Anthony Zeolla, M.D., Pilar Lachhwani

SUMMARY:
Antipsychotic medications have been implicated as acquired risk factors for venous thromboembolism (VTE), including pulmonary embolism (PE), which are rare but life-threatening complications. Studies have estimated as much as a seven-fold increase in VTE risk in patients taking antipsychotics, with a particularly high risk in the first three months of treatment. No easily identifiable link between antipsychotics and VTE has been discovered. Hypotheses include antipsychotic-associated reduction in physical activity, increased body weight, enhanced platelet aggregation, and influence of other VTE risk factors. Reports have proposed antithrombotic prophylaxis in populations at higher risk of VTE who are to be initiated on antipsychotic treatment. Attempts have also been made to identify which antipsychotics are more associated with VTE than others. Here, we present the case of a 49-year-old former male prisoner with unspecified psychosis and hypertension, on court-ordered paliperidone palmitate long-acting injectable (LAI) 156 mg every 3 weeks, who presented to the emergency department following a syncopal episode with loss of consciousness and posterior head injury associated with a subsequent fall who was found to have an acute submassive saddle PE with right and left pulmonary artery filling defects on computerized tomography (CT) scan of the chest, deep venous thromboembolism (DVT) of the L popliteal and calf veins, as well as right-sided heart strain. He had no known VTE/PE risk factors besides increased age and the possibility of prolonged immobilization, as he was subjected to house arrest. On presentation, he described acute-onset dyspnea, severe midsternal pleuritic chest pain, and lightheadedness prior to the syncopal episode. He received his last paliperidone palmitate injection two weeks prior to presentation and had been taking it for four months. Treatment was initiated with heparin per standard nomogram and oxygen therapy. He was transitioned to warfarin for recommended anticoagulation treatment duration of at least six months. Paliperidone palmitate was discontinued and his psychosis was instead addressed with aripiprazole. This case report aims to highlight the need for larger studies of the risk of VTE in patients taking antipsychotics, alerting patients of associated VTE risk when providing informed consent, identification of patients who may benefit from antithrombotic prophylaxis during antipsychotic initiation, and stratification of preferred antipsychotics in patients who are at risk of decompensation if they are off psychotropics.

No. 9

Atypical Case of Hashimoto's Encephalitis With Relapsing Course

Poster Presenter: Gurmehr Kaur, M.D.
Co-Authors: Shehzad Ayub, D.O., Nathan Jones, M.D.

SUMMARY:
Background: Hashimoto's encephalitis is a rare disorder which often presents with symptoms of hallucinations, somnolence, and focal neurological

deficits. Typical clinical course is of complete resolution after treatment with corticosteroids. This atypical case affects a younger and healthier woman than cases previously described with a clinical course significant for multiple relapses with decreasing sensitivity to corticosteroid therapy. Results: A 31-year-old Hispanic woman with past medical history significant for Hashimoto's encephalitis and past psychiatric history of anxiety presents to emergency department after increased aggression, pressured speech, insomnia for 2 weeks. Evaluation revealed microsomal TPO antibody and thyroglobulin antibody both within normal limits. However, patient's mother reported this presentation was identical to previous symptoms at the time of her diagnosis of Hashimoto's encephalitis. Previous presentation showed complete resolution of symptoms with corticosteroids. This hospitalization, the patient had minimal improvement with corticosteroids and IVIG, and required addition of olanzapine for agitation. Discussion: Previously described cases of Hashimoto's encephalitis typically affect older patients with comorbid autoimmune disorders. Typical disease presentation involves focal neurological signs or confusion, dementia, somnolence and hallucinations. Typical laboratory features include elevated serum TPO and/or antithyroglobulin antibodies. While this case is positive for some typical laboratory findings, such as initially elevated anti-TPO and antithyroglobulin and MRI with T2 signal abnormalities in subcortical white matter, the patient does not fit the typical clinical picture. She did not have focal neurological deficits and denied any hallucinations. Rather than increased somnolence, patient is manic and agitated. Her repeat measurements of anti-TPO and antithyroglobulin and second admission were negative. Her relapsing disease course and decreased sensitivity to steroid therapy is also of note. Conclusion: Presentation of Hashimoto's encephalitis may be more variable than previously described. A relapsing course may not continue to show elevated serum TPO and/or antithyroglobulin antibodies as previously expected. The disease process may also become more treatment resistant requiring additional medications for symptom management. Hashimoto's encephalitis should be considered in the differential diagnosis of atypical presentations of psychiatric illnesses and routine serological testing of anti-TPO and anti-thyroglobulin antibodies should be performed.

No. 10
Baclofen Withdrawal Presenting as Catatonia: A Case Report

Poster Presenter: Catherine Zisk
Co-Author: Gabriela Pachano, M.D.

SUMMARY:

Background Baclofen is commonly prescribed as a muscle relaxant to alleviate the pain and physical discomfort associated with muscle spasm. Baclofen withdrawal has been associated with multiple psychiatric symptoms. Case A 65 year old female with past psychiatric history of Schizoaffective disorder, bipolar type and past medical history of chronic back pain presented to the hospital after overdosing on an unknown amount of Baclofen. She remained unconscious and intubated for the first two days of admission and EEG ruled out status epilepticus. She was re-started on Baclofen on the second day of hospitalization, however dose was substantially lower than her reported home dose. She regained consciousness on the third day, however was disoriented to time and place. Over the following two days she endorsed auditory and visual hallucinations and was noted to have paranoid delusions. There was concern for Baclofen withdrawal given her mental status and also abnormal vital signs, mainly hypertension. She then became more withdrawn and was noted to have mutism, staring and posturing which raised concerns for Catatonia. Her Bush Francis (BF) score at the time was 14. With an Ativan challenge, she showed significant improvement in her BF score down to 6. She was treated with scheduled Ativan 1mg three times daily with some improvement of her symptoms. Her Baclofen was increased back to home dose, after which her catatonic symptoms resolved. Discussion Baclofen is a B-4-chlorophenol derivative of y-aminobutyric acid (GABA) and is widely prescribed as a muscle relaxant. It is a GABA-B agonist working mostly in the ventral tegmental area of the spinal cord. There has been concern that baclofen may have mood-elevating properties leading to risk of abuse. Patients may present with various psychiatric symptoms in the setting of

withdrawing from this medication and there has been a case report on a patient who similarly presented with psychosis with catatonia after overdosing on baclofen followed by the abrupt cessation of the medication. One proposed potential mechanism is that sudden withdrawal of baclofen, which previously suppresses monoamine pathways, leads to disinhibition of these pathways and a release of norepinephrine and dopamine onto super-sensitized receptors and this leads to autonomic arousal. Adequate treatment with baclofen and benzodiazepine would be critical for the prompt and effective recovery of patients from catatonic states. Conclusion We discussed a case of the patient who presented with catatonic symptoms in the setting of recent overdose on baclofen and subsequent abrupt cessation of the medication. It is important to closely monitor patients for catatonic symptoms in the setting of baclofen overdose/withdrawal to provide the adequate and effective treatments.

No. 11

Challenges in Managing Anxiety in a Patient With Co-Existing Symptoms Suggestive of Neuroendocrine Tumor

Poster Presenter: Sung Min Ma, M.D.
Co-Authors: Junghyun Lim, M.D., Maria Hadjikyriakou, M.D., Maria A. Rueda-Lara, M.D., Zelde Espinel, M.D.

SUMMARY:

A 34-year-old Caucasian male with a past psychiatric history of anxiety presented to an outside facility for worsening anxiety in the setting of a 2-month history of persistent facial flushing, daily diarrhea, headaches, fatigue, weight loss, postural orthostatic tachycardia, and hypertension. He was briefly and voluntarily admitted to a psychiatric facility, where a trial of low-dose escitalopram was discontinued due to worsening anxiety, diffuse burning abdominal pain, nausea, and insomnia. The patient was subsequently started on prazosin, propranolol, and clonazepam, which stabilized the patient's elevated heart rate and blood pressure. Psychiatrists at the outside facility advised the patient to explore medical etiologies of his anxiety, and therefore, the patient presented to a university hospital for a medical workup with psychiatric consultation. Given the constellation of the above symptoms, neuroendocrine etiologies such as pheochromocytoma and carcinoid tumors were proposed, and an endocrinology team was consulted. Comprehensive endocrine laboratory workup was significant for a mildly elevated serum metanephrine level of 159.7 and a 24-hour urine epinephrine level of 28, both of which returned to normal values on repeat testing, voiding their potential role in elucidating a diagnosis. CT brain scan showed a partially empty sella, a nonspecific finding, but no evidence of a pituitary mass. CT of the abdomen was unremarkable. Gallium-68 Dotatate PET scan did not identify any suspicious lesions. Meanwhile, the patient's facial flushing remained prominent and persisted throughout his hospitalization. Upon learning that a neuroendocrine tumor may be an unlikely diagnosis, the patient developed a depressive episode with profound neurovegetative symptoms, which were managed with mirtazapine and outpatient psychotherapy. This case demonstrates that the presence of symptoms suggestive of neuroendocrine tumor, such as facial flushing, gastrointestinal symptoms, labile blood pressure, and heart rate, poses significant challenges in the diagnosis and management of psychiatric symptoms (1). The inability to tolerate SSRIs posed another treatment challenge in this case; as up to 90% of the body's serotonin is produced within the gastrointestinal tract, SSRIs must be used cautiously in patients with neuroendocrine tumors (2, 3). Because the diagnostic process of neuroendocrine tumors is often arduous and time-consuming, patients may be easily discouraged, leading to worsening anxiety and depression. This case highlights the importance of frequent monitoring of psychiatric symptoms and psychoeducation during the diagnostic process of a neuroendocrine workup.

No. 12

Challenges Involved in the Treatment of Hospitalized COVID Patients With Severe Mental Illness

Poster Presenter: Jessica P. Domitrovic
Co-Authors: Christine Barr, L.C.S.W., Linda Barloon, N.P., Ranjit C. Chacko, M.D.

SUMMARY:
The three patients in our case series were hospitalized patients seen by the Consultation and Liaison service at Houston Methodist Hospital between June and August 2020. They had a diagnosis of coronavirus disease 2019 (COVID-19), with coexisting acute on chronic mental illness. Psychiatry was consulted due to their acute psychiatric symptoms which complicated their medical care. All were appropriately isolated for infection control, requiring videoconferencing or extensive PPE use for patient interviews and exams. Patient A was a 63-year-old male with a history of Bipolar 1 disorder who arrived from a psychiatric facility and was admitted for fever and chills, AKI, and multifocal pneumonia. Upon examination he demonstrated disorganized thought processes with grandiose delusional content and poor insight, judgement and impulse control. He was placed on an emergency detention order (EDO) and once his acute pneumonia was stabilized and psychiatric medications optimized, he was discharged to a psychiatric facility. Disposition was complicated due to the difficulty finding a facility that would accept COVID-19 positive patients. Patient B was a 54-year-old female with a history of multiple psychiatric diagnoses who was admitted from a homeless shelter for chest pain, dyspnea, and pneumonia with associated sepsis and acute hypoxic respiratory failure. Upon examination via phone, she was uncooperative and reported paranoid delusions. Her current medications were changed and a long-acting-injectable antipsychotic was recommended but refused. Upon resolution of her acute medical symptoms she was transferred to an outside skilled nursing unit with a recommendation for discharge with a supply of psychiatric medications. Patient C was a 59-year-old female with a history of paranoid schizophrenia and seizure disorder, who was admitted from a psychiatric hospital for altered mental status and possible syncope. During hospitalization she was diagnosed with metabolic encephalopathy likely due to hyponatremia. She was uncooperative and had aggressive behavior, irritability, and mood swings. Upon examination she had delusions, hallucinations, and homicidal thought content. She required a 1:1 sitter and was placed on an EDO. After clearance by medicine and optimization of her psychiatric medications, she was transferred to an inpatient psychiatric facility. The COVID positive context of our patients added a layer of complexity in their management and disposition. This patient population of uncooperative, psychotic patients who cannot be discharged home already presents challenges, however the added features of a communicable disease and a limitation on PPE use increased barriers to effective in-person interviewing, examination, and treatment and decreased discharge options. These barriers to providing appropriate psychiatric care in the context of COVID can inform planning for future isolation-requiring diseases during times of stress on the healthcare system.

No. 13

Consult-Liaison Tele-Psychiatry for Patient Care and Resident Training: An Educational Case Study

Poster Presenter: Mudasar Hassan, M.D.
Co-Authors: Shristi Shrestha, M.D., Syed Ismail, Mahamudun Nabi, M.D., Zershana Khan, M.D.

SUMMARY:
Introduction: There has been a long-standing opportunity to employ telecommunication as a tool for providing clinical service, clinical supervision, and didactics [1-3]. However, low reimbursement rates, a requirement of state-specific telepsychiatry licensing, and rigorous medical graduate education are some of the challenges faced in implementing these tools for widespread use. The rapid implementation of telepsychiatry has raised questions and challenges in many areas, especially in the wake of COVID-19. This educational case study aims to address some of these questions. Since 2012, we have gained experience with telepsychiatry; we describe how we conceptualized and developed the consult-liaison (C-L) telepsychiatry services as a clinical, supervising, and educational tool. Here we highlight different challenges faced and how they were addressed and then discuss the future directions for advancing telepsychiatry. Methods: After establishing the psychiatry residency training program, we emphasized that telepsychiatry was vital for patient care and resident''s educational needs. We were able to start with two telepsychiatry platforms (Doxy and Vidyo). Vidyo offers delivery of HIPAA compliant

real-time audio/visual data through a computer and handheld devices. Doxy is another telehealth platform with similar capabilities. The program also provides screen-sharing with multiple participants. When the institution adopted Zoom as a long-distance learning tool in 2017, we transitioned to it to save costs without compromising the ease of use or acquiring new security concerns. Results: Since 2017, this process has effectively reduced the average waiting time for patients in the psychiatric emergency room. Thus, we see on an average day 5-6 floor consults combined at the two teaching hospitals and 2-3 patients in the psychiatric emergency room with one resident. Conclusion: We emphasized the telehealth program''s affordable cost, assured of improved patient''s privacy, satisfaction, and greater availability of the C-L psychiatry services, and the Accreditation Council for Graduate Medical Education (ACGME) residency training needs. Finally, the hospital agreed to implement the program on a trial basis for six months, followed by another review of the program. Since then, CL telepsychiatry has been running for eight years and counting.

No. 14
An Early Case of COVID-19 and New-Onset Psychosis
Poster Presenter: Rayad H. Barakat, M.D.
Co-Author: Anton Power, M.D.

SUMMARY:
Much of the world has been enraptured by the wide-ranging effects of novel coronavirus (COVID-19 or SARS-CoV-2), with concerns and debates about its lethality, its transmissibility, its treatment, and even the extent of its infection in humans. Its presentation is as widely variable as the organ systems affected: from the asymptomatic super spreader to the supine "happy hypoxic," and its lasting effects, let alone lasting immunity, largely unknown. Initially primarily treated as a respiratory infection, psychiatric and neurologic sequellae have come to be noticed as well, with often limited explanation and few identified targetable pathways. Here we present a case report of a COVID-19 positive patient from relatively early in the United States'' experience with the pandemic and only days after Hawai''i''s initial emergency declaration. Despite no prior psychiatric history, this patient developed a brief psychotic episode during the course of his hospital stay with residual effects lasting well beyond his hospitalization.

No. 15
Delirium Associated With Meropenem Use: A Case Report
Poster Presenter: Omar Munoz, M.D.
Co-Authors: Maria A. Rueda-Lara, M.D., Zelde Espinel, M.D.

SUMMARY:
Mrs. L is a 59-year-old female with amyloidosis secondary monoclonal gammopathy who was admitted to inpatient medicine for autologous stem cell transplant. Prior to this presentation, she lived with her husband at home and functioned independently. She had no prior psychiatric history. Her hospitalization was complicated by febrile neutropenia. She was initially treated with cefepime and vancomycin but was switched to meropenem because fever and leukocytosis persisted. On day 2 of treatment with meropenem, the patient mental status changed. She was found to be less talkative than usual and lethargic. Neurology was consulted and recommended labs, EEG and brain imaging. Brain MRI was unremarkable. Labs revealed AKI; blood culture were normal. Patient had a lumbar puncture that was not consistent with meningitis or encephalitis. EEG revealed generalized slowing. Psychiatry was consulted. On initial psychiatric evaluation, the patient was non-verbal, unaware of her environment, unable to follow commands and exhibiting severe psychomotor retardation. She was started on risperidone solution 0.5mg daily and placed under 1:1 observation. Due to poor oral intake, risperidone was switched to Haldol 1mg IV Q12H. Psychiatry recommended to switch meropenem to a different antibiotic. Patient was followed on a daily basis and improvement of symptoms was noticed with treatment. Patient kept improving and by day of discharge she was fully oriented and at baseline with no recall of the episodes of confusion. At that time Haldol was suspended due to resolution of symptoms. Due to timeline of drug administration, development of

symptoms, treatment response and return to patient's baseline, suggests a meropenem-induced delirium. Drug-induced neurotoxicity is a known complication associated with carbapenem antibiotics. In this poster we will present a case of delirium induced by an antibiotic. An increased awareness of antibiotic associated CNS toxicity would avoid unnecessary delay in treatment and achieve prompt resolution of symptoms.

No. 16

Delirium, Catatonia, and Dandy Walker Syndrome: A Case of Benzodiazepine Resistant Catatonia Responding to Memantine

Poster Presenter: Kinza Tareen, M.D.
Co-Authors: Elias A. Khawam, M.D., Anna Shapiro, M.D.

SUMMARY:
Dandy-Walker Malformations is a congenital malformation that results in agenesis or hypoplasia of the vermis, cystic enlargement of the fourth ventricle, and upward displacement of tentorium and lateral sinuses (1). Several case reports have demonstrated a potential connection between psychosis and Dandy Walker syndrome (1), relating to the connection between cerebellar damage and cognitive/behavioral disturbances (4). Memantine, N-Methyl-D-Aspartic acid antagonist, is traditionally has recently been shown to be effective in catatonic delirium especially when patients have failed lorazepam (3). It is hypothesized that memantine efficacy results by decreasing glutamine excitotoxicity through the AMPA and NMDA receptor (2). We present the case of a 57 year old man with a past medical history of Dandy Walker Syndrome and agenesis of the corpus callosum who presented after being found down and disoriented at his nursing facility. Previously, patient was able to communicate and make medical decisions. While in the hospital his altered cognition was thought to be related to hypernatremia, however psychiatry was consulted when this persisted despite medical intervention. On initial evaluation patient appeared rigid, was minimally responsive, and engaged in some posturing. Home doses of antipsychotics were stopped and patient was given a trial of lorazepam 1 mg IV, three times daily, to address the catatonic features presented. However, he did not respond to Ativan and appeared more somnolent. On the last day of hospitalization patient was still demonstrating altered cognition, rigidity, and posturing. In an attempt to address catatonic symptoms he was started on memantine 5 mg twice daily, and was discharged. He was continued on this at the nursing home and per staff began to show improvement. In one month after return, patient appeared to be "back to baseline": talkative, able to walk, and able to feed himself. Patient even confirmed improvement. He has been continued on the memantine. Our case is remarkable as a discussion of Dandy Walker syndrome. In particular, our goal will be to focus on malformations in the cerebellum and their connections to psychotic illness and catatonia. In addition we will focus on NMDA antagonists, memantine in particular, and their effects in lorazepam resistant catatonia.

No. 17

Elevated Creatine Kinase in the Setting of Altered Mental Status and Schizophrenia: A Case Report and Literature Review

Poster Presenter: Asheema Saripalli, M.D.
Co-Author: Justin B. Smith

SUMMARY:
Mr. C, a 25-year-old man with a past medical history of schizophrenia, anemia and GERD presented from his assisted living facility with 24 hours of somnolence, psychomotor retardation and lethargy. This was a distinct change from his baseline psychosis (irritability, poor sleep and hallucinations). Of note, he was recently cross-titrated from clozapine to risperidone due to non-compliance with surveillance labs. Physical exam was notable for erythema of his right lower extremity, brisk brachioradialis reflexes bilaterally and increased tone in his bilateral lower extremities. Bush Francis Catatonia Rating Scale was 7 (for mutism, mannerisms, automatic obedience and perseveration). The following day he also exhibited echopraxia and posturing. Labs were notable for elevated creatine kinase (48,277), low serum iron (21), elevated white blood cells (22.67) and hematuria. He was admitted to medicine for treatment of rhabdomyolysis and right lower

extremity cellulitis, with psychiatry following for assistance with managing his schizophrenia. Home medications included aripiprazole, lorazepam, risperidone and fluvoxamine. Over the first few days of admission, risperidone was discontinued, clozapine was re-started and lorazepam was increased. On day three of hospital admission, patient had a generalized tonic-clonic seizure, which was attributed to clozapine titration. We present a review of the differential diagnosis for altered mental status in the setting of schizophrenia and markedly elevated creatine kinase as well as a brief review on clozapine induced seizures. This case is an important reminder to maintain a broad differential diagnosis when treating psychiatric patients in the general medical setting.

No. 18

Encephalopathy Secondary to Valganciclovir in a Patient With Cancer: A Case Report

Poster Presenter: Jeong Hoo Lee, M.D.
Co-Author: Gabriela Pachano, M.D.

SUMMARY:

Background: Valganciclovir is an oral prodrug that is rapidly converted to ganciclovir and plays a major role in the treatment and prevention of CMV infections in immunocompromised hosts. There has been an increasing number of reported cases of Valganciclovir-induced encephalopathy. **Case:** A 62 year old female with no previous psychiatric history and medical history of hypertension and mixed-phenotype acute leukemia presented to the hospital with altered mental status. The patient underwent unmatched haplo-identical stem cell transplant approximately two months prior to presentation. Three days prior to presentation, she was switched from Acyclovir to Valgancyclovir for prophylactic treatment. She was also on Tacrolimus at the time. Presenting symptoms included mild confusion, depressed mood and suicidal ideation. Over the next several days her behavior became progressively more aggressive and reached the point where she became physically violent towards a family member. She also appeared to be experiencing auditory/visual hallucinations and was paranoid of staff members. The patient''s Valganciclovir was eventually switched to Foscarnet. Upon stopping this medication, the patient experienced gradual improvement in mood, psychosis and mental status over the next several days. Other changes made during her admission was switching Tacrolimus to Sirolimus, and adding Olanzapine for psychosis. However, these changes did not coincide with the improvement of her symptoms. **Discussion:** Valganciclovir/Ganciclovir are generally well tolerated, but there have been multiple cases reported on Ganciclovir induced encephalopathy. Accurate diagnosis is challenging in such cases as it relies on the precise review of the timeline of the events and there usually are multiple other possible confounding etiologies for encephalopathy that have to be considered. In our case, other important differential diagnoses that were considered included Major depressive disorder with psychotic features, Tacrolimus-induced Posterior Reversible Encephalopathy Syndrome (PRES), and toxic-metabolic encephalopathy secondary to her medical condition. Brain MRI findings were not consistent with PRES and given the timeline of events, Valganciclovir appeared to be the most likely etiology of her acute mental status change. **Conclusion:** We discussed the case of a patient who presented with Valganciclovir-induced encephalopathy. As in previous reports, a timely diagnosis and treatment is challenging. Given its widespread use, it is important to consider Valganciclovir as a potential etiology of new onset encephalopathy.

No. 19

Equity and Capacity in the Face of Futility, Non-Compliance, and Poly-Substance Abuse: A Complex Decision-Making Capacity Case Report

Poster Presenter: Vera Prisacari, M.D.
Co-Authors: Lea Brandt, M.D., M.A., David Fleming, Ph.D., M.A.

SUMMARY:

Decision making capacity (DMC) evaluations are a frequent psychiatry consult question. They often present a challenge for both the primary team placing the consult and the receiving psychiatry service consult team due to discordant expectations, level of training in completing DMC evaluations, and unclear recommendations in extremely challenging cases. In this case report, we present a complex case

involving consultations to both psychiatry and clinical ethics teams that center around equity in health care for a patient with self-sabotaging behaviors thwarting effective clinical care. A 27-year old male patient was admitted for severe dehydration and malnutrition. Complicating the patient''s presentation was poorly controlled type 1 diabetes with multiple admissions for DKA; esophageal perforation due to recurrent severe vomiting, now status post esophagectomy and J-tube placement; and ongoing poly-substance abuse with multiple overdoses. Despite best efforts, illicit drug use continued while inpatient, as evidenced by an episode of unresponsiveness and hypoventilation, which resolved after naloxone administration. Patient was also repeatedly discontinuing IV fluids and enteral feedings. A psychiatry consult was placed for decision making capacity, which found that in spite of poor judgement, patient did have decision making capacity. Patient repeatedly stated that he wished to continue treatment and denied any suicidal ideation, however refused transfer to a secured unit where obtaining illicit drugs from outside visitors would be restricted. Additionally, a clinical ethics consult was placed to provide guidance on patient autonomy and futility of treatment. The recommendation of this consult advocated for the primary team''s responsibility to select the appropriate, more restrictive albeit safe environment to reach the goals of treatment. It is crucial to remember that a capacitated patient has the right to refuse treatment, however that right does not extend to "dictating the practice of medicine, self-prescribing, or forcing the team to provide substandard care or services that extend beyond their moral boundaries" (1). Finally, the determination of decision-making capacity by psychiatry must take into account the effect of addiction on free will and therefore DMC (2). In severe cases of self-destructive behaviors, we must consider a court appointed guardian for protective guardianship due to inability to care for self. Most DMC evaluations are not this complex and should be performed by primary team. Assistance is available in conducting an evaluation with widely accepted instruments (3). If an underlying psychiatric condition may be contributing to patient''s questionable DMC, a consult to psychiatry team is acceptable and favored (4). Further, a clinical ethics consult may be considered in complex cases that involve multiple value conflicts, such as equity, autonomy, and capacity.

No. 20
WITHDRAWN

No. 21
Haloperidol-Induced Neuroleptic Malignant Syndrome Status Post Anoxic Brain Injury: A Case Report

Poster Presenter: Brianna Cocuzzo
Lead Author: Kristy A. Fisher, M.D.
Co-Authors: Ian Hunter Rutkofsky, M.D., Jessica V. Kroin, M.D., M.S., Samuel Neuhut, M.D.

SUMMARY:
The patient is a 48 year old female with past medical history of hypertension, diabetes mellitus, hypothyroidism, atrial fibrillation, hydrocephalus with multiple ventriculoperitoneal (VP) shunt revisions, chronic pancreatitis, Bipolar Disorder, and Panic Disorder, who presented to the emergency department due to abdominal pain and vomiting. The patient was diagnosed with severe acute interstitial pancreatitis secondary to hypertriglycerdidemia and admitted for further evaluation and management. Of note, upon hospital admission, the patient’s home dose quetiapine was discontinued as per the medical team. The patient’s course was complicated with acute hypoxic respiratory failure and subsequent intubation with sedation. Upon removal of sedation, neurology was consulted due to altered mental status (AMS), where the patient was found to be non-responsive to verbal stimuli, withdrew only to localized pain, and held no purposeful movement. The patient was deemed to have suffered an anoxic brain injury. Three days later, the patient self-extubated and mental status was reported to be improving, as the patient was awake, alert, and oriented, with a non-focal neurological examination. Six days later, the patient was exhibiting subtle signs of agitation; a total of four doses of 2-3mg IV haloperidol was administered by the medical team. Two days later, psychiatry was consulted for “acute psychosis.” Immediate recognition and diagnosis of Neuroleptic Malignant Syndrome (NMS) was established due to

clinical presentation, with typical progression of symptomatology, along with indicative laboratory values. Haloperidol was discontinued and amantadine 100mg twice daily was initiated, along with supportive measures. In this poster, we discuss the significance in prompt and appropriate diagnosis of NMS to ensure appropriate and timely treatment, particularly in more vulnerable populations where such conditions may go under diagnosed, such as complex ICU patients with prior anoxic brain injury.

No. 22

Interdisciplinary Disagreements Resulting in Suboptimal Treatment of New Onset, Florid Psychosis

Poster Presenter: Raina Aggarwal, M.D.
Co-Author: Charles Robinson

SUMMARY:
A previously high-functioning, 61-year-old white female college graduate, previously diagnosed with depression but no other psychiatric disorders, developed thought disorganization, internal preoccupation, and profound cognitive decline over a three-month period. She was hospitalized on a Neurology unit, and Psychiatry was consulted for assistance with diagnosis and management. No explanation could be found for her decline other than limbic encephalitis secondary to renal cell carcinoma (RCC). Because of a number of confounding clinical factors and clinical disagreements, the surgical service declined to remove the tumor. A course of radiation treatment had no effect on the patient’s symptoms, and she was placed in subacute rehabilitation, still markedly functionally impaired. While it is impossible to know that excision of the RCC would have led to resolution of the symptoms, the limited available literature indicates that removal has been effective, and there is no similar literature indicating that radiation treatment would yield similar results. We discuss the interdisciplinary issues and disagreements that can prevent optimal treatment. Specifically, we describe four factors that contributed to diagnostic and therapeutic uncertainty in this case: (1) the lack of confirming autoantibodies, (2) stigma about her previous psychiatric diagnosis of depression, (3) confusion of past depressive symptoms with her new psychotic symptoms by the surgeons upon whom the treatment depended, and (4) several acute medical complications that muddled the picture. We propose strategies to improve communication and collaboration in similar cases.

No. 23

Intractable Nausea and Vomiting—Sometimes the Shrink Has a Cure! A Case Report of Gastroparesis, and Role of C-L Psychiatry in Diagnosis and Management

Poster Presenter: Shuchi Khosla, M.D.
Co-Author: John Alexander Baker, M.D.

SUMMARY:
A 75-year-old female with a medical history significant for CAD s/p stents, COPD, CHF, and lung cancer who presented to the ED with progressively worsening abdominal pain, nausea, vomiting, and diarrhea. The patient was seen in the ED for abdominal pain diagnosed with diverticulitis, and sent home with treatment with Amoxicillin for 10 days, with the subsequent course of Metronidazole with no reported improvement. The patient reported a subsequent 20-pound weight loss over the next 6 weeks. The patient presented to the ED again, CT Abd demonstrated diverticulitis with possible Colo vesical fistula. The nuclear stress test was suggestive of small inferior apical lateral area ischemia. During her 10 day stay at the hospital, initially failed conservative management with another course of antibiotics Levofloxacin and Metronidazole Followed by surgical resection of small bowel resection with end colostomy. On the day of discharge to a rehab facility, the patient was reported to be tolerating a liquid diet but continued to endorse nausea. Over the next 45 days at the rehab facility where she continued to report symptoms of nausea, vomiting, abdominal pain, and difficulty tolerating diet. She was seen by her primary care, two visits to Urgent care where pain control measures including opioids and medical cannabis were prescribed which provided temporary relief. This followed the patient presenting to the ED again. Repeat CT suggestive of colitis of the transverse and descending colon. Initial findings included leukocytosis and elevated CRP/ESR. The patient was started on Ciprofloxacin and

Metronidazole; surgery and GI were consulted. No surgical intervention was deemed necessary. GI performed an EGD that was non-diagnostic. The patient received 6 days of TPN due to a severe lack of PO intake followed by 10 days of antibiotics which were stopped after repeat CT was negative for any acute process. On day 11 of hospitalization, psychiatry was consulted as the primary team noted that the patient's symptoms were disproportionate with a clinical exam. The psychiatric evaluation consisted of an interview and an extensive chart review. It was assessed that patient endorsed a recent, mild burden of depressive symptoms secondary to her GI symptoms. The severity of the patient's appetite loss was not congruent with her psychiatric presentation. C-L team noticed that gastroparesis had not been ruled. Liaison performed with the primary team recommending that a Gastric emptying test be done. The study was performed and showed 0% emptied at 60 minutes. The patient was diagnosed with gastroparesis, started on scheduled Metoclopramide. There was reported resolution of nausea and vomiting and the patient was discharged home 3 days later after reporting complete resolution of symptoms. No reported ED visits since discharge (2+ years ago). This case outlines the unique position of consultation & liaison psychiatry at the helm of psychiatry and medicine.

No. 24

Lost in Translation: Identification of Complex Trauma in Latino Patients in the Inpatient Medical Setting

Poster Presenter: Sofia Beatriz Vivoni, M.D.
Co-Authors: Cristina Montalvo, M.D., Kevin Donnelly-Boylen

SUMMARY:

Background: Studies suggest that Latino immigrants who have been exposed to trauma are more likely to suffer from chronic medical illnesses, and may not be evaluated unless seen by psychiatry consultation services in primary care or hospital settings.1 With this case, we bring to attention the prevalence of PTSD among Latino immigrants and complexity of their presentations.   Case: 57 year-old Hispanic female with no psychiatric history and other history of left lumpectomy for breast cancer diagnosed in 2014 on tamoxifen, hypertension, admitted after presenting to primary care for altered mental status. Neuroimaging and EEG were unremarkable. Further workup was negative for infection, substances, electrolyte, or endocrine abnormalities. Psychiatry was consulted for persistent paranoia and perseveration over family's safety requiring them to stay with her during hospitalization. Patient was guarded, restless, denied history of trauma and minimized her distress; however, per husband, she had been having increasingly odd behavior including sleeping with knives under her pillow which he attributed to the recent move to the United States eight months ago after living alone in a violent neighborhood of Colombia. Given her negative workup with continued avoidance, hypervigilance, and paranoia, a diagnosis of complex PTSD was considered with plan for further psychiatric treatment.   Discussion: With the influx of Latino immigrants to the United States, we will continue to see an increase of patients in medical care settings who have been exposed to varying psychosocial traumas. While multiple studies focus on the effects of PTSD and acculturation process among Latinos, there is limited information about approach psychiatry consultants should take given the prevalence of comorbid chronic conditions including cardiovascular disease, diabetes, and hypertension.1 Studies based in primary care settings suggest that a collaborative approach through culturally focused assessments of depression seem to impact utilization of mental health services among Latinos.2 Evaluations can be made more challenging, however, as this patient population tends to minimize the impact of such experiences which has led the Latin American guide to psychiatry to encourage providers specifically to inquire about trauma.3   Conclusion: Given the significant association between PTSD and chronic medical conditions, future studies should be performed to provide C-L psychiatrists a more systematic approach to assessing trauma in the Latino immigrant population to improve patient outcomes and avoid over-utilization of hospital services.

No. 25

WITHDRAWN

No. 26

Neuroleptic Malignant Syndrome Masquerading as Sepsis

Poster Presenter: Casey Lenderman, D.O.
Co-Authors: Jacob Anthony Parrick, M.D., Anisa Suparmanian

SUMMARY:
Neuroleptic malignant syndrome (NMS) is a true psychiatric emergency associated with antipsychotic use, typically presenting with symptoms of autonomic dysregulation (1). These include altered mental status, generalized muscular (“lead-pipe”) rigidity, hyperthermia, tachycardia, hypertension, tachypnea, diaphoresis, and occasionally dysrhythmias (2). Elevated creatinine kinase greater than four times the upper limit of normal is also to be expected. It has been documented in most age groups that its incidence ranges from 0.02 to 3 percent (1). Treatment of NMS depends on the severity of symptoms. The offending agent should be discontinued and, in most cases, lorazepam 1-2 mg intramuscularly or intravenously should be administered every four hours. In more severe cases, bromocriptine 2.5-5 mg should be administered every eight hours orally or by nasogastric tube for max daily doses of 30-45 mg per day. Amantadine 100 mg every 8 hours orally or by nasogastric tube, as well as dantrolene 1-2.5 mg/kg every six hours intravenously, can also be considered (3, 4). However, it is most important to provide hemodynamic support to the patient, including fluids and active cooling if severely hyper thermic (4). We present a case of a male patient who was admitted from long-term care at a state mental institution with a past psychiatric history of schizoaffectiveNeuroleptic malignant syndrome (NMS) is a true psychiatric emergency associated with antipsychotic use, typically presenting with symptoms of autonomic dysregulation. These include altered mental status, generalized muscular (“lead-pipe”) rigidity, hyperthermia, tachycardia, hypertension, tachypnea, diaphoresis, and occasionally dysrhythmias. Elevated creatinine kinase greater than four times the upper limit of normal is also to be expected. It has been documented in most age groups that its incidence ranges from 0.02 to 3 percent. Treatment of NMS depends on the severity of symptoms. The offending agent should be discontinued, and, in most cases, lorazepam 1-2 mg intramuscularly or intravenously should be administered every four hours. In more severe cases, bromocriptine 2.5-5 mg should be administered every eight hours orally or by nasogastric tube for max daily doses of 30-45 mg per day. Amantadine 100 mg every 8 hours orally or by nasogastric tube, as well as dantrolene 1-2.5 mg/kg every six hours intravenously, can also be considered. However, it is most important to provide hemodynamic support to the patient, including fluids and active cooling if severely hyperthermic. We present a case of a male patient who was admitted from long-term care at a state mental institution with a past psychiatric history of schizoaffective disorder for apparent sepsis. Initially, he was worked up for sepsis, and was resuscitated with fluid in the emergency department before being transferred to the intensive care unit. After transfer, psychiatry was consulted to evaluate his medications. Physical exam raised concerns for NMS, as the patient had lead-pipe rigidity in his lower extremities, cogwheeling in his upper extremities, confusion, fever, tachypnea, blood pressure lability, and signs of end-organ damage as indicated by elevated cardiac enzymes and transaminitis. The patient’s creatine kinase (CK) level was above 22,000. Medication review revealed that the patient was on variable antipsychotics with variable doses. The patient was treated for presumed NMS; he required short-term dialysis to protect his long-term renal function in light of significant acute kidney injury (AKI). Dantrolene was not given, as its benefits over benzodiazepine therapy and withdrawal of offending medications alone appeared negligible. The patient was started on lorazepam 1-2 mg every Q4H-Q6H, to be titrated symptomatically. His symptoms improved minimally on this regimen, so diazepam 10 mg Q8H was initiated the following day. Diazepam dose was decreased to 5 mg Q8H due to drowsiness the following day, which was continued for the following two days prior to his discharge back to the state hospital. CK, cardiac enzymes, and liver enzymes improved daily throughout his stay once appropriate treatment and management was initiated. The day before discharge, the patient’s CK was 847. disorder for apparent sepsis. Initially, he was worked up for sepsis, and was resuscitated with fluid in the

emergency department before being transferred to the intensive care unit. After transfer, psychiatry was consulted to evaluate his medications. Physical exam raised concerns for NMS, as the patient had lead-pip rigidity in his lower extremities, cog wheeling in his upper extremities, confusion, fever, tachypnea, blood pressure lability, and signs of end-organ damage as indicated by elevated cardiac enzymes and transaminitis. The patient's creatine kinase (CK) level was above 22,000. Medication review revealed that the patient was on variable antipsychotics with variable doses. The patient was treated for presumed NMS; he required short-term dialysis to protect his long-term renal function in light of significant acute kidney injury (AKI). Dantrolene was not given, as its benefits over benzodiazepine therapy and withdrawal of offending medications alone appeared negligible. The patient was started on lorazepam 1-2 mg every Q4H-Q6H, to be titrated symptomatically. His symptoms improved minimally on this regimen, so diazepam 10 mg Q8H was initiated the following day. Diazepam dose was decreased to 5 mg Q8H due to drowsiness the following day, which was continued for the following two days prior to his discharge back to the state hospital. CK, cardiac enzymes, and liver enzymes improved daily throughout his stay once appropriate treatment and management was initiated. The day before discharge, the patient's CK was 847.

No. 27

Neuropsychiatric Sequelae of Tacrolimus: Case Series and Literature Review

Poster Presenter: Joseph McCullen Truett, D.O.
Co-Author: Justin Bracewell Smith, M.D.

SUMMARY:

Background: Calcineurin is a calcium and calmodulin dependent protein phosphatase responsible for activating the immune system. The target for many immunosupressant agents, calcineurin and calmodulin receptors also appear to have neuropsychiatric effects evident in psychotic behavior demonstrated by animal models with Calcineurin gene knock-outs. Following solid organ transplant, calcineurin inhibitors, specifically tacrolimus, are first line in preventing organ rejection. Since tacrolimus was FDA approved in 1994 for management of liver transplant rejection and again in 2006 for pulmonary and renal transplant, numerous case reports have been published identifying tacrolimus as precipitating decompensation of mania, psychosis, and depression in patients with premorbid psychiatric illness as well as in patients with no known psychiatric history. Despite varying presentations, most cases require dose or medication change in order to completely resolve psychiatric symptoms. It is well established among transplant physicians at UVA that psychiatric symptoms are often a cause for switching from tacrolimus post-transplant. To this date, no significant review, meta-analysis, or prospective study on neuropsychiatric sequelae of tacrolimus have been published. Methods This poster highlights cases encountered by both the UVA psychiatry consult service and the UVA pulmonary and nephrology transplant services. Distinguishing characteristics as well as common psychiatric symptoms were identified across three individual cases over the last year. Tacrolimus levels were recorded in all cases. Outcomes and medication management decisions including psychiatric and non-psychiatric interventions were identified. We reviewed literature from 2000 to present, covering FDA approval of tacrolimus for multiple solid organ transplants. Our cases were compared to literature to provide context and elucidate possible trends in diagnosis and management of neuropsychiatric complications of tacrolimus. Discussion Literature is confined to case reports, limiting the generalizability or risk stratification of tacrolimus with regard to neuropsychiatric complications. Psychosis and manic episodes have been identified in both patients with known psychiatric illness and in patients without significant psychiatric history. These episodes can occur at various phases of post-transplant suppression. While tacrolimus toxicity has been noted, it is not present in every case. Increasing age appears to be a risk factor. Decreased tacrolimus dose or medication change required in most cases. Conclusion Tacrolimus, a common immunosuppressant, may elicit new onset psychiatric syndromes or worsen stable psychiatric disease in solid organ transplant patients. Careful monitoring of patients on tacrolimus should be considered, particularly with a history of mania and/or psychosis. Further research is needed to

quantify prevalence of psychiatric illness in this patient population.

No. 28
New-Onset Psychiatric Disturbance Related to Covid-19 Infection

Poster Presenter: Neet Shah, M.D.
Co-Author: Shehzad Ayub, D.O.

SUMMARY:

Background: The COVID19 pandemic has drastically affected day to day life. While delirium in hospitalized patients infected with coronavirus has been defined, the psychiatric effects are yet to be fully described. Some neurological deficits related to COVID19 have been noted, particularly change in smell and taste. A meta-analysis identified rarer neurological and psychiatric complications such as encephalitis and hypoxic encephalopathy (3). In a surveillance study of neurological and neuropsychiatric complications of COVID19 showed 31% of patients presented with altered mental status and, of these, 92% were diagnosed with a new onset psychiatric condition (4). Case Presentations: We present a case of a 48-year-old Hispanic man with no past medical history and no past psychiatric history who presents to ED with altered mental status and severe agitation post suicide attempt by cutting his wrist. The patient reports that he attempted suicide as he believed he had COVID19 though he was not symptomatic. At presentation, he hadn't been diagnosed with or treated for COVID19. Chest Xray was significant for multilobar pneumonia and Covid test was reactive. On initial interview, patient was paranoid, delusional, and demanding to leave the hospital and kill himself. He believed that if he didn't kill himself, that he would get other people sick. The patient had not been exposed to steroids at this point. His agitation required physical restraints and chemical sedation. He was not responding to internal stimuli and was alert during assessments. No illicit substances were detected on UDS. EEG did not show encephalopathy. As the patient's pneumonia improved, so did patient's mental status. He denied further suicidal ideation or paranoia and became cooperative. Upon discharge, patient denied any psychiatric symptoms and did not require psychotropic medications on discharge. Discussion and Conclusion: Most patients with COVID19 will recover without experiencing neurological or psychiatric symptoms. However, there are reports, such as this one, of patients experiencing a new onset psychosis and affective disorder. Suicidality has also been rarely reported (7). Most cases of psychosis are attributed to being steroid induced, however, this case uniquely demonstrates new onset psychosis prior to steroid exposure. This case serves as a reminder that presentations of COVID19 may be more variable than previously described and will require greater research focus in the coming years.

No. 29
Not So Special K? Risks of Indiscriminate Ketamine Use

Poster Presenter: Shehzad Hassan Siddique, M.D., B.Sc.
Co-Authors: Bethany Franklin, M.D., Aum A. Pathare, M.D.

SUMMARY:

Introduction: Ketamine in prehospital and emergency department settings for acute agitation or suicidality has been rising after ketamine received level C recommendation from the ACEP for adults presenting with acute agitation and after esketamine received FDA approvals. Psychiatric adverse effects, eg. emergence reactions, have led ACEP to list known/suspected schizophrenia as an absolute contraindication of ketamine. We have noticed a corresponding trend of indiscriminate use of ketamine in psychiatric patients.. High-profile cases include the cardiac arrest of young man who received ketamine 500 mg for "excited delirium" dosed at a weight approximated by EMS as 100kg v/s his true weight of 64kg. Here we present inappropriate use and subsequent complications of ketamine in the ED. Case: A middle aged man diagnosed with autism spectrum disorder and schizophrenia was under treatment for excited catatonia with lorazepam pending ECT in inpatient psychiatry. Sent to the ED for hand and forehead swelling, and found to be significantly agitated. Initially, given haloperidol, lorazepam, and diphenhydramine without response. Twenty minutes later, given three doses of ketamine totaling 390mg

IV over 90 minutes for ongoing agitation. Soon developed dysautonomia with HR 140s, SBP 190s, TEMP 38C, CPK 2391. Psychiatry consulted and found significant rigidity, diaphoresis, and sialorrhea, concerning for malignant progression. Following an acute series of ECT, stabilized on benzodiazepines, depakote, and memantine. Discussion: Diagnosed with schizophrenia, a contraindication to ketamine per ACEP, he still received large doses of ketamine. Agitation was likely purposeless agitation in the setting of excited catatonia for which benzodiazepines are the standard as antipsychotics or ketamine can produce catalepsy or worsen catatonia. Conclusion: Need exists to research ketamine use in emergency settings and subsequent adverse effects. Additional education needed for emergency personnel regarding neuropsychiatric effects of ketamine to reduce such indiscriminate use.

No. 30

Heroin-Induced Toxic Leukoencephalopathy From "Chasing the Dragon" and the Proposed Synergistic Effect of Amantadine and Antioxidants in Its Treatment

Poster Presenter: Heather D. Burke, M.D.
Lead Author: Alexis Cohen-Oram, M.D.
Co-Author: Shixie Jiang, M.D.

SUMMARY:
Mr. M, a 40-year-old Hispanic male with an unknown past medical history presents to the psychiatric consult service for further evaluation of altered mental status, inattention, mutism, and picking movements with his hands. History was limited as the patient was unable to answer questions reliably. However, a friend of the patient later called the hospital, stating the patient had been using multiple substances including IV and inhalational heroin and synthetic marijuana increasingly over the past month after losing his job. The patient was admitted to the medical team who considered delirium from unknown cause vs synthetic drug intoxication vs seizure. On evaluation, there were no signs of CNS infection. Basic lab work and urine drug screen were normal. CT head did not show any acute findings. CAM-ICU was positive, and EEG showed diffuse slowing and absence of seizure-like activity, further supporting delirium. Catatonia was considered as the patient had some features of catatonia including mutism and brief posturing. However, he did not have any other classic features of catatonia and the patient was unresponsive to an Ativan challenge. The etiology of delirium was unknown until the MRI head showed diffuse increased signal intensity corresponding to the white matter of the supratentorial brain consistent with toxic leukoencephalopathy. Paired with his substance use history, these imaging findings suggested toxic leukoencephalopathy from inhalation of heated heroin, otherwise known as "chasing the dragon". The patient was started on empiric antioxidant therapy including coenzyme Q10, vitamin E, and vitamin C as it has been noted anecdotally in the literature to help with recovery (Cordova). The patient showed minimal improvement with this regimen. The patient was then started on amantadine as amantadine has been noted previously in the literature to assist with functional recovery in patients with severe TBI (Giacino). Mr. M improved over the remainder of his admission, becoming more alert and attentive with the resolution of his mutism. Heroin-induced leukoencephalopathy often has a prolonged course with a debilitating loss of function; about 25% of patients progressing to its terminal stage and resulting in death (Kass-Hout). At this time, there is no consensus on effective treatment. In this poster, we discuss the evaluation of delirium, the diagnosis of heroin-induced leukoencephalopathy, and the proposed mechanism behind the effectiveness of amantadine in this patient.

No. 31

Pharmacokinetic Considerations in the Management of Post-Traumatic Brain Injury Agitation With Comorbid Epilepsy: A Case Report

Poster Presenter: Alan Tseng
Co-Authors: Kiefer Greenspan, M.D., Abhisek Chandan Khandai, M.D., M.S.

SUMMARY:
Significance: Agitation in hospitalized patients is often complicated by multiple comorbidities including substance use, mood, and neurological disorders. Therefore, careful consideration for drug-

drug interactions, in particular to the cytochrome p450 (CYP) system, should be given in choosing pharmacological management of agitation. Case: A 60-year-old man with a history of multiple substance use disorders (cocaine, alcohol) and epilepsy was transferred from an outside hospital to Neurology for concerns for subclinical status epilepticus requiring continuous EEG monitoring. His home seizure medication was phenytoin and he was continued on phenobarbital started by the outside hospital. MRI brain showed changes suggesting prior trauma. The patient attempted multiple times to physically assault staff and was started on quetiapine QHS and haloperidol and lorazepam PRN. When his agitation did not improve, the psychiatry service was consulted for assistance with management. Phenytoin and phenobarbital were cross-tapered to valproic acid. Quetiapine was discontinued. He was started on olanzapine and propranolol. As medication changes were implemented, the patient's agitation improved, and he was able to be discharged to a subacute rehabilitation facility. Discussion: Our team provided recommendations for treating this patient's agitation suspected to be secondary to TBI based on his MRI results. Although his home seizure medication phenytoin had been described in the treatment for post-TBI agitation, we discontinued both phenytoin and phenobarbital due to their strong CYP3A4 inducing properties, which was likely increasing the metabolism and reducing the efficacy of quetiapine. We changed his AED to valproic acid due to its lack of CYP3A4 induction and potential benefit for prevention of agitation (Williamson, 2019). Quetiapine was changed to olanzapine due to its metabolism through alternative CYP pathways, with additional support demonstrating its efficacy in conjunction with valproic acid (Mousavi, 2013). A β-blocker, propranolol, was added based on data showing reduced episodes of agitation as sequela to TBI (Nash, 2019). Conclusions: Currently, there are no FDA-approved drugs for post-TBI agitation, and treatment guidelines are based on limited data. Thus, pharmacotherapy of post-TBI agitation should be personalized to patients' symptoms and medical comorbidities, such as epilepsy. Physicians should remain cognizant of drug-drug interactions and their potential impact on treatment efficacy. More work is needed to determine optimal strategies for the treatment of post-TBI agitation.

No. 32
Pseudologia Fantastica in a Case of Factitious Disorder: Lying Is Just a Tip of the Iceberg

Poster Presenter: Ishdeep Narang, M.D.
Co-Authors: Hajra Ahmad, M.D., Swapnil Khurana, M.D., Ewald Horwath, M.D.

SUMMARY:

Background: Pseudologia fantastica is defined as the psychological phenomenon of pathological lying. It can be distinguished from other types of deception and from Munchausen's syndrome through four main characteristics. These four elements are : 1. the falsifications are not entirely improbable and are often based in truth or reality, 2. the falsifications are persistent and are often complicated and detailed, 3. they are not told for personal profit but have self-promoting qualities and, 4. they are characteristically distinct from delusions. The person engaging in these falsehoods will also usually acknowledge them when they are confronted. Pseudologia fantastica can present a unique diagnostic challenge to the clinician. Objective: The purpose of this report is to present a case highlighting the phenomenon of pseudologia fantastica in a patient who presented with physical and psychological signs consistent with factitious disorder. By the end of this presentation, the reader will be able to distinguish between pseudologia fantastica and other deception syndrome and learn about the challenges in its management. Case: This is a 40 year old African American female with a self-reported medical history of cervical cancer stage 4, fibromyalgia, lupus and past psychiatric history of MDD, PTSD and substance use disorder who came for bloodwork to the hospital and was admitted to the trauma floor after she was stabbed in a bathroom unprovoked by a stranger. On confronting, patient revealed an extremely abusive childhood and perpetual falsifications to receive attention. Diagnoses of malingering and factitious disorder were considered along with an underlying major depressive disorder. However, due to lack of a secondary gain, she was diagnosed with factitious disorder, with pathological

lying as one of its symptoms. Conclusions: There is limited pre-existing literature
on pseudologia fantastica, particularly quantifiable data. As this phenomenon presents a unique clinical challenge to the physician, knowledge of its characteristics can be very helpful when formulating an initial diagnostic impression and treatment plan. It can also help clinicians highlight their own countertransference while dealing with these patients

No. 33
Psychiatric Dilemmas in Acute Intermittent Porphyria: A Case Report
Poster Presenter: Rooshi Amit Patel, M.D.
Co-Authors: Aditi Sharma, Sanjay Chandragiri

SUMMARY:
Acute intermittent porphyria (AIP) is a rare metabolic disorder caused by a deficiency of the enzyme porphobilinogen deaminase (also known as hydroxymethylbilane synthase) (1, 2). This enzyme is involved in the synthesis of heme and as a result of this deficiency, there is an accumulation of porphyrin precursors in the body (1, 2). Though a genetic predisposition is necessary, there are often environmental "triggers" that cause symptomatic acute porphyria. These stressors can include excessive alcohol consumption, caloric restriction, stress, infections, endocrinopathies, and certain medications (3, 4). The clinical presentation of acute exacerbations is highly variable, most commonly manifesting with gastrointestinal, renal, neurological and/or psychological symptoms. Per literature review, there is a wide array of psychiatric presentations during acute attacks that include irritability, depression, anxiety, hallucinations, paranoia, agitation, and altered mentation (4, 5). We present a case of a 56-year-old female with a history of AIP who was admitted to the psychiatric unit following an intentional polypharmacy overdose, later developing psychotic features, abdominal pain, and seizures. Her complicated hospital course highlights a dilemma clinician's face; the presentation is nonspecific and there is a serious risk of precipitating further attacks by prescribing specific medication classes.

No. 34
Recurrent Episodes of Psychosis Associated With a Systemic Lupus Erythematosus Flare in the Setting of Immunosuppression Withdrawal
Poster Presenter: Shireen S. Samson, M.D.
Co-Authors: Linda Nix, M.D., M.P.H., Jonathan Kaplan, M.D.

SUMMARY:
Introduction: Psychosis is a relatively rare presentation of neuropsychiatric lupus and occurs early in disease progression. Recurrence of psychotic episodes associated with systemic lupus erythematosus (SLE) is not uncommon but there are no prior reports of psychosis occurring in the setting of immunosuppression withdrawal. Case: A 28-year-old African American female with a past medical history of SLE with class IV lupus nephritis on maintenance therapy of mycophenolate mofetil (MMF) and prednisone was brought in to the emergency department for disorganized behavior, auditory hallucinations, and paranoid delusions. Two weeks prior to presentation, she was diagnosed with bacterial vaginosis, started metronidazole, and reduced her dose of MMF due to concern for possible medication interaction. Initial workup revealed elevated Anti-ds DNA, low complement levels, mildly elevated erythrocyte sedimentation rate, and negative magnetic resonance imaging of the brain without contrast. Lumbar puncture was offered but refused. On admission, immunosuppression was restarted and olanzapine was utilized for management of psychosis. She required multiple as-needed doses of olanzapine and was transferred to inpatient psychiatry for further management. Initially, psychosis worsened with increased corticosteroids and was complicated by extrapyramidal symptoms from olanzapine. Over the following week, psychosis gradually improved with continued immunosuppressive therapy and antipsychotics were tapered and discontinued. She was discharged on home dose of MMF, increased dose of corticosteroids, and no antipsychotics. At follow up one week later, she was back to baseline mental status with plans to resume work. One year prior, she had a similar episode in the setting of reducing MMF after taking metronidazole for bacterial vaginosis. At the time, her psychiatric symptoms resolved within one week of restarting

MMF, and she did not require psychiatric medication or hospitalization. Discussion: This case demonstrates recurrence of disease activity in the same organ system, specifically psychosis in the setting of withdrawal of immunosuppression which has not been previously reported based on our review of the existing literature. Diagnosis can be challenging as over 50% of MRIs are unremarkable and LPs may or may not be abnormal. Implications: The above case highlights the intricate interplay between autoimmune and psychiatric diseases, and the challenge in managing the psychiatric side effects of autoimmune flares and immunosuppression. When treated appropriately, psychosis related to neuropsychiatric SLE resolves entirely with few recurrences emphasizing the importance of early diagnosis and treatment.

No. 35

Serotonergic Toxidrome Following Methylene Blue Administration for Vasoplegia: Barriers in Preventing Serotonin Syndrome and Review of the Literature

Poster Presenter: Winifred Mary Wolfe, M.D.
Lead Author: Ihuoma O. Njoku, M.D.
Co-Author: Gabriela Pachano, M.D.

SUMMARY:

Methylene blue is a monoamine oxidase inhibitor that is traditionally known to be used as a procedural dye and historically used for methemoglobinemia. More recently, its use for patients who are in shock after cardiac procedures, such as coronary artery bypass (CABG), has grown. Here we present a case of methylene blue use in a 60-year-old male with a past psychiatric history of Major Depressive Disorder and Alcohol Use Disorder, severe (in sustained remission) who presents to the hospital for scheduled three-vessel CABG. He had been stable on mirtazapine 7.5 mg PO daily, duloxetine 120 mg PO daily, and fluoxetine 80 mg PO daily. His surgical course was complex and post-operatively he was ultimately treated with methylene blue for vasoplegia. Following discontinuation of all psychotropic medications, the University of Virginia Medical Center Psychiatry Consultation-Liaison service was consulted for recommendations on the management of Serotonin Syndrome and psychotropic medication management. We discuss the background and relevant literature to this scenario and promote discussion for outpatient and consultation-liaison psychiatrists for medically complex patients at increased risk of Serotonin Syndrome.

No. 36

Sometimes the Hoofbeats Are Zebras: The Role of Psychiatry in the Inter-Disciplinary Management of CNS Vasculitis

Poster Presenter: Nona A. Nichols, M.D.

SUMMARY:

Background: Primary angiitis of the CNS (PACNS), also known as CNS vasculitis, is a rare condition with high morbidity and mortality. Due to nonspecific presenting symptoms and lack of specific diagnostic tests, PACNS is difficult to diagnose and requires high clinical suspicion (Hajj-Ali & Calabrese, 2012). We present the case of a patient with severe agitation who was diagnosed with presumed PACNS. While literature review of rheumatic and neurological aspects of PACNS is fruitful, there is a dearth of medical knowledge on the psychiatric management of this condition. **Case**: Mr. X is a 30 year-old male with opiate use disorder, anxiety, depression, and recent intentional heroin overdose transferred from an outside psychiatric hospital for back and abdominal pain. He was noted to have altered mental status with head MRI revealing vasogenic edema concerning for infection. Infectious disease started broad-spectrum antibiotics without response. Further imaging revealed a brain mass with midline shift, prompting involvement of neurology, neurosurgery, and rheumatology. Extensive medical work-up, including two brain biopsies, was completed. In addition to neurological deficits, Mr. X demonstrated affective lability and agitation throughout his hospitalization, managed by psychiatry. During his nearly 4.5-month hospitalization, multiple psychotropic medications were used including quetiapine, olanzapine, propranolol, gabapentin, clonazepam, escitalopram, and buprenorphine-naltrexone as well as PRN ziprasidone, haloperidol and lorazepam. High-dose methylprednisolone resulted in decreased mass size and improvement in mental status, leading to

presumed diagnosis of CNS vasculitis. Mr. X's behavior continued to improve with treatment. Ultimately, his medications were decreased with plans to taper further in the outpatient setting, and he was discharged. **Discussion**: Studies have found altered mental status to be common in patients diagnosed with PACNS (Giannini et. al, 2012). Additionally, a 2020 case series review of 585 patients found that about one-fifth of all patients with a diagnosis of PACNS will have a psychiatric disorder (Cristina et. al, 2020). Thus, this is an important diagnosis for psychiatrists to be familiar with, as delay in diagnosis can worsen outcome. This case will review the challenges in diagnosis and treatment of PACNS and the necessity of a collaborative approach throughout patients' treatment courses. Specifically, we will address psychiatry's role in management of agitation and affective lability, both during the hospitalization as well as in the outpatient setting, as part of an integrated care system. **Implications**: PACNS requires a multi-faceted and multi-disciplinary approach for which psychiatrists can play an important role, particularly in management of a patient's affective lability, co-existing psychiatric illnesses, and aggression through various care settings.

No. 37

Stroke, Stress, and the Incubus Phenomenon: Understanding the Etiology of Hallucinations and Integrated Delusions

Poster Presenter: David Botros Rizk, M.D.
Co-Author: Katrina E. Burns, M.D.

SUMMARY:

BACKGROUND: Basic neuroscience, neurology, psychiatry and psychodynamic theory often provide different perspectives regarding the symptoms experienced by patients. The lack of an integrated etiologic understanding becomes apparent when discussing patients with certain hallucinations and delusions. We present a case of a patient who experienced an integrated tactile hallucination and delusion of being sexually assaulted. We hypothesize the phenomenon she experienced is best explained by an integration of neurologic and psychiatric theories relating to delusions of infestation, Charles Bonnet syndrome, phantom limb pain, post-stroke psychosis, and the incubus phenomenon. CASE: A 55-year-old woman with a history of a right middle cerebral artery cryptogenic stroke, residual left-sided hemiplegia, post-stroke seizures, and chronic post-stroke pain and no prior psychiatric history was admitted for acute worsening of neuropathic pain. During this admission, she began to feel two hands groping her buttocks and penetrating her anus during the day and night. Despite not being able to see the attacker, she maintained an immutable conviction that there was an individual physically present. She did not exhibit signs of delirium, seizures, or a thought disorder. Her medical workup was unremarkable for new neurologic insults, metabolic or drug-induced causes of these symptoms. DISCUSSION: There are various proposed mechanisms of hallucinatory and delusional conditions. In Charles Bonnet syndrome, hypotheses suggest deafferentation of neurons cause release visual hallucinations by post-injury afferent input restructuring, neuronal hyperexcitability, vesicular changes in boutons, and postsynaptic receptor modifications (Burke, 2002). Studies show that the central nervous system, peripheral nervous system, and psychological factors all play an active role in the mechanism of sensation of phantom limb pain (Luo, 2016). Delusions of infestation, one of the most prominent tactile hallucinations with concordant delusion, occur both as post-stroke sequelae and as primary psychiatric disorders (Nagaratnam, 2000). For centuries, stereotyped cases of the incubus phenomenon, a delusion in which one is being sexually approached by an unseen being, have occurred stemming purely from psychiatric and culturally based etiologies (Molendijk, 2017; Grover, 2018). CONCLUSION: By describing hypotheses surrounding syndromes of hallucinations and delusions, we hope to advocate for a more integrated approach when evaluating patients experiencing these phenomena. Systematic clinical reporting of such cases may facilitate an understanding of the variety of ways in which these occurrences may be conceptualized.

No. 38

Surviving Covid-19 but Believing You Are Dead: Cotard's Syndrome as a Neuropsychiatric Sequela of Covid-19

Poster Presenter: Anne Louise Stewart, M.D.
Co-Author: Diana M. Robinson, M.D.

SUMMARY:
Cotard's Syndrome is a rare constellation of symptoms including anxious melancholia, suicidal behavior and thoughts, analgesia, delusions of nonexistence, and delusions of immortality (1). It has been reported in severe neuropsychiatric illnesses (2). It has been described explicitly in the context of delirium in one case report (3) but not in the context of delirium related to SARS-CoV-2 (COVID-19) infection illustrated in the following case. Ms. G is a 52-year-old female with no past psychiatric history and a past medical history of type 2 diabetes, obstructive sleep apnea, congestive heart failure, obesity, and discharge from the hospital five days prior for COVID-19 pneumonia who presented to the emergency department with acute on chronic respiratory failure and thoughts that her son was dead. Initial psychiatric exam was consistent with delirium with distressing thoughts her son was dead. She required haloperidol for severe agitation and hallucinations in the context of delirium. On hospital day six, she endorsed thinking her son was dead and she was dead. The Mini-Mental State Exam (MMSE) was 16/30. On hospital day seven, she believed her hand was dead and "black" because too much blood had been removed. MMSE was now 28/30. Neurologic exam was non focal and symmetric. CT head without contrast showed chronic encephalomalacia of the left superior frontal gyrus. Haloperidol was tapered and discontinued on hospital day nine, and Ms. G was discharged home on hospital day ten with resolution of symptoms. This is a patient with no past psychiatric history and no focal neurologic findings, presenting with Cotard's Syndrome in the context of delirium and recent COVID-19 infection. This suggests the need for broader psychiatric screening during the COVID-19 pandemic to include this rare delusion and potential screening for COVID-19 infection in patients presenting with disturbing delusions of negation. In addition to this being a novel neuropsychiatric sequelae due to a novel virus, this poster will also review the literature on Cotard's syndrome and on other neuropsychiatric sequelae of COVID-19.

No. 39

Syndrome of Irreversible Lithium-Effectuated Neurotoxicity—Mostly SILENT Since 2005: A Case Study

Poster Presenter: Joe Shortall
Co-Author: Sree Latha Jadapalle, M.D.

SUMMARY:
Introduction: Lithium has been a mainstay of treatment in the psychiatrist's therapeutic arsenal since 1970. Its toxicity often manifests in neurologic deficits that typically improve after medication removal by hemodialysis. In rare cases, patients may encounter residual neurologic symptoms that persist for 2 months beyond the completion of dialysis—this qualifies them for the diagnosis of the Syndrome of Irreversible Lithium-Effectuated Neurotoxicity. (SILENT) Since the seminal meta-analysis of 90 patients with SILENT by Adityanjee in 2005, only 10 additional cases have been identified in the medical literature. Methods: We will be describing a relatively rare case of lithium induced neurocognitive complications called SILENT syndrome. We will review and discuss the current available literature on SILENT syndrome and outline important advances in the understanding and treatment of this condition. Results: A 54-year-old female with depression presented with stupor and seizures after an overdose on lithium culminated in a plasma drug level of 3.85 mEq/L. She had a hospital course of 21 days with significant neurocognitive decline. She had hemodialysis normalizing her lithium levels but continued to experience ataxia, dysarthria, and cognitive impairment for more than 2 months after dialysis. Discussion: In comparison with previous case reports, our patient experienced the most common residual symptoms of SILENT, including cerebellar signs and dysarthria, though she also experienced the rarer sequelae of confusion. These symptoms left her debilitated. Neuroimaging studies completed since 2005 implicate cerebellar demyelination in SILENT and have shown 40% improvement in these changes after intensive physiotherapy. Conclusion: Our case presents a

diagnostically challenging scenario for Consultation-Liaison psychiatrists and we recommend to think broadly of the differential diagnosis in patients presenting with neurocognitive problems after lithium toxicity. SILENT is a rare presentation of a relatively common medication toxicity; recent technologic advances suggest cerebellar demyelination as the cause and promote physical therapy as the standard of care for this condition.

No. 40

Telecourt: A Safer, Efficient and Cost Effective Option to Conducting Involuntary Commitment Hearings for Inpatient Mental Health Patients

Poster Presenter: Jason P. Lee, M.D.
Co-Author: Saba Syed, M.D.

SUMMARY:
As the medical field incorporates telecare services to improve the healthcare delivery system, there is an increased need for the court system to also technologically evolve and embrace telecourt services, particularly the involuntary commitment hearings for mental health patients. The utilization of telecourt for involuntary commitment hearings offers several benefits over a traditional court setting, including decreased risk of patient elopement, improved safety for the patient and staff accompanying the patient to the court house, improved participation by the patients in their court hearing, more efficient as far as use of time, and decreased cost. With our case example, we highlight how the traditional court system can sometimes hinder patient care and result in severe consequences. We report on a case of a patient with chronic Schizophrenia and psychogenic polydipsia resulting in recurrent episodes of severe hyponatremia. The patient's ongoing psychosis and behavioral dysregulation led to his repeated absence at a scheduled conservatorship hearing in court and dismissal of the case by the judicial system. As a result, the patient had to be discharged from the mental health unit, which subsequently lead to a near fatal suicide attempt. We propose utilization of telecourt as a viable option for improving access to care and bridging the systemic issues that can occur between the court system and inpatient psychiatric services.

No. 41

Thalamic Strokes Resulting in Psychosis: A Case Series and Review of Literature

Poster Presenter: Nona A. Nichols, M.D.
Co-Authors: Lukas Vilella, B.S., Alexi Rae Webb, M.D., M.P.H., Sahil Munjal, M.D.

SUMMARY:
Introduction: Post-stroke psychosis continues to be considered relatively rare despite nearly 5% of post stroke patients experiencing delusions or hallucinations with minimal insight (Stangeland et. al, 2018). Literature indicates that the most commonly affected regions of the brain tend to be the frontal, temporal, and parietal regions as well as the caudate nucleus (Stangeland et. al, 2018). Here, we present two cases of thalamic strokes resulting in psychotic presentations and discuss management of post-stroke psychosis. **Case 1**: Mr. N, a 65-year-old male with no prior psychiatric history and no pertinent medical history, presented to the hospital after being found barefoot in the woods. He demonstrated paranoia, delusions, and bizarre behavior prompting a psychiatric consult. On assessment, he displayed severe disorganization of thought, continued paranoia, and hyper-religiosity. Collateral indicated 6 months of personality changes, increasing thought disorganization, and memory problems, which had worsened over the past week to the extent that Mr. N was no longer making sense. His MRI revealed an acute right thalamic infarct. Other labs and LP were negative. Mr. N started risperidone 0.5mg qAM and 1mg qhs with great improvement by his follow-up appointment one month after discharge. **Case 2**: Ms. S, a 61-year-old female with no prior psychiatric history and a medical history notable for IDDM, chronic back pain, and orthostatic hypotension, presented to the ED with complaints of low blood pressure, weakness, and recent falls. CT head was concerning for a left thalamic stroke, which MRI confirmed. On the neurology service, she developed tactile hallucinations, prompting a psychiatric consult. On exam, she was fully organized and oriented, with exam notable for tactile hallucinations causing significant distress. Her insight improved on olanzapine 7.5mg qhs, clonazepam 0.5mg BID PRN,

and duloxetine 90mg qAM, and she was discharged home. At her one-month follow-up appointment, she noted continued visual hallucinations and tactile hallucinations necessitating an increase in her olanzapine. **Discussion**: Given the rarity of post-stroke psychosis, many questions about treatment and course of illness remain (Hackett et. al, 2014). We present two patients with thalamic strokes, one with a left-sided lesion, and the other with a lesion in the right. Interestingly, prior literature has indicated that right hemisphere damage tends to be more associated with post-stroke psychosis (Joyce, 2018). We will review the literature regarding post-stroke psychosis and discuss the course of treatment and illness for the two patients above, which we are currently following in our clinic, offering suggestions for psychiatrists with similar patients. **Implications**: Psychiatrists should consider post-stroke psychosis as a possible cause of new onset psychosis in older patients with no prior psychiatric history, atypical psychiatric symptoms, or accompanying neurological signs.

No. 42

The Cold Hard Facts: Remembering Hypothermia as a Side Effect of Antipsychotics

Poster Presenter: Emmalee A. Boyle, M.D.
Co-Author: Cristina Montalvo, M.D.

SUMMARY:

Background Hypothermia is an often-forgotten adverse effect of antipsychotics associated with severe morbidity and mortality. This case highlights a patient who developed hypothermia after initiation of olanzapine. Case Report 73-year-old male with schizoaffective disorder, hypertension, hyperlipidemia presented to the Emergency Department (ED) from his nursing home (NH) after testing positive for COVID-19 with altered mental status (AMS). In the ED, labs and vitals were notable for temperature 98.4°F, pulse 104 bpm, blood pressure 131/71, acute kidney injury with creatinine of 2.2, sodium 153, and elevation in inflammatory markers. He was admitted after which the Consultation-Liaison psychiatry (CLP) service was consulted to assess his capacity given his refusal of aspects of his care. On exam, patient was inattentive, disoriented, and experiencing visual hallucinations consistent with delirium. Per collateral, he had been psychiatrically stable on haloperidol 2.5 mg QHS and carbamazepine 200mg QHS. He proceeded to have several complications including transfer to the medical intensive care unit (MICU) and intubation. During this time, psychiatric medications were held due to his cardiac and renal status. As patient's clinical status improved, CLP initiated olanzapine 2.5mg QHS for treatment of his psychotic disorder and to assist with ongoing poor PO intake. Six days after initiating olanzapine, patient subjectively reported feeling cold and was found to have rectal temperatures between 91-92°F and was subsequently transferred to the MICU for rewarming. Olanzapine was discontinued without recurrent hypothermia, and patient discharged back to his NH. Discussion Hypothermia is an under considered side effect of antipsychotics, yet 55% of hypothermia reports have been found to be related to atypical antipsychotic medications. 1 Atypical antipsychotics are more often associated with hypothermia than typical antipsychotics with the highest risk following initiation or increase in dosing 2. Olanzapine is most commonly associated with hypothermia along with haloperidol and risperidone.2 Mechanisms behind antipsychotics and thermoregulatory processes are thought to involve hypothalamic neurotransmission within dopamine, noradrenaline, and serotonin systems. 1 The literature indicates neuroleptics with strong 5HT-2 antagonism are more associated with hypothermia than other antipsychotics, with elevation in 5-HT levels thought to cause hyperthermic effects, and lowering 5-HT levels thought to cause hypothermic effects.3 Blocking alpha2-adrenergic receptors may also cause hypothermia by inhibiting peripheral responses to cooling such as vasoconstriction. 2 Neurotensin has also been shown to be a mediator of hypothermia with levels increased by antipsychotics. 3 Conclusion Psychiatrists should be familiar with hypothermia as a potential side effect of antipsychotics with a high clinical suspicion and monitoring of symptoms during initiation or titration.

No. 43

The Emotional Impact of Sickle Cell Disease Symptoms on a 21-Year-Old African American Female

Poster Presenter: Seyed Alireza Hosseini, M.D.
Co-Authors: Sasank Isola, M.D., Saad Thara, M.D., Sara Abdijadid, D.O., Minal Bhatia, M.D.

SUMMARY:

Sickle cell disease (SCD) is a chronic and debilitating disease that can affect almost any organ system in the body, hence it is associated with a broad range of complications and comorbidities that may have a profound impact on a patients' quality of life through medical and mental health consequences. Psychosocial and affective comorbidities are prevalent in SCD and could considerably influence disease outcomes. While management of psychiatric symptoms is an important component of SCD treatment, many patients with psychiatric comorbidity remain unrecognized and untreated. Moreover, treatment options for SCD psychosocial sequelae are suboptimal, and evidence on their effectiveness is limited. We report A 21-year-old married African American female with a history of sickle cell disease (SCD) and recurrent hospital admissions due to vaso-occlusive crises (VOC), who was referred to the consultation-liaison psychiatry service for evaluation of psychiatric comorbidities and management recommendations. She had more than ten hospitalizations over the past three months, and pain management during recent admissions required parenteral hydromorphone at escalating doses. The patient showed non-compliance behavior and presented with symptoms suggestive of depression. This led to the concern of potential suboptimal management of psychiatric sequela that may have also contributed to the pain experiences and frequent hospitalizations. On psychiatric assessment, the patient was uncooperative, withdrawn, and emotionally labile. She revealed extreme concerns about her pain and demonstrated maladaptive emotional and behavioral symptoms, including low mood, irritability, catastrophizing, and anger. Personal and family history of mental illness, history of drug abuse, and mental status examination were not remarkable. The diagnosis of adjustment disorder unspecified was made, and duloxetine was initiated. Cognitive-behavioral therapy (CBT) with psychoeducation techniques was recommended and discussed with the patient. The patient was scheduled for frequent outpatient mental health visits to build trust and establish plans of care. However, she refused therapy and outpatient care, therefore the efficacy of the recommended treatment remained unclear. This case illustrates the psychiatric consequences of sickle cell disease and impairment of quality of life in an adult with SCD. We discuss the relationship between somatic complications and neuropsychiatric disorders in SCD and highlight the importance of early identification and management of mental health conditions as an essential component of SCD management. We also emphasize treatment challenges and the need for large scale research on pharmacotherapies and nonpharmacological interventions in treating psychosocial comorbidities associated with SCD.

No. 44

The Man Who Forgot His Own Reflection: A Case Report of an Adult Male With Severe Alcohol Related Dementia

Poster Presenter: Benjamin Jon Swanson, D.O.
Co-Authors: Yaeeun Lee, M.S., Sanjay Yadav, M.D.

SUMMARY:

Background: Alcohol is one of the most popular psychoactive substances used in the United States, with 55.3% of adults reporting having consumed it in the past month (1). Complications of alcohol are diverse, including neurological complications that may last beyond acute withdrawal. Wernicke encephalopathy, Korsakoff syndrome, and Marchiafava–Bignami syndrome are disorders resulting from the deficiency of certain nutrients, especially thiamine, and are heavily correlated with chronic alcohol abuse (2, 3). The underlying causes are understood to be related to damage to discrete areas of the brain, but the presenting symptoms are heterogeneous between patients (4). Case: A 61-year-old Caucasian male with a history of hypertension and chronic alcohol use presented to the emergency department by EMS after neighbors became concerned that the patient appeared confused and not eating. In the past year, alcohol misuse has affected the patient''s social and

professional life. On examination, he provided a vague history and demonstrated no significant neurological deficits or gait abnormalities. Patient did not recall his most recent drink prior to presentation and did not demonstrate signs of acute alcohol withdrawal during his hospitalization. Repeat interviews revealed obvious inconsistencies between reports with no memory of previous conversations. Laboratory testing did not reveal significant abnormalities, and a CT scan of the brain without contrast revealed mild to moderate patchy hypoattenuation. While the patient was consistently friendly with staff and able to complete daily activities without much assistance, he became agitated upon seeing his reflection in the mirror to the point that nursing had to cover mirrors in the patient's room. The patient was treated IV thiamine for three days with minimal improvement to his presentation. Methods: A psychiatric evaluation was completed and neuropsychological testing was performed. The patient completed the WASI-II, CVLT-II, RCFT, D-KEFS, and MoCA. Results: The patient demonstrates substantial retrograde and anterograde amnesia with confabulation while maintaining socially appropriate behavior. He displays normative impairments across all domains, including verbal comprehension, perceptual reasoning, cognitive processing and flexibility, and visual and auditory memory. Examination does not reveal any significant symptoms of a mood disorder per self-report, collateral, and GDS-SF. Discussion: Memory deficits related to chronic alcohol use can be difficult to differentiate from other causes of dementia. This patient's relatively preserved social function with amnesia and constant confabulation demonstrates a severe case of alcohol related dementia. We discuss the patient's differential diagnoses and future treatments. Conclusions: Clinicians will benefit from quickly recognizing and differentiating signs of alcohol related dementia from other forms of dementia and implementing appropriate interventions.

No. 45

Thiamine Dosing and Its Role in Alcoholic Brain Disease

Poster Presenter: Raheel A. Chaudhry, M.D.

SUMMARY:

Introduction: Prevalence of Wernicke encephalopathy is between 0.4% and 2.8% but the prevalence increases to 12.5 % in patients with alcohol use disorder. Wernicke''s encephalopathy is associated with significant morbidity and mortality, with death reported in up to 20% of patients. About 80-85% of patients who survive develop a chronic disorder of severe memory deficits with amnesia that include learning defects and short term memory loss. This condition, known as Korsakoff''s psychosis, often follows Wernicke's encephalopathy, which collectively is known as Wernicke-Korsakoff Syndrome. (WKS). Wernicke encephalopathy is a reversible, acute neuropsychiatric emergency because of low thiamine levels. Adequate and urgent thiamine replacement is needed to avoid death or progression to Korsakoff syndrome with largely irreversible brain damage. Thiamine administration is the main treatment of Wernicke encephalopathy but there are no universally accepted guidelines with regard to its optimal dose, mode of administration, frequency of administration or duration of treatment so with the help of this case report we present different treatment recommendation for thiamine administration in the treatment of WKS based on literature review. Case Report: We describe a case of a patient who presented with generalized weakness, fatigue, loss of appetite. On examination, he was confused, grossly emaciated. Central nervous system examination revealed nystagmus. These findings were highly suspcious with Wernicke''s encephalopathy. He was started on thiamine supplementation with which neurological signs improved. It is important to consider Wernicke encephalopathy in patients with chronic alcohol use, nutritional deficiency of thiamine who develop acute neurological symptoms. We performed a literature review of common databases including: Cochrane, PubMed, Embase, Clinical Key, Medline, Web of Science. Conclusion: Through this case discussion and review of current literature, we present information on the possible mechanism by which thiamine deficiency can lead to Wernicke encephalopathy or WKS. So we alert clinicians to be aware of signs and symptoms and provide treatment recommendations for Wernicke''s Encephalopathy. So we present different treatment recommendation for administering thiamine based on literature

review and we also determine the efficacy of thiamine in preventing and treating the manifestations of Wernicke-Korsakoff Syndrome as a consequence of alcohol excess, nutritional deficiency and if so in which form it should be given, at what dose and for how long.

No. 46

Thrombocytosis From Reintroduction of Clozapine: A Case Report

Poster Presenter: Kanida Charuworn, M.D.

SUMMARY:

Introduction: Psychiatrists have used Clozapine for decades as the medication of choice for treatment-resistant Schizophrenia. A well-known side effect of agranulocytosis was reported and noted around 1% of patients taking Clozapine, especially in the first year of starting the medication. Other notable side effects of Clozapine include sialorrhea, drowsiness, hypotension, and weight gain. There were also case reports on very rare side effects of Clozapine, such as interstitial nephritis and pulmonary embolism. To date, there were only five case reports on clozapine-induced thrombocytosis. Case: The patient is a 40-year-old African American male with a past psychiatric history of Schizophrenia. The patient presented to the emergency department after jumping out from the third-floor balcony resulting in sacral fracture and fracture of the distal tibia. The platelet on admission was 296K. The patient was well known to the Consultation and Liaison psychiatry service since he has been to the hospital in the past. He never had a diagnosis of hematologic disorders or thrombocytosis. The patient was prescribed with Clozapine 50 mg/day, Haloperidol decanoate 150 mg IM monthly, and Valproic acid 2500 mg/day. However, he reported stopping all medications three days before the incident. Clozapine was reintroduced at 25 mg PO BID and increased gradually. As per the Clozapine REMs protocol, CBC was monitored weekly. We increased Clozapine to 75 mg PO BID. At this dose, his platelet increased from 222K to 456K in one week and to 1026K the week after. There was no other medical explanation for the rapid increase in platelets. Review of medications, there was no drug-drug interaction. The consultation team decided to decrease Clozapine to 50 mg PO BID while monitoring daily CBC. His platelets decreased in three days from 1026K to 953K then in the next week to 476K. His platelet level normalized in two weeks after we reduce the clozapine dosage. Conclusion and Discussion: From this case report, the patient was taking no other medications that may have caused reactive thrombocytosis. However, we did not have a hematology consultation to verify the cause, since the patient's platelet level returned to normal after the reduction of clozapine dosage and the patient did not experience any complications from the increased platelet level. Complications of unaddressed thrombocytosis can include acute CVA, DVT and pulmonary embolism which can be life threatening conditions. As from our literature research, clozapine-induced thrombocytosis is most likely to occur after the restarting of clozapine. In most of the case reports, thrombocytosis occurred after the patient was reintroduced to clozapine even at lower dosage. We would like to recommend that psychiatrists be aware of its occurrence and to monitor expectantly. Clozapine likely has an action on the hematopoietic stem cells of the bone marrow and can trigger the reaction similar to acute myeloid leukemia.

No. 47

Diagnostic Overshadowing and Barriers to Care in a Patient With Hashimoto's Encephalitis on the Psychiatry Unit

Poster Presenter: Jacob A. Davidson, M.D.
Co-Author: Saba Syed, M.D.

SUMMARY:

Research indicates that patients with mental illness diagnoses have a double-digit loss in life expectancy compared to the general population. While there are a variety of reasons that this might be the case, the problem of diagnostic overshadowing should be further examined in the healthcare setting. Diagnostic overshadowing is the process by which physical symptoms are misattributed to mental health diagnoses. This can lead to delays in diagnosis, treatment, and further complications of underlying illness. Patients with mental illness may refuse necessary procedures and care teams may not have the time or the knowledge to properly

asses capacity or to obtain consent from a surrogate decision maker. Many cases of patients presenting with both psychiatric and medical symptoms led to a psychiatric focus of the differential diagnosis, leading medical teams to resist intrusive investigations to evaluate for an organic cause of the presentation. In this poster we will discuss the case of a 38 y/o woman with no known psychiatric history and a medical history of seizure disorder, well controlled on Keppra, who was brought to the hospital for one month of altered mental status, speaking gibberish, with delusions, and agitated behavior. Her initial classification as a psychiatric patient and subsequent admission to the inpatient psychiatric unit led to a delay in diagnosis and treatment of the cause of her alteration in mental status, Hashimoto's encephalitis.

No. 48

Using a Case Example to Examine the Importance of Evaluating and Treating Malnutrition in Inpatient Psychiatric Patients

Poster Presenter: Michael Donath
Co-Author: Saba Syed, M.D.

SUMMARY:
There is high prevalence of malnutrition in hospitalized patients resulting in increased frequency of clinical complications and mortality. It also increases the healthcare cost and hospital length of stay and the longer the patient stays in the hospital, the greater the risk of malnutrition worsening. Having a psychiatric co-morbidity like depression can further elevate the risk of malnutrition and serious adverse outcomes including development of Wernicke Korsakoff syndrome. The reason for malnutrition is multi-factorial and often cases are confounded with the question: "is the patient malnourished because of their psychiatric illness? Or is their poor nutritional status causing their psychiatric symptoms?" Often, primary medical teams focus on the need for psychotropic medication optimization, when in reality, attention to proper nutritional management is needed concurrently. It is more common for dietary support and close monitoring in patients with primary eating-disorder pathology -- where not much has been written about management of malnutrition patients with depression, anxiety or psychosis spectrum disorders. As a result, it is even more important to screen and monitor for appropriate nutritional intake in our vulnerable patient populations. Using a case report example, we will learn from an older adult man with depressive symptoms, who presented to the hospital after withdrawing from food for 5 weeks and losing over 20 lbs. We will discuss some of the barriers faced in his care and the role that our psychiatry Consultation Liaison team played in optimizing this patient's psychiatric symptoms as well as his nutritional status.

No. 49

When Ativan Isn't Up to the Challenge: A Case Report of Concurrent Catatonia and Delirium

Poster Presenter: Bernice N. Yau, M.D.
Co-Authors: Matthew G. Yung, M.D., Diana M. Robinson, M.D.

SUMMARY:
A 66-year-old woman with no significant psychiatric history and medical history of hypertension, type 2 diabetes, and a recent COVID diagnosis, presented to an academic hospital in status epilepticus. This occurred in the context of hyperosmolar hyperglycemic syndrome and confirmed cocaine use. She was initially intubated, admitted to the ICU, and started on levetiracetam without recurrence of seizures by EEG. Her hospital course was complicated by bacteremia and bilateral pulmonary emboli treated with vancomycin and anticoagulation, respectively. After extubation, she had waxing and waning mental status, minimal engagement with team, and intermittent somatic delusions of pregnancy. Initial psychiatric evaluation revealed posturing, verbigeration, echopraxia, negativism, and mitgehen, with a Bush Francis Catatonia Rating Scale (BFCRS) of 28/69 and positive CAM-ICU. Thus, the presentation was consistent with catatonia and hypoactive delirium. The patient failed two trials of lorazepam 1mg IV due to sedation. Due to significant ongoing catatonic symptoms, she was started on amantadine 100 mg/day with improvement over the next three days with BFCRS nadir of 7. Amantadine was ultimately tapered to 50 mg, then after stabilizing was

discharged to home on hospital day 12 with an additional 8 days of amantadine 50 mg/day. This case illustrates several key points regarding the diagnosis and management of co-occurring benzodiazepine resistant medical catatonia and delirium. First, catatonia has a medical etiology in up to 46% of cases (Stern, 2018), and this rate increases with age and level of care (Oldham, 2018). Second, though DSM-5 precludes a concurrent diagnosis of delirium and catatonia due to a general medical condition, these two conditions can and often co-exist and are associated with increased morbidity and mortality (Han, 2018; Philbrick, 1994; Wilson, 2017). In addition, patients with more catatonic symptoms are at higher risk for developing delirium (Wilson, 2017). While catatonia has many overlapping features with delirium in settings of critical illness, its early diagnosis is critical as its management is considerably different from that of delirium. Third, about 20-30% of cases do not respond to treatment with benzodiazepines and alternative treatments are available (Beach 2007; Denysenko 2018). There is growing case series level evidence of the use of NMDA antagonists, such as amantadine, in the treatment of benzodiazepine resistant catatonia through its direct glutamate antagonism and indirect GABA and dopamine effects. These findings are based on the hypothesis that NMDA hyper-excitability in striato-cortical and cortico-cortical pathways and loss of GABA-A and dopamine in these regions may represent the pathophysiology of benzodiazepine resistant catatonia (Hervey, 2012). Several case series have been published on the use of amantadine in treating primary catatonia, however this is a unique case of amantadine’s utility in medical catatonia.

No. 50

Worsening Hallucinations of Charles Bonnet Syndrome in Acute Stress

Poster Presenter: Prerana Suresh Kurtkoti, M.D.
Co-Authors: Ana Claudia Zacarkim Pinheiro dos Santos, M.D., Andrea Guerrero, M.D., Adriana Phan, M.D.

SUMMARY:

Introduction: Charles bonnet syndrome (CBS) is characterized by visual hallucinations with intact cognition and insight in the absence of auditory hallucinations or other symptoms of psychosis. It is seen in individuals with defects in visual pathways from anywhere between the eye to visual cortex1. Though it's most common in the elderly, CBS is also found in younger individuals2. The hallucinations are classified as simple (lines or geometric shapes) and complex (animals or people). Here we report a case of a patient who developed CBS secondary to bilateral cataract and diminished visual acuity. Case report: The patient is a 76-year-old male with multiple comorbidities, including bilateral cataract status-post extraction with IOL placement at the age of 17 and recent atrial flutter status post ablation under general anesthesia. He presented to the emergency room on the day following the procedure with complaints of visual hallucinations. He was brought in by EMS after he called 911 reporting strangers at his house who were demonstrating inappropriate behavior, pointing at him and laughing. As per the police, no strangers were present in the house. He also reported seeing changing colors and random patterns on the floor and the walls. When interviewed, he reported having visual hallucinations for 6 years. He endorsed seeing family members who were deceased or not physically present in his house. He reported seeing ants and distorted images when staring at the floor or walls for a long time. He had good insight and was able to differentiate hallucinations from reality. He reported not seeking help due to the stigma attached to a psychiatric diagnosis. Although the hallucinations were initially non-distressing, he was unable to tolerate them after the cardiac ablation as they became very disturbing. He denied auditory hallucinations. He reported one episode of depression 20 years ago after the death of his wife. He received psychotherapy but did not require psychotropic medications. He has no known family history of psychiatric disorder or substance use. The patient’s physical examination was unremarkable, except for notable pupil abnormalities of both eyes. His left pupil was <1mm and the right pupil was 3mm. Both were reactive and non-circular. Visual acuity was 20/200 RE and 20/100 LE without glasses, improved to 20/100 RE, and 20/60 LE with glasses. His urinalysis was suggestive of UTI. Further investigations revealed no acute changes in CT and CTA of the head. The differential diagnosis at this

point included delirium secondary to UTI, side effects of anesthesia, and CBS. Discussion: CBS symptoms are known to be under-reported due to the fear of being diagnosed with a mental illness3, which is seen in this case. Although they are often non-distressing, there has been one reported case4 where the symptoms became distressing following an acute stressor. In this case, it could be due to his recent procedure or the UTI.

No. 51
WITHDRAWN

No. 52
"Stones, Bones, and Psychiatric Overtones", Hypercalcemia in the Setting of New Onset Psychosis
Poster Presenter: David Jeffery Faro II, M.D.
Co-Author: Rebekkah Brown

SUMMARY:
Mrs B. a 72 year old Caucasian woman, with a past history of Major depressive disorder and generalized anxiety disorder, taking aripiprazole 10mg daily, and Lorazepam 1mg three times a day at home, presented to the Emergency department with worsening depression, anxiety, panic attacks, tachycardia, chest pain and new onset of delusions. She reported: "my body punishes me for drinking water" and had been recently began refusing Oral fluids, medications, or food. The patient was a poor historian, and initially limited collateral information from the family was available. EKG showed sinus tachycardia, without evidence of ST changes, and troponin testing was negative. Lab workup did find hypokalemia to 2.8mg which was repleated in the emergency department, and an ionized calcium level of 1.40. She was admitted to the inpatient psychiatric facility. Her initial differential was broad, and included benzodiazepine withdrawal, MDD with psychotic features, toxic metabolic encephalopathy, Major Neurocognitive disorder, and brief psychotic disorder. The patient was placed on 5mg Aripiprazole and placed on a gradual lorazepam taper. An MRI without contrast was obtained and showed chronic ischemic changes, but no evidence of acute changes, mass, or stroke. Further collateral information was obtained by the patient's husband, who noted multiple Emergency department visits in the region, with similar presentation over the past three months. He additionally described her ashaving unusual behavior at home over the past few months, neglecting her own hygiene, repeatedly saying she believed she was going to die, and appearing anxious and confused. Over the course of the next several days, the patient was noted to have an elevated calcium level of 10.9, with an albumin of 2.9, with a corrected calcium of 11.8, well above the normal range. Her ionized calcium was 1.54, further increased from admission. Further workup revealed an elevated PTH of 158, as well as a vitamin D level within normal limits. The patient was transferred to the medical floor for management of hypercalcemia due to presumed primary hyperparathyroidism. A parathyroid scan did reveal a parathyroid adenoma, and the patient's hypercalcemia was managed with Zoledronic acid. The patient was later transferred back to the psychiatric unit, where she responded well to a combination of aripiprazole, and Electroconvulsive therapy. In this poster, we discuss the signs, symptoms, and diagnostic workup of hypercalcemia, and how hypercalcemia may contribute to psychiatric symptoms.

No. 53
A Case of Non-Allergic Peripheral Edema With Sertraline and Fluoxetine
Poster Presenter: Hassaan Gomaa, M.D.
Lead Author: Ritika Baweja, M.D.
Co-Author: Aditya Joshi, M.D.

SUMMARY:
Background: Selective Serotonin Reuptake Inhibitors (SSRIs) are commonly used to treat depressive disorders. Common side effects associated with their use include headache, nausea, vomiting, diarrhea, constipation, dry mouth, insomnia, restlessness, and sexual side effects. A few cases of edema (not due to allergic reactions) have been reported with some SSRIs (escitalopram and paroxetine), as well as other antidepressants (venlafaxine, mirtazapine, and trazodone). The reported incidence of this side effect is less than 2% in patients using sertraline and less than 1% of patients using fluoxetine. We present a case of a female who developed peripheral edema with sertraline and fluoxetine. **Methods**: We present

a case of a female who developed peripheral edema with sertraline and fluoxetine. **Results**: A 38-year-old married Caucasian female with a medical history of polycystic ovary syndrome and gastric bypass surgery for obesity, and no prior psychiatric history presented to an obstetrics outpatient clinic for a 4-week follow up after giving birth to her second child. The patient was diagnosed with major depressive disorder with peripartum onset and started on sertraline 50 mg per day. The patient noticed swelling in her lower limbs and hands with noticeable weight gain on the second day. Within a week, she gained 9-10 pounds. Sertraline was discontinued and her symptoms resolved completely within 2 days. She was then started on fluoxetine 10 mg per day and had similar symptoms of peripheral edema with a gradual increase in weight of about 9-10 pounds within a week. Fluoxetine was stopped after 1 week with subsequent resolution of peripheral edema and weight gain. An allergic reaction to both medications was less likely due to absence of other signs and symptoms typically associated with such a reaction. The patient had no known history of renal, cardiovascular, liver, immune, or thyroid diseases. The absence of other changes in medication regimen around the time of manifestation and resolution of edema suggests correlation with sertraline and fluoxetine. **Conclusion**: Peripheral edema can occur with sertraline and fluoxetine. The mechanism for development of this adverse effect is unclear. We recommend assessing patients for adverse events like peripheral edema after commencement of SSRIs including sertraline and fluoxetine.

No. 54

Advancing the Use of Electroconvulsive Therapy in Patients With Severe Treatment-Resistant Depression

Poster Presenter: Rana Jawish, M.D.

SUMMARY:

Major depressive disorder (MDD) is among the most common and debilitating psychiatric disorders and is a leading cause of disability worldwide. Electroconvulsive therapy (ECT) is a highly effective treatment for patients with depression who are medication resistant or have suboptimal responses to pharmacological therapy. About 85% of these patients with refractory depression improve with ECT. Despite this remarkably high response rate, ECT is under-utilized in many psychiatric settings due to its stigmatized perception by patients and mental health professionals. A study of a private insurance claims database in the United States found that only 0.25 % of nearly one million patients with unipolar major depression or bipolar disorder receive ECT. There are other barriers to ECT administration such as socioeconomic status, race, and age. ECT patients are more likely to be of higher socioeconomic status, white, older than 65, and receive ECT in a private sector psychiatric facility. In this case report, we present a patient, Mr. X, with chronic refractory Major depressive disorder and suicidal ideation that had a poor response to psychotherapy and multiple medication trials including SSRIs, mood stabilizers, and typical and atypical antipsychotics requiring multiple hospitalizations. The patient was successfully treated with ECT showing rapid improvement in his symptom, including resolution of suicidal thoughts, following six ECT sessions. Our objectives are 1) to focus on the discrepancy in our clinical practice between the existing guidelines for ECT indications and the current use of ECT in our psychiatric facilities 2) to advance ECT utilization earlier in patients with depression rather than later after exhausting all the psychopharmacology algorithms, which would prolong the suffering of the patients further jeopardize their safety, and expose them to unnecessary medical complications due to side effects of psychotropic medications 3) to explore ways we can de-stigmatize the use of ECT amongst patients and mental health professionals

No. 55

Bupropion Extended Release Overdose in a Patient With Comorbid Medical Conditions: A Case Report and Systematic Review

Poster Presenter: Chris Ferry
Co-Author: Karim Sedky

SUMMARY:

INTRODUCTION Bupropion (Wellbutrin) is a well-tolerated norepinephrine–dopamine reuptake inhibitor and a nicotinic receptor antagonist utilized in the treatment of depression and facilitation of

smoking cessation. However, at supratherapeutic/intoxication levels both neurotoxicity and cardiotoxicity can occur. The underlying pathophysiology of these sequelae is often multifactorial and may be exacerbated by concomitant disease states. The objective of this case report was to describe a unique presentation of an unintentional Bupropion overdose in a patient with uncontrolled Grave's disease and associated congestive heart failure (CHF). A systematic literature review was performed to determine if similar cases exist and its association with Bupropion dose and formulation. METHODS A systematic review of the literature was conducted using the PubMed database. Only case studies were considered. Demographics of inclusion cases were collected, which included (but not limited to): Bupropion type and dose/load, concurrent medications, corrected QT interval (QTc) QRS on admission, and comorbid conditions. RESULTS Case We present a case of a 34-year-old female with a psychiatric history of bipolar II disorder, post-traumatic stress disorder, and attention defective hyperactivity disorder, and a medical history notable for Grave's disease, congestive heart failure, ulcerative colitis, and recent pregnancy. During pregnancy, the patient had discontinued many of her maintenance medications and had not yet resumed post-partum. Shortly before presentation, the patient had experienced a grand-mal seizure at home following an unintentional overdose of her boyfriend's Bupropion XL (load: 5.1g) in an attempt to improve her mood. QRS and QTc on admission were of 95ms and QTc of 495ms, respectively. Free T4 and T3 levels were markedly elevated. Her home medications were restarted, which included propranolol and methimazole for her Grave's disease, and mesalamine for her ulcerative colitis. Additionally, both venlafaxine and lurasidone were initiated. After the second day of medical monitor, she became medically stable. By the fourth day she reported improved mood and decreased anxiety and was subsequently discharged with referral to outpatient therapy and psychiatric services. Literature Review Final inclusion criteria yielded 28 case report articles. All overdoses were determined to be intentional. Mean overdose load was 9.4g. All cases reported generalized tonic-clinic seizures. Mean QRS and QTc intervals on admission/earliest EKG were 110ms and 516ms, respectively. No cases reported comorbid Grave's disease, hyperthyroidism, thyrotoxicosis, or congestive heart disease. CONCLUSION In this unique presentation of a Bupropion overdose, the patients underlying Grave's disease and congestive heart failure did not appear to exacerbate or accelerate clinical course beyond the scope of cases previously discussed in the literature.

No. 56

Case Report and Implications: Successful IV Ketamine for Depression in the ICU and Its Practical Application in the Hospital Setting

Poster Presenter: Bo Hu

SUMMARY:

Introduction: While use of ketamine in depression is growing (1,2), IV Ketamine for the hospital psychiatrist is less explored. I present the case of a man admitted to the ICU who was successfully and rapidly treated with IV Ketamine. I then discuss practical aspects of treatment such as the role of prior beliefs and conditions under which to consider ketamine as treatment for the hospital psychiatrist. Case: A 60y/o missionary was admitted to the SICU for post-Whipple care due to recently diagnosed pancreatic cancer. He endured a complicated post-op course. His mood was poor prior to procedure and worsened during hospitalization. On post-op day 21, psychiatry was consulted for depression. Patient's mental status demonstrated a severe neurovegetative state, including withdrawn attitude, high speech latency, vacant eyes, and hopeless, guilt-ridden, burdensome thought content (MADRS 44). IV Ketamine was decided as treatment due to concerns for GI absorption and his declining decision making capabilities that could have led to an extended ICU stay. Consent was obtained from patient and wife. We infused 0.5mg/kg IV Ketamine infusion over 40 minutes with a nursing chaperone. On post-infusion day 1, patient noted immediate improvements in sleep, and we noted improved psychomotor speed along with livelier expressions (MADRS 16). In stark contrast to days prior, he became forthcoming about his hospital experience and eloquently reaffirmed his life purpose in "serving others". Wife corroborated that

patient proactively called her for the first time in weeks and “did most of the talking”. He continued to improve and was bridged to Venlafaxine. Five days later, patient no longer demonstrated symptoms of depression and was discharged in good spirits. Two points of discussion: 1. Patient’s pre-existing belief structure had a significant impact in how he appraised the treatment. He was a deeply religious Christian and had been a missionary in the past. While he acknowledged significant improvement, he attributed this to “the prayers of 1000 people”. He stated that the infusion experience “was what you’re supposed to get by going to church and praying for years”, and thus found it “artificial”. He remained very appreciative about the help and spoke fondly of the staff. As potential treatments such as ketamine, psilocybin, and LSD become more widespread, we encourage considering the patient’s spiritual milieu prior to administration (3). 2. For the hospital psychiatrist, ketamine can be a powerful and practical option especially in the following circumstances: palliative/hospice care, indication for rapid relief, concomitant pain, poor GI absorption, staff and infrastructure familiar with IV ketamine on board (i.e. anesthesiology-trained physician in the ICU), appropriate discharge plan (oral bridge, outpatient ketamine clinic). Conclusion: IV Ketamine can be a safe, rapid, effective agent for depression in the acute hospital setting in select cases.

No. 57
WITHDRAWN

No. 58
Complications of Undetected Major Depressive Disorder in Patients Struggling With Diabetes Mellitus Type I
Poster Presenter: Uche Ugorji, D.O.
Co-Authors: Nardin El-Shammaa, D.O., Munaza Khan, M.D.

SUMMARY:
Patient is a 32-year-old African-American male w/ a history of Diabetes Mellitus II, diagnosed in 2013, and Major Depressive Disorder, w/ multiple admissions to the hospital for Diabetic Ketoacidosis. From 2016-2019, patient was admitted to the hospital 12 times for either diabetic ketoacidosis or symptoms of hypoglycemia. Psychiatry consult service was introduced to patient in 2018 due to concern for suicidal ideation. Per collateral received from patient’s mother, patient’s hospitalizations followed episodes of avolition, isolation, poor energy, and general failure to thrive or care for himself. Patient was subsequently diagnosed with Major Depressive Disorder and committed involuntarily to an inpatient psychiatric facility. Over the course of the next two years, patient was poorly compliant w/ treatment recommendations from psychiatry and, subsequently, readmitted to the hospital, 6 additional times, for diabetic ketoacidosis. In the same period, patient exhibited worsening cognitive deficits, evidenced through clinical testing and imaging. Due to worsening cognitive functioning, it became progressively difficult to educate patient about the importance of treatment compliance and adherence, resulting in worsening of both his depression and diabetes. In this poster, we discuss the prevalence of comorbid Diabetes Mellitus and Major Depressive Disorder and the complications that may arise from failure to adequately screen and treat this demographic.

No. 59
WITHDRAWN

No. 60
Please Don’t Take My Sunshine Away: Vitamin D, Race and Health Implications
Poster Presenter: Lino A. Gutierrez III, M.D.
Co-Author: June Cai

SUMMARY:
Mr. D is a 20-year-old Hispanic male with dark complexion and no significant past medical or psychiatric history, who presented to the emergency department in the winter after screening for suicidal ideation during a routine annual physical exam. The patient endorsed severe depressive symptoms for 4 months with a recent suicidal gesture. The patient was working 12-hour nightshifts for 5 months and had minimal opportunity for exposure to sunlight. The patient enjoyed extensive outdoor activity prior to his current job, but these activities ceased 6 months prior to his presentation. The patient

endorsed poor sleep, difficulty with concentration, loss of interests, hopelessness, depressed mood and chronic suicidal ideation. Psychiatric admission was indicated and admission labs revealed a vitamin D deficiency (VDD) (10.0 ng/ml) with a normal calcium level. VDD and depression have a well-recognized association but whether the deficiency leads to depression or vice versa has yet to be delineated. This patient presented with circumstances that limited sun exposure with a pre-existing risk factor for VDD, skin color. In this presentation we will discuss criteria for Vitamin D deficiency and insufficiency, risk factors, especially considering minority patients, and recommendations on Vitamin D supplementation that are both effective and safe. It has become increasingly evident that there is a role for the adjunctive use of vitamin D supplementation in the treatment of depression but the effects of this intervention can be seen throughout the body. Vitamin D has physiologic activity that goes beyond calcium homeostasis and bone health and vitamin D status is shown to have an association to all-cause mortality and suicide risk. Additionally, Vitamin D is considered a true hormone with an active role in immune system modulation and the regulation of inflammation. We will discuss the significance of Vitamin D status in minority populations given recent findings that reveal poorer outcomes in the current COVID pandemic and the relationship with their mental status.

No. 61

Post Stroke Depression and Recovery: The Imperative Need for Early Recognition and Treatment With Antidepressants

Poster Presenter: Chloe Marie Leitch, M.D.
Co-Author: Cynthia Pristach, M.D.

SUMMARY:

Ms. B is a 47 y/o divorced female living with her two adult children in an apartment who was referred to the outpatient psychiatry clinic from primary care due experiencing depressive symptomatology for the past sixteen months since her stroke. The patient denied previous psychiatric history prior to her first stroke. Past medical history was significant for a total of three strokes in the past twenty years. At the initial visit, the patient reported feeling increasingly sad since her most recent stroke, along with poor sleep with early morning awakening, poor appetite, poor energy, anhedonia, amotivation and excessive guilt. She reported right sided weakness and right sided visual deficits. Notably, the patient reported hopelessness and frustration that she would never fully recover from her stroke. The patient had always worked a full-time job as an administrative assistant, however, was unable to work since her most recent stroke. The patient was started on Prozac and met with a therapist bimonthly for supportive psychotherapy. After seven months of treatment, Ms. B no longer felt subjectively depressed. However, she continued to report mild feelings of anhedonia and was still unemployed. She had no improvement in her right sided deficits. Therefore, she had not returned to her premorbid functioning. Depression occurs more frequently after stoke compared to its prevalence in the general population. A diagnosis of depression within three months post stroke indicates long-term dependency in activities of daily living. Antidepressant therapy is the first line treatment for post stroke depression and when treated early, patients show significantly increased rates of survival, improved motor functioning, improved cognitive recovery and improved functioning in activities of daily living. As with Ms. B, post stroke depression is frequently overlooked, undiagnosed and untreated, which may have contributed to her incomplete recovery. Therefore, early recognition of post stroke depression and treatment with antidepressants is imperative. This poster will discuss the diagnosis and assessment of post stroke depression, diagnostic challenges and the benefits of antidepressant treatment.

No. 62

Postpartum Major Depressive Disorder With Atypical Features Presenting as Conversion Disorder

Poster Presenter: Gina Caitlin Jamal, M.D.
Co-Author: Lokesh Shahani, M.D., M.P.H.

SUMMARY:

BACKGROUND: When diagnosing major depressive disorder (MDD), all relevant specifiers for the current episode should be listed, such as ‘peripartum

onset' or 'atypical features.' Peripartum onset refers to MDD during pregnancy or within four weeks after delivery, but clinically, there is an increased risk of developing MDD the first year after delivery. With atypical features is defined as MDD with mood reactivity and two or more of the following: persistent interpersonal rejection sensitivity, increased appetite or weight, hypersomnia, or leaden paralysis. Conversion disorder is defined as changes in motor or sensory function with clinical findings inconsistent with any other medical disease, though symptoms of conversion disorder can have considerable overlap with other medical diseases. This makes it challenging to accurately diagnosis, which is only confounded by the possibility of diagnosis with a concurrent medical diagnosis. However, the rate of misdiagnosis has decreased since the 1950s, from 29% to 4%, which is attributed to improved diagnostic methods and more available neuroimaging. Here, we describe a case of MDD with atypical features and peripartum onset presenting as conversion disorder. CASE PRESENTATION: A 26-year-old-female with no medical or psychiatric history was hospitalized with eight weeks of weakness, fatigue, and paresthesias after recently giving birth. Two weeks after an uncomplicated vaginal delivery, she developed right arm pain that spread to her legs and back. A multitude of physical symptoms appeared over the next several weeks including transient, migratory paresthesias of her face and extremities, diffuse arthralgias, headaches, dyspnea, pruritis, and discoloration of her hands and feet. Given the broad differential diagnosis, an extensive evaluation and workup was pursued. OB/GYN and anesthesia determined this was unrelated to her recent epidural and delivery, infectious and cardiorespiratory processes were ruled out, and a comprehensive neurological and rheumatological workup was unrevealing. Thus, the lack of a medical explanation and inconsistent clinical findings prompted consideration of postpartum depression and conversion disorder. Psychiatrically, she demonstrated 'sadness' with mood reactivity, interpersonal rejection sensitivity, and leaden paralysis which were best explained by MDD with atypical features, not conversion disorder. Though she declined antidepressant treatment stating she did not believe she was 'depressed,' her pain was treated with Gabapentin and outpatient nerve conduction studies were recommended to rule out other neurological processes. Here, we describe a case illustrating the significance of a thorough medical and psychiatric evaluation in elucidating a diagnosis as well as highlighting the importance of this to prevent a misdiagnosis of conversion disorder.

No. 63
Psychotic Features Abated With Vitamin D Therapy
Poster Presenter: Ryan Parker, M.D.
Lead Author: David Fipps

SUMMARY:
The 12 month prevalence of MDD in the US has been estimated to be approx. 7%. About 40% of individuals typically enter recovery phase within 3 months of onset, and 80% enter recovery by 1 year. Features associated with lower recovery rates: prominent anxiety, personality disorders, symptom severity, and psychotic features. Treatment of MDD with psychotic features (MDDPF) typically includes antidepressant (AD) and antipsychotic (AP) medication. The fulminant etiology of psychosis is not well understood, though traditional understanding revolves around a dopaminergic origin. This case is a novel one that demonstrates psychotic features abated with Vitamin D (VitD) therapy. Patient is a 49 year old married, Caucasian, college educated, disabled veteran male with a 20-year history of MDD and a 5 year history of auditory hallucinations (AH) starting after multiple deaths of family members and a job loss. Initial lab workup (CBC, CMP, TSH, lipids, B12, folate, VitD) by his PCP showed hypercholesterolemia and low VitD. CT head was normal, and physical exam findings were unremarkable. Primary thought disorder was considered, however diagnosis of MDDPF made due to patient's age, unusual timing, and level of functioning. Patient was treated with AD's and AP's (he declined ECT). Depression improved with AD optimization, and AH did not appear to have correlation with depressive symptoms. Patient was tried on multiple AP''s with lack of effect on AH. When there was a change in outpatient provider, labs were redrawn and the patient was again shown to be VitD deficient. Patient was started on 2000 IU/day of cholecalciferol with recommended

behavioral changes (increased time outdoors and/or obtaining a light box). At 1 month follow-up, he had not been able to increase outdoors time and had not bought a light box, however he had complete resolution of AH. Recheck of VitD levels were within normal limits. AP's were decreased and ultimately discontinued secondary to concern for akathisia. The patient has now been off AP's for over 15 months with complete absence of psychotic features and normal VitD levels. Most literature regarding VitD usage in the psychiatric population has focused on MDD. VitD deficiency is associated with an 8-14% increase in depression, though literature findings regarding VitD supplementation in MDD have been mixed. Studies have also found correlation between VitD and psychosis. While psychosis is understood to have a dopaminergic origin, there also appears to be a relationship between VitD and dopaminergic functioning. Emerging data has also linked changes in the dopaminergic system to the pathophysiology of depression. While the etiology of psychosis and depression are likely multifactorial, further study in this area will allow for advances in diagnosis and treatment. This case shows that VitD deficiency could be a cause and/or contributing factor to psychosis in MDD.

No. 64

Reversible Dementia Recovered With Electroconvulsive Therapy (ECT): A Case Report

Poster Presenter: Omar Elmarasi
Co-Author: Andrew J. Francis, M.D.

SUMMARY:

Introduction: We present a case of Major Depressive Disorder (MDD) presenting with symptoms of cognitive impairment that showed dramatic improvement after receiving ECT treatment. Methodology: A brief summary of a case report. Results: An 81-year-old female with psychiatric history of MDD and generalized anxiety disorder presented with severe anxiety and behavioral changes. Six months prior, she displayed rapid decline in cognition, with escalation of anxiety, sadness, rumination, social withdrawal, and suspiciousness towards her family. Cognitive symptoms included inattention, delayed answers, repetitive questions, indecision and short-term memory deficits. She received multiple antidepressant trials with temporary improvement, followed by rapid decline in cognition and mood. She was clinically diagnosed with prion disease, had work up done for it, and sent to hospice while awaiting results. Testing was negative and the patient returned home. On referral the differential diagnosis was major neurocognitive disorder vs MDD. Multiple medication trials including sertraline, lorazepam, quetiapine and trazodone produced minimal improvement. We eventually favored MDD as more likely and patient was considered for ECT treatment. A court order was obtained for ECT and patient was started on bilateral ECT treatment initially, which was changed to unilateral treatment after the second ECT. She showed marked improvement for both mood and cognition, with decline of cognition prior to the 4th treatment that improved significantly after spacing out ECT treatment. She continued for 3 weeks on outpatient ECT with no depressive or cognitive symptoms. Conclusion: The differentiation between primary dementia and the reversible dementia of a mood disorder remains a clinical challenge. We encourage that in patients with suspected dementia, the possibility of mood disorder with a reversible dementia should be considered especially with patients with history of mood disorders, and extensive treatment measures should be done.

No. 65

Somatic Preoccupation in a First Presentation of Depression in Ethnic Minority

Poster Presenter: Jeffrey McBride, M.D.
Co-Authors: Stefanie Cavalcanti, M.D., Tori Waters, Madeline E. Gabe, M.D., Amanda Leigh Helminiak, M.D.

SUMMARY:

Mrs. V., a 41-year-old Hispanic female with no known past psychiatric history presents as a voluntary admission to an inpatient psychiatric hospital with complaints of five months worsening depression and somatic complaints. The patient emigrated from El Salvador 20-years prior to presentation and had been managing well until her recent decline. The patient has numerous new life-circumstance stressors including losing her job,

marital relationship difficulties, new diagnosis of diabetes mellitus, and the current SARS-CoV-2 pandemic. After her diagnosis of diabetes, she lost more than 50-pounds of weight due to increased anxiety and paralyzing fear when she is in situations revolving food and meals. On the second day of admission, the patient complained of new back pain and was fixated on discharge to a separate medical hospital for treatment of what she believed was a kidney infection. Labs and physical exam at the psychiatric facility were not indicative of a kidney infection, yet the patient remained resolute on her need for kidney infection treatment. The patient denies all thoughts of suicidal ideation and was discharged from the inpatient psychiatric hospital. She went to a neighboring emergency department (ED) where complete medical workup including imaging, serum labs, and urine labs did not uncover a kidney infection nor any other acute abnormality that would be causing her new pains. She again returned to the psychiatric facility the same week as a voluntary admission for continuation of her treatment for depression. During the second inpatient admission, her preoccupation with somatic symptoms became more manageable as her other depressive symptoms resolved with medication and therapy. She continued to have increased anxiety about specific illnesses including her diabetes, but her eating habits improved in conjunction with improvement of her other depressive symptoms. This case study emphasizes the importance to recognize the increased prevalence of somatic complaints in non-Caucasian populations. These symptoms can also present barriers to successful treatments if the patient feels these concerns are being ignored. If indicated, a complete medical workup of the somatic complaints is important to rule out comorbid disorders and would be necessary in solidifying the doctor-patient therapeutic relationship. For this poster, we explore this individual patient's medical workup for addressing her somatic concerns. We also examine the common challenges and barriers that the presence of somatic complaints presents as well as effective techniques to addressing these difficulties.

No. 66

Suicidality and the Covid-19 Pandemic

Poster Presenter: Stanley O. Nkemjika, M.D., M.P.H.

Co-Authors: Kenneth Oforeh, M.D., Chiedozie Ojimba, M.D., Susmita Khadka, M.D.

SUMMARY:

Introduction: Multiple studies suggest that major disease outbreaks, like SARS-Cov-1 in China (2003) and Ebola outbreak in West Africa (2013) have had adverse effects on Mental Health. Based on the literature, fear, stress, anxiety, sadness, and depression have been reported as negative clinical manifestations of mental health illnesses. Additionally, economic slowdown leading to job loss, social isolation, misinformation and uncertainty of the disease has been attributed to outbreaks. So far, COVID-19 pandemic is not an exception as similar negative consequences have been described in the literature. The long term quarantine effects on mental health in metropolitan cities such as NYC, in the context of COVID-19 pandemic-related suicidality in patients with no prior psychiatric history, is yet to be explored. Hence, we present a case report of a young female with a sudden history of suicidal attempt on first psychiatric presentation. Case Summary: We present a case of a 23-year-old African American female domiciled in a small residential space without a prior history of mental illness who presented in our ED with a suicidal attempt. Upon evaluation, she reported her usual state of health until one day before presentation when she started feeling overwhelmed and overrun by life and being frustrated with coronavirus quarantine and swallowed 20 pills of Janumet (Sitagliptin/ Metformin). Mother reported the patient was doing well in school and receiving good grades. No previous suicidal attempt was reported. The patient never had psychiatric encounters either in any hospital or clinic in the past. Mother denied any history of childhood trauma, complication in pregnancy or childbirth, and no mental illness was reported in the family. Discussion This case supports and adds to the evidence in literature with regards to pandemic related suicidality presentation in a patient with no past psychiatry history. While suicidality is a common feature of depression and other mental illness, it is also important to assess acute suicide risk in younger vulnerable individuals without a psychiatric history in the context of ongoing COVID 19 pandemic.

No. 67

Topiramate for Treatment of Cocaine Cravings in Dual Diagnosis Patient

Poster Presenter: Joe Espinoza
Co-Author: Caesa Nagpal, M.D.

SUMMARY:

Background: There is an approximately 20% lifetime risk of Major Depressive Disorder (MDD) prevalence in the United States. At the same time, there is a 9% lifetime risk of Substance use disorder for illicit drugs. When combined, 32% of those with any Mood disorder had a co-occurring Substance use disorder. As such, the treatment of Dual diagnosed patients would go a long way towards preventing complications of both disorders over the lifetime. Cocaine, with more than 5 million people in the US alone last year, is one of the most common illicit substances used by Americans. There are no FDA approved medications for the treatment of Cocaine use disorder are currently available, but evidence has been provided to support Disulfiram and Naltrexone for treatment. Both of these drugs, however, have their own difficulties and it is difficult for patients to maintain compliance. Data recently suggested the use of Topiramate for treatment of cravings associated with Cocaine use disorder. Minimum data are available to support its use in a Dual diagnosis patient. We present such a case of use of Topiramate to help with cocaine cravings in a dual diagnosis patient. Method (Case Report): Mr. A is a 26-year-old Hispanic male with past psychiatric history of Major Depressive Disorder and Post-traumatic Stress Disorder who was transferred to an acute inpatient psychiatric unit for depression with suicidal ideation, auditory hallucinations and aggression in the context of medication noncompliance. The patient reported using mostly cocaine and some use of ecstasy, meth, and alcohol before admission. . He was on Naltrexone in the past to help with cravings which was ineffective. While at the outside facility, before admission, the patient was started on Topiramate 25 mg PO q am and qhs for cocaine cravings and was continued at the inpatient psychiatric facility. He was also started on Sertraline 50 mg PO q am for depression and Quetiapine 100 mg P q am and 300 mg PO qhs for psychosis and mood. After five days of hospitalization, he denied any cravings, reported improved mood, sleep, appetite, and denied any auditory hallucinations and suicidal ideations at discharge. Discussion: There is limited evidence available to suggest that Topiramate is effective in treating Cocaine use disorder. Of these data, there is a significantly reduced amount of evidence supporting its use in Dual diagnosis patients. However, it is clear that the treatment of both Substance use problems and primary psychiatric illness has better prognosis for patients. Conclusion: Although it is not possible to draw any definitive conclusions from a single case, this study shows that Topiramate can be a useful treatment for patients with dual diagnosis.

No. 68

Treatment of Tardive Syndromes With VMAT2 Inhibitors in the Presence of Comorbid Depression in Remission

Poster Presenter: Jonathan Artz, M.D.
Co-Author: Paul Hicks

SUMMARY:

Vesicular monoamine transporter 2 (VMAT2) inhibitors have proven to be one of the most effective treatments for tardive dyskinesia but have historically been associated with a risk of depressive symptoms and/or suicidal ideation. The following case of valbenazine use in a patient with depression is an opportunity to discuss effective usage of VMAT2 inhibitors in situations where the stability of a primary mood disorder is of concern. Our patient is a 70-year-old Caucasian female with an extensive history of depression and anxiety which had been treated with venlafaxine and aripiprazole for over a decade. She presented to our outpatient clinic due to breakthrough symptoms of depression and anxiety. During her evaluation she exhibited a bilateral parkinsonian tremor of the upper extremities which she reported had been progressing for several years and was now causing her significant distress. The tremor quickly resolved after her dosage of aripiprazole was decreased and her symptoms of anxiety and depression resolved with an increase in her venlafaxine. Two months after her aripiprazole was decreased, she developed choreoathetoid movements of her hands and feet consistent with tardive dyskinesia. Aripiprazole was

stopped immediately but the severity worsened, and she developed additional symptoms consistent with tardive akathisia. Her symptoms remained refractory to multiple medication trials over the following seven months until she was treated with valbenazine. Her symptoms markedly improved after two months of treatment with valbenazine, but after nine months of remission her depression had worsened. Her PHQ-9 score was a 9, up from a score of 3 before starting valbenazine. A lower dose of valbenazine was briefly trialed, but her tardive dyskinesia and akathisia quickly worsened with a decreased dose. Although the risk of depressive symptoms is lower with valbenazine, this case shows that there may still be an associated risk. Additionally, we discuss the effective use of the various VMAT2 inhibitors as well as the pharmacological differences which may be behind their differing associated risk with development of depressive symptoms.

No. 69

Treatment Resistant Major Depressive Disorder, a Rare Form of 22q11.2 Microdeletion and the Efficacy of Ketamine Treatment

Poster Presenter: Julia Danielle Kulikowski, M.D.
Co-Authors: Lawrence Samuel Martin, M.D., Anne S. Bassett, M.D.

SUMMARY:
This case reviews a patient with treatment resistant major depressive disorder (MDD) that demonstrated a robust response to ketamine infusions and a potential relationship to an atypical deletion at the 22q11.2 locus. A 34-year-old man followed by a clinic specialized in treatment resistant mood disorders first presented to psychiatry at age 16 years with MDD after a suicide attempt. Psychiatric history revealed five psychiatric admissions and three suicide attempts requiring medical attention. Comorbid psychiatric conditions included attention deficit hyperactivity disorder (ADHD), social anxiety disorder, and traits of obsessive compulsive personality disorder. There was no lifetime history of psychosis, mania or substance use disorders. Medical history included irritable bowel syndrome, obesity, vitamin B12 deficiency, borderline hypertension and mastoiditis; MDD was present in two first degree relatives. At age 32 years, an atypical 22q11.2 C-D deletion was identified by clinical genome-wide microarray after this rare copy number variation (CNV) was found in his newborn daughter. Treatment resistant depression was documented by age 20 years. There were multiple (>20) antidepressant and adjunctive medication trials, varying in duration due to lack of response and/or poor tolerability, despite consistent medication compliance, engagement in care, and family support. Best partial response was achieved with 7 sessions of unilateral electroconvulsive therapy (ECT) at age 23 years. However, subsequent relapse of neurovegetative symptoms and suicidal ideation required hospitalization; further ECT was limited by perceived side effects. Otherwise, the best partial response was achieved with lithium carbonate. At age 33 years, ketamine infusions were offered with immediate robust and sustained response. The severity of neurovegetative symptoms improved and suicidal ideation remitted for the 17 months of ketamine infusions (7.5 mg every 28 days) to date. Other medications continued, including methylphenidate, low dose quetiapine, zopiclone, clonazepam, mirtazapine, and gabapentin, targeting ADHD, sleep and anxiety symptoms. Ketamine, a N-Methyl-D-Aspartate (NMDA) receptor antagonist, has shown rapid antidepressant effects and response in treatment resistant MDD cases, though the likelihood of remission tends to decrease with the number of failed antidepressant trials. The case presented thus displays some pharmacologic atypicality given the degree of treatment resistance yet robust response to ketamine. The results may be consistent with the response to clozapine for treatment-resistant schizophrenia associated with typical (A-D) 22q11.2 deletions. There are few studies of rare CNVs and MDD. This case suggests the potential utility of genome-wide microarray for selected individuals with severe treatment resistant depression and neurodevelopmental and/or other suggestive features.

No. 70

Worsening Psychiatric Condition Precipitated by Complication of Bariatric Surgery

Poster Presenter: Farah Shaikh, M.D.

SUMMARY:
Roux-en-Y gastric bypass is the most popular bariatric method of weight-loss management. Numerous studies have found that weight loss has a positive effect on mental health and improves psychosocial function however the results are mixed in bariatric surgery patients. Bariatric surgery can exacerbate preexisting mental disorders, especially depression. Suicidal activity can also increase after bariatric surgery. Potential causes include anatomical and physiological alteration of the digestive tract which can cause malabsorption of nutrients and drugs especially antidepressant and brain-gut axis dysfunction. This is a case of a 52-year-old female who presented with worsening depression and suicidal ideations with multiple psychiatric hospitalizations after bariatric surgery which was complicated by small bowel obstruction followed by small bowel resection. The objective of this case report is to illustrate the association between bariatric surgery and worsening psychiatric conditions.

No. 71

A Major Depressive Episode Complicated With a Duodenal Ulcer Rupture

Poster Presenter: Alvaro Jorge Gonzalez Alfonzo, M.D.
Co-Authors: Shruti Alok Tiwari, M.D., Eduardo Andres Calagua Bedoya, M.D.

SUMMARY:
Depression has a multitude of pathogenesis, including stress and disturbance of the hypothalamus-pituitary axis (HPA). There has been a correlation between depression and increased risk of chronic diseases, including cardiovascular diseases, stroke, and diabetes, better explained by disturbances in metabolism, immune-inflammatory markers, and HPA. In the gastrointestinal system, depression was associated with irritable bowel syndrome, ulcerative colitis, gastroesophageal reflux disease, and dyspepsia. Given that interrelationship, we explore the risk of peptic ulcer disease (PUD) in a patient with depression in this case. A 66 years old female with a history of hypertension and obesity (BMI 33), and psychiatric history of major depressive disorder with psychotic features (MDD) and generalized anxiety disorder (GAD), arrived at the emergency room with a one-week duration of chest pain along with sadness, insomnia, decreased appetite and behavioral changes at home, triggered by financial stressors. After chest pain was determined to be non-cardiac, the patient was transferred to a psychiatric emergency room and ultimately admitted to the inpatient unit to treat a major depressive episode with psychosis. Hospital course was significant for partial adherence to treatment (Risperidone, Sertraline, and trazodone) and suboptimal oral intake. Subsequently, her stay was complicated by a duodenal ulcer rupture causing an acute peritonitis that required emergent surgical intervention with intensive care management treatment. The correlation between depression and the risk of PUD has been recently studied on cross-sectional and retrospect studies. These studies suggest that the gut and brain are interconnected by immune and hormonal systems that influence a reciprocal association between PUD and depression. Each condition is independently elevating the risk for the other. Also, depression is frequently associated with poor diet, which directly influences gut microbiota by prolonged esophageal acid exposure and gastroesophageal reflux. PUD has a high incidence in patients with depression and a high mortality risk if complicated. This condition should be suspected for patients presenting with non-cardiac chest or upper abdominal pain. Moreover, when associated with other risk factors, including high levels of stress, chronic use of NSAIDs, H pylori, inadequate oral intake, or alcohol use history.

No. 72

A Rare Case of Psychosis in Balo's Concentric Sclerosis

Poster Presenter: Liqing Zhang, M.D.
Co-Author: Richard Holbert, M.D.

SUMMARY:
Balo's concentric sclerosis (BCS) is a rare demyelinating disease with unknown prevalence. A variant of Multiple Sclerosis (MS), BCS is characterized on MRI by concentric lamella of alternating demyelinated and myelinated tissues [1]. Symptoms include cognitive or behavioral changes,

severe headaches, hemiparesis, dysarthria and aphasia. Attacks may proceed over weeks or months [2]. Most cases describe a self-limiting course, however, other cases have resulted in death or severe disability. Immunosuppression treatment can produce sustained remission. Only two cases of BCS related psychosis have been described. We present a 56-year-old Caucasian female with a history of BCS and bipolar disorder who developed psychosis correlated to BCS treatment. She initially presented with a well described syndrome of dyslexia, headache and hand weakness, and was diagnosed by MRI. She required rituximab for control of her symptoms and was discharged on maintenance rituximab every six months. The case was complicated by episodic inpatient psychiatry admissions at 6 months and 1 year following initial diagnosis, around the time that rituximab infusion was due. Episodic symptoms of worsening disorientation, disorganized behavior, delusions of grandeur, and paranoia were initially correlated with the patient's history of bipolar disorder. Concurrent treatment with risperidone was trialed initially, with further drug trials requiring multiple psychotropics and ultimately improvement with risperidone and lithium. Symptoms at each episode abated within 10-21 days following rituximab re-administration, and the patient was ultimately maintained with risperidone, lithium, and rituximab. This case illustrates the challenge of determining the etiology of psychosis and mania in patients with a history of bipolar disorder and demyelinating disease. The patient developed manias within a month of being due for her next rituximab injections, and both manic episodes resolved shortly after the rituximab re-dosing, suggesting BCS-related psychosis. In each mania, she received psychopharmacological therapy as well, but BCS treatment re-dosing may have contributed to symptom resolution. Only two prior cases of psychosis have been correlated with BCS, in which patients with history of psychosis maintained with psychotropics were later diagnosed with BCS. Further studies are needed to describe the association between BCS and psychosis, which may have treatment implications. In our case, it is possible that more frequent immunosuppression may have treated the mood disorder.

No. 73

A Royal Flush: A Case of Neurosyphilis in a Patient With a History of Bipolar Disorder

Poster Presenter: Aatif Mansoor, M.D.
Co-Author: Daniel Y. Cho, M.D.

SUMMARY:

Neurosyphilis alone is a rare disease, but recognizing it in the setting of psychiatric illness can be challenging. This is a case of a 49-year-old male without any significant past medical or psychiatric history who first presented to an outlying psychiatric hospital for delusional and manic symptoms, which had worsened over the course of a month. He was initially court-committed for inpatient psychiatric treatment for these symptoms. During his inpatient stay, he was treated with lithium and two antipsychotics. His initial broad lab workup at the psychiatric hospital included a positive RPR, which was confirmed with positive treponemal antibody test. He was treated with IV penicillin G and given instructions to follow up at the local health department for continued treatment. Of note, his lithium level was checked upon initiation of the medication and before discharge- the level was within normal limits both times. Approximately six months later, the patient was brought to our facility's emergency department with chief complaint of angioedema- he had started an ACE inhibitor about 1 month ago. However, it became apparent in the emergency department that the patient was confused and was oriented to person only. He also was found to have an abnormal gait, poor muscle strength, and positive Romberg maneuver. Laboratory workup in the emergency department revealed a lithium level of >3 mEq/L and an initial creatinine of 4.2 mg/dL. He did have a lumbar puncture in the emergency department, which later was revealed to be VDRL reactive with a titer of 1:8, thus indicating secondary to late neurosyphilis. He was treated with IV penicillin G for 14 days. His mental status improved and the patient was near his baseline after approximately 3 days of treatment. His acute kidney injury and lithium toxicity were treated with generous intravenous fluids, and both his creatinine and lithium level improved to within normal limits by 3 days. Although his balance improved, his weakness remained an issue by the time of discharge, and he was

discharged to a skilled nursing facility in stable medical and psychiatric condition. This case illustrates the importance of internists and psychiatrists having a working level of expertise in the other field. Beyond this, it demonstrates a situation in which integrated care, specifically in an outpatient setting, could have very likely prevented morbidity in this patient. Lastly, for any clinician, this case exemplifies the perils of premature closer and highlights the importance of keep differential diagnoses as broad as possible, especially when treating patients with concurrent medical and psychiatric symptoms.

No. 74

An Investigative Diagnostic Complication: PTSD With Psychotic Features

Poster Presenter: Nakisa Kiai, M.D.
Co-Authors: Sarayu Vasan, M.D., M.P.H., Parisa Hashemi, D.O.

SUMMARY:

Introduction Post- Traumatic Stress Disorder (PTSD) is characterized in the Diagnostic and Statistical Manual of Mental Disorder 5 (DSM 5) by exposure to a traumatic event and the subsequent development of symptoms that fall into four clusters (i.e., intrusions, avoidance, negative alterations in cognition and mood, and alterations in arousal and reactivity). According to literature, there are two types of PTSD with psychosis - post psychotic PTSD and PTSD with secondary psychotic features. Positive symptoms are more frequently identified as being connected to PTSD and childhood trauma is recognized to have a strong connection with both PTSD and psychosis. An important symptomatologic process of PTSD and psychosis is dissociation. Moreover, research has shown a high incidence of comorbidity between PTSD and psychosis. The lifetime prevalence of exposure to trauma found in the United States is 40 to 80% and the lifetime prevalence of PTSD is approximately 7%. One study revealed 52% correlation between PTSD and psychotic symptoms in over five thousand people in the United States. The presence of psychotic symptoms in patients with PTSD may indicate a more severe form of psychopathology with concurrent auditory and visual hallucinations as well as delusions raising important nosological questions about the disorder. Case This is a case of a 24-year-old female with significant childhood trauma who presents with symptoms of post-traumatic stress disorder which were complicated by ongoing auditory and visual hallucinations who was treated on an antidepressant as well as an antipsychotic medications regimen. Discussion and Conclusion It is imperative to understand and learn more about PTSD with psychosis and to give its due respect as the lifetime rates of comorbid psychosis with PTSD are estimated at thirty percent, versus less than eight percent in the general population. With the current available information, it is difficult to discern the incidence rate of PTSD with psychosis, mainly because such a diagnosis is not currently available in the DSM. This case illustrates the need for further specifiers within the DSM-V in regards to the diagnosis of PTSD. The DSM-V does not include a specifier for PTSD with psychotic features which poses challenges with treatment, communicating diagnostic information to other clinicians, accurately applying research that define study groups using DSM, and accurate billing and reimbursement. We put forth more evidence of psychosis in PTSD by presenting a case study that highlights the importance of identification and treatment of PTSD with psychotic features. By doing so, we hope to draw more attention to the subject and the need for clearer diagnostic guidelines for this specific subtype.

No. 75

Anti-NMDA Receptor Encephalitis: Clinician Bias, Delay in Diagnosis, and Ultimate Outcomes

Poster Presenter: Morgan Schmidt, M.D.
Co-Authors: Vincent Chou, D.O., Amanda Ries, M.D.

SUMMARY:

Once thought to be exceedingly rare, autoimmune encephalitis is becoming increasingly recognized due to heightened clinician awareness. Recent advances in diagnostic criteria as well as increasing availability of antibody testing has led to greater recognition of cases. However, approximately half of cases initially present with isolated psychiatric symptoms, often leading to delayed diagnosis, unnecessary treatments, and less favorable outcomes. In

addition, clinician biases regarding psychiatric patients have the potential to lead to less comprehensive medical evaluations. Here we compare two patients ultimately found to have anti-NMDAR encephalitis and received treatment with immunotherapy with vastly differing clinical outcomes. The first patient is a 24-year-old man who presented with acute onset of paranoia, aggression, disorganization, and insomnia. While awaiting admission to the psychiatric unit, he experienced a brief unwitnessed loss of consciousness with subsequent mild confusion. He was admitted to the medicine floor, where a comprehensive workup for traumatic, infectious, and toxicological causes was negative. He was then transferred to the psychiatric unit for further management and was found to have memory deficits, cognitive slowing, and confusion. EEG and MRI of the brain were obtained and normal. Due to high clinical suspicion, a lumbar puncture was performed on hospital day 3 and showed elevated opening pressure and CSF pleocytosis. He was then treated with IV steroids and IVIG for presumed autoimmune encephalitis. CSF samples returned positive for NMDA-R antibody. His hospital course was complicated by catatonia, which responded well to benzodiazepines. Following treatment, his mental status and cognition improved and he was discharged on hospital day 20 to outpatient rehabilitation. In contrast, the second patient is a 26-year-old woman who initially presented for depression and suicidal ideation. She was admitted to the psychiatric unit, where she developed catatonia refractory to high-dose benzodiazepines and four sessions of ECT. She developed persistent tachycardia, emesis, and could no longer answer simple questions. A lumbar puncture on hospital day 20 was positive for NMDA-R antibody. She underwent treatment with IV steroids and IVIG with minimal improvement and subsequently received weekly rituximab with some improvement, although with continued cognitive deficits. She was discharged on hospital day 81 for residential neurorehabilitation. Several differences between these cases may have led to prolonged hospitalization and recovery for the second patient. This poster addresses the effects that delay in diagnosis and treatment, psychotic features confounding neurologic examination, and clinician index of suspicion can have on patient outcomes. We also review important aspects of autoimmune encephalitis and why providers should have a high index of suspicion for patients with new psychotic or catatonic symptoms.

No. 76

Catatonia in Intellectual Disability: Case Report

Poster Presenter: Shevani Ganesh
Co-Authors: Rooshi Amit Patel, M.D., Sanjay Chandragiri

SUMMARY:

Catatonia is defined as “a state of apparent unresponsiveness to external stimuli and apparent inability to move normally in a person who is apparently awake” (1). Catatonia can be acute and occur in severely ill patients with underlying psychiatric or other medical disorders (2,3). Differential diagnosis includes: Psychiatric causes including Mood disorders and Schizophrenia (2), as well as medical causes such as Encephalitis (4) and Neurotoxicity (5). The most well-known features of catatonia include: mutism, waxy flexibility, negativism, echolalia, echopraxia, and withdrawal (6). As a result of the above, catatonic patients often are limited historians, which can be complicated when they have underlying intellectual disability and impaired baseline functioning. In this poster, we report a case of catatonia discovered in an intellectually disabled patient, along with its presentation and management (6).

No. 77

Challenges in the Diagnosis of Cerebellar Cognitive Affective Syndrome in an Active Duty Patient Post-Treatment of Burkett’s Lymphoma

Poster Presenter: Jerry Trotter, M.D.
Co-Authors: Huckelberry Finne, M.D., Heather Shibley, M.D.

SUMMARY:

A 27 year old previously healthy service member was diagnosed and underwent neurosurgery for identification of a primary central nervous system lymphoma of the cerebellum in 2013, with a later diagnosis of cerebellar cognitive affective syndrome in 2019. Immediately following the identification,

the patient underwent chemotherapy followed by rehabilitation and subsequently returned to duty. Given the elite nature of the patient's training and prior skill set, he was capable of undergoing a combat deployment and served for nearly 5 additional years. However, his overall performance degraded, and he exhibited poor decision making. In 2018, the patient transferred locations and during routine medical review and evaluation, he was found to have significant symptoms of gait and fine motor impairment, memory and attention difficulties, and changes in executive function. ccording to the patient, these symptoms first started after tumor identification, but became more pronounced over time and in the setting of worsened stress. The patient was referred to psychiatry given the complicated nature of his medical history and possibility of a concurrent stress disorder related to his operational status, shifting to a medical retirement. His initial presenting symptoms were concerning for a chronic, untreated depression. Due to his prior medical history he underwent a battery of tests and examinations that were supportive of the diagnosis of Cerebellar Cognitive ffective Syndrome (CCAS), a rare condition in which damage to the cerebellum causes changes in executive function, language, affect, spatial cognition, and regulation of motor movements. In this case, we will be discussing the challenges of diagnosing and importance of including this condition in the differential of someone with cerebellar damage that displays executive dysfunction.

No. 78

Chicken or the Egg? A Tale of Depression, Delusion, and Profound Hypothyroidism

Poster Presenter: Naina Chaitanya Mangalmurti
Co-Authors: Jane Xiao Ma, M.D., Shannon Christine Ford, M.D., Matthew T. Hunter, D.O.

SUMMARY:

Mrs. C, a 62 year old woman with no psychiatric history presented to the ED, brought in by her husband for a chief complaint of, "she needs help". Upon further interview, the patient revealed a 3 year history of a fixed, false belief that she will 'contaminate those around her' through her physical presence. This delusion prevented her from seeing friends/family, maintaining a job, weakened her relationship with her husband, and drove her to wear a mask and gloves every day, including to bed and in the shower. This fear of contamination also prevented the patient from filling her thyroid and blood pressure prescriptions for approximately 1 year. In the ED, her BP was 202/107. Because of her hypertensive crisis, the patient was admitted to Internal Medicine where she was found to be severely hypothyroid, with a TSH of 115 and fT4 of 0.35. On physical examination she demonstrated classic skin findings and hair loss. Because of her fears about contamination and how the delusion had affected her behavior, psychiatry was consulted. In addition to her delusional belief she could cause sickness in others, the patient disclosed feelings of depression, anxiety, insomnia, agitation, and suicidal ideation with a tentative plan to overdose on pills. It is important to note that the patient experienced thyroid dysfunction prior to the development of this delusion; she was initially hyperthyroid 7 years ago and underwent ablation therapy; at that time she first began to develop anxiety about her health, and found that her anxiety symptoms correlated with her physical symptoms of diaphoresis, restlessness, and palpitations. She also states that her ablation, while improving her symptoms, made her feel as though "something was wrong inside of me that I couldn't see," which may have planted the seed for her current delusion. Endocrinology was also consulted, and the patient was started on 100 mcg of Levothyroxine. She clinically improved and was able to discharge 2 days after admission. This case illustrates how hypothyroidism can be the great mimicker, especially as it highlights the difficulty of separating the symptoms of psychiatric and medical illness. The patient reported a modest improvement in mood symptoms with resumption of Synthroid. However, the delusion that she could impact the health of those around her persisted. 4 months after initial presentation, she had yet to return to euthyroid status. From the psychiatric perspective, this case presented a diagnostic challenge because of its ability to highlight several finer points of differentiation between DSM-5 diagnoses. The case demonstrates how medicine and psychiatry overlap, emphasizing the necessity of addressing both conditions at once, regardless of whether addressing one resolves the other. Further, this case highlights

the impairment faced by patients with a spectrum of psychiatric disorders that prevent access to care, an issue which is particularly germane in the time of COVID.

No. 79

Diagnostic Approach for a Capacity Assessment of a Psychiatric Patient: A Case Challenge

Poster Presenter: Zargham Abbass, M.D.
Co-Authors: Shahan Sibtain, M.D., Aminder Gill, Syed Jafri, B.S.

SUMMARY:
Capacity is a key component of informed consent to medical treatment. It is the ability to make one's own decision and in used in various contexts, such as consent to hospitalization, to manage one's financial affairs, etc. Capacity is determined by one's mental state at the time. Patients may demonstrate behaviors which put self or others at risk of significant harm, be known or are suspected of having impaired decision-making abilities or have made choices that others believe are inconsistent with values previously held when they were apparently capable. Such triggers can signal the potential need for a capacity assessment. In this article we will examine the difference between capacity and competence, tools that are used for capacity assessment, and the statutory principles that guide clinicians in assessment and decision making process. Furthermore, we will present a case of a 23-year-old male who ingested 70 acetaminophen tablets and refused the assessment, diagnostic workup, treatment and wanted to leave against medical advice. We will discuss in depth whether the patient has the capacity to refuse the treatment and the steps that were taken to approach this case.

No. 80

Fantasy in Reality: A Case Series of Pseudologia Fantastica

Poster Presenter: Khai Tran, M.D.
Lead Author: Maria Alejandra Gallo Ruiz, M.D.
Co-Author: Sana Baig

SUMMARY:
Fabrication of information is a common occurrence in daily life. It can be both voluntary and involuntary. It carries different names such as lying or confabulation, most are situational and conditional. However, there are such cases where the fabricated stories are so intricately woven together that they essentially form an alternate reality for the storyteller. This specific condition is called Pseudologia Fantastica. Many believe that this is pathological lying, commonly seen in malingering cases. Some see it as a form of delusion. The phenomenon was first reported by Anton Delbrueck in 1891. The topic itself is still controversial but nevertheless poses difficulty for treatment in patients that exhibit it. We present two unique cases that would help demonstrate the distinct presentation of Pseudologia. Case 1: a 33 year old Caucasian female with past psychiatric history of bipolar disorder who presented to the CPEP (Comprehensive Psychiatric Emergency Program) department due to disorganized and risky behaviors. The patient was admitted for what initially presented as persistent delusions resulting in self destructive behaviors. During the hospital stay, she reported a personal history that is so disproportionally unrealistic to the observer and such beliefs that stem from her life views that rendered her unsafe from living independently. Case 2: a 37 year old African female with past history of bipolar disorder who was admitted to inpatient psychiatric service for persecutory paranoia. While in the unit, patient gave grandiose self history with conflicting details but was able to provide further details to explain the discrepancies. Patient was able to be stabilized with regimen of Depakote and Invega. Discussion: while the foundation of pseudologia is based on complex webs of fabricated details but unlike delusions and pathological lying, pseudologues often do not tell lies for external secondary gain. The motivation for fabrication is to tell the story itself. The proposed theory is it acts as a defense mechanism against psychological insults. There are 2 types of stories that are told by pseudologues, aggressive and defensive. The aggressive type is often told to provide inflated sense of worth, or false accusation of others; the defensive type serves to illicit a sense of sympathy or to evade punishment. In both cases, they both

exhibit a phenomenon called imposture where they claimed to know some influential figures. Treatment plan had to be included psychological testing and long acting injection to help suppress the severity and preoccupation in patients

No. 81

Functional Neurologic Disorder With Nonspecific Cognitive Deficits and Functional Global Amnesia

Poster Presenter: Francis O. Ridge, D.O.
Co-Author: Shannon Christine Ford, M.D.

SUMMARY:

In psychiatry we are often confronted with situations where our patients do not cleanly fit into one diagnostic category. When a patent presents with global amnesia and neurologic causes are ruled out, we might be led to diagnose a dissociative disorder. How then, do we proceed, when the patient has cognitive issues that do not fit a dissociative paradigm, and present more like functional neurological symptoms? These cases force us to challenge our understanding of these diagnostic categories and encourage us to develop an individualized treatment plan to meet our patient's symptoms as they are presented, rather than the diagnosis that most closely approximates their presentation. We present the case of a 21 year old male single Active Duty United States Army Private First Class stationed overseas with no prior psychiatric history, who presented to behavioral health reporting global amnesia after hitting his head during a basketball game. He reported both complete retrograde and anterograde amnesia and was medically evacuated to a neuropsychiatric ward in the United States. He underwent an extensive work up for an underlying organic cause that included a head CT and brain MRI, lumbar puncture, EEG, all which did not show any abnormalities. His neuropsychological testing results showed a performance worse than simple guessing. The psychiatric evaluation was notable for his general indifference to this memory loss, without concern for his future level of functioning or how the symptoms were impacting his life. There were other incongruences with his presentation. One example is the inpatient neuropsychiatric team noted that his spontaneous movements were grossly normal until direct examination, when they became abnormal. Based on the lack of an identifiable organic cause and his symptom presentation, he was diagnosed with a functional neurological disorder even though his symptoms were cognitive in nature. As treatment progressed his anterograde amnesia slowly improved with the support of psychiatry, speech language pathology, occupational therapy, physical therapy, and recreational therapy. His retrograde amnesia has, so far, persisted. We will discuss our biopsychosocial approach to developing a differential diagnosis and the clinical reasoning that led to a diagnosis of conversion disorder rather than a dissociative disorder or malingering. We will present a review of stressors which likely precipitated and perpetuated this patient's unique symptomatology, and our approach to treatment which adapts psychotherapeutic techniques for other functional neurologic symptoms to a case where amnesia is the primary presenting symptom. This treatment included supportive psychotherapy and elements of CBT which were used for other psychiatric symptoms which emerged during treatment. As with many cases with functional neurologic symptoms, this case highlights the need for multi-disciplinary treatment.

No. 82

Hydrocephalus Presenting as Catatonia in a Patient With Down Syndrome

Poster Presenter: Lino A. Gutierrez III, M.D.
Co-Author: Enoch Barrios, M.D.

SUMMARY:

Mr. C is a 20 year-old Black Jamaican-American male with a prior history of trisomy 21 and intellectual disability, who presented to the outpatient psychiatry clinic with his mother after a four month history of depressive symptoms, neurocognitive decline and decreased independence and functionality. The patient was previously high functioning with a bright, sociable affect. Upon presenting to the clinic, there was significant concern for catatonia: mutism, negativism, stupor, and staring. The patient was escorted to the emergency department(ED) for further evaluation and psychiatric assessment. The patient did not follow commands or communicate with ED staff. He

stood nearly motionless in the exam room and resisted physical exam. The patient was not combative, but his size and strength led to concern for possible aggressive behavior. Psychiatry was able to work with the patient and his physical exam was concerning for increased deep tendon reflexes in the upper and lower extremities and his mental status exam was remarkable for immobility, mutism, staring, posturing, stereotypy, negativism. There was uncertainty over whether his presentation was due to a medical condition or a manifestation of a psychiatric illness. A discussion on catatonia ensued and a strong recommendation for a benzodiazepine challenge, lab draw and imaging was given. Imaging demonstrated hydrocephalus and resulting in a neurosurgery consultation. The patient was admitted to the neurosurgery service from the ED for an urgent Endoscopic Third Ventriculostomy(ETV). Although there was a moderate response after neurosurgical intervention, his catatonia reoccurred and following a benzodiazepine trial, electroconvulsive therapy (ECT) was safely used with positive effect. Had the patient been prematurely released from the ED, there would have been a risk of worsening catatonia and the development of neurologic deficits. This patient had multiple vulnerabilities to care including race, age and history of Down syndrome with intellectual disability. Patients with Down syndrome are at increased risk for both behavioral disturbances and catatonia and regression should prompt a comprehensive work up. Increasing awareness of catatonia and its etiologies with staff proved to have a positive impact in the care of this patient. In this poster we discuss disparities in health due to Down syndrome, race and intellectual disability. We will also discuss the components of a psychiatric and medical workup for regression in young adult patients with Down syndrome and effective treatments for catatonia in this patient population.

No. 83

Identifying Catatonia in a Previously Healthy Young Patient Acutely Hospitalized for Behavioral Concerns

Poster Presenter: Katrina Louise Wachter, M.D.
Co-Authors: Ryan Allen Stevens, Michelle B. Hornbaker-Park, M.D.

SUMMARY:
Ms. P, an 18-year-old Caucasian female with no significant past psychiatric history, presented to the emergency room with her parents for a one month history of episodic poverty of speech, worsening anxiety, and bizarre behavior, including reported “freezing” when attempting to complete tasks. The patient was struggling with completing her activities of daily living and reported difficulty with communication, feeling that her words were “stuck inside” her brain. She stated that her mind would argue with herself about what is real and what is not. She denied hallucinations or feelings of suicide but endorsed significant distress in not being able to remember what it felt like to be herself. Her speech pattern was halting during interview, and patient was visibly distressed about not being able to fully communicate her thoughts. The patient scored a 4 on the Bush-Francis Catatonia Rating Scale upon admission. During her admission, she was observed staring at the door in her room without movement. Patient was given an Ativan challenge of 2mg oral lorazepam with good response. Potential rheumatological markers were also positive and are will be followed up in an outpatient setting. The diagnosis of catatonia can be difficult to make and is easily mistaken for another psychiatric diagnosis. This patient was previously high-functioning and presented uniquely with paucity of speech and social withdrawal, drawing concern for a primary psychotic process rather than a major depressive disorder-associated catatonia. Physical causes of mood and behavior symptoms must be ruled out before a diagnosis of catatonia can be made, and an Ativan challenge can be helpful in clarifying the clinical picture. In this poster, we discuss the clinical challenges of identifying catatonia and its etiology in real-life and the associated work-up necessary to help make the diagnosis.

No. 84

Misdiagnosis of Schizoaffective Disorder in a Patient With Autism Spectrum Disorder Complicated by Clozapine-Induced Cardiomyopathy

Poster Presenter: Marshall Steele, M.D.
Co-Author: Laura Francesca Marrone, M.D.

SUMMARY:
While psychotic disorders and neurodevelopmental disorders are considered to be distinctly different conditions in the DSM, the two syndromes often present with similar signs and symptoms. In particular, there appears to be high comorbidity between Autism Spectrum Disorder (ASD) and schizophrenia, with one study indicating that up to 28% of ASD patients may go on to be diagnosed with a psychotic illness. However, there is also a concern for misdiagnosis of schizophrenia in ASD, with numerous case reports of such being documented in the literature. The case presented here is illustrative of the ramifications of such a misdiagnosis with an evolving clinical presentation. This female patient was noted to have atypical development at 18 months of age and was diagnosed with dyspraxia and Asperger's disorder at age 4. At age 13, she began to have worsening behavioral problems and reported hearing "voices", leading to diagnosis of Schizoaffective Disorder and numerous trials of antipsychotic and mood stabilizing medications. Her symptoms were stabilized somewhat on clozapine, but she developed morbid obesity and dilated cardiomyopathy as a result of the medication. The latter condition is a rare side effect of clozapine, but very severe and potentially life threatening. Additionally, she also developed a likely drug-induced liver injury, which was potentially attributed to other antipsychotics used around the same time. After stopping clozapine, the patient's mood and behavior became increasingly labile and unmanageable, leading to several prolonged hospitalizations. Close observation and evaluation of the patient led providers to ultimately feel her presentation was best explained by ASD and environmental stressors rather than a primary psychotic disorder. She was tapered off all antipsychotics and improved over time with behavioral management strategies. However, it had taken over 8 years for the diagnosis to be more appropriately corrected and the antipsychotic medications used in the meantime had severe medical consequences. This poster will examine the risks and consequences of misdiagnosis in this case and will discuss the importance of understanding and differentiating the overlap between developmental and psychotic disorders.

No. 85
Neuroleptic Malignant Syndrome: A Complex and Atypical Presentation
Poster Presenter: Manu Dhawan, M.D.
Co-Authors: Prashanth Pillai, M.D., Sachidanand R. Peteru, M.D., Ksenia Freeman, M.D.

SUMMARY:
NMS is a rare side effect of antipsychotic medications, with an incidence of 0.02 % (Stubner et al., 2004). Occurring in the context of drug-induced dopamine receptor blockade usually caused by antipsychotic medications and antiemetic medications. NMS may occur in the setting SGA's use but usually present with milder symptoms and better outcomes (Caroff, Mann, Campbell, & Sullivan, 2002; Mann, Caroff, Keck, & Lazarus, 2003; Nakamura et al., 2012; Picard et al., 2008). The risk factors for developing NMS include prior episodes, catatonia, agitation, hypovolemia, and rapid titration of high doses of potent dopamine blockade drugs(Mann et al., 2003; Ware, Feller, & Hall, 2018). The cardinal symptoms of NMS are elevated body temperatures, rigidity, tremors, autonomic Instability, and altered levels of consciousness(Mann et al., 2003; Ware et al., 2018). They are usually resolving on withdrawal from dopamine blockade medications on an average of 7-10 days(Mann et al., 2003). We present the case of a patient who develops NMS with residual catatonia and a parkinsonian state, in the context of a recent stroke and antipsychotic medications in a 69 y/o female with a history of psychiatric illness. In our case, the patient's laboratory evaluations did not reveal any acute changes, and her vitals remained stable throughout. She presented with tremors, rigidity, and symptoms of catatonia, with subsequent rapid deterioration in her general condition with confusion, immobility, fixed flexion posture, and decreased oral intake. Our patients' symptoms persisted for more than a month but continue to improve, despite the cessation of dopamine blockade medications.

No. 86
WITHDRAWN

No. 87
Psychosis and Dissociation: A Complex Case Effectively Managed With a Multidisciplinary Approach
Poster Presenter: Michelle Cross, D.O.
Co-Authors: Diana Nguyen, D.O., Damaso Oliva

SUMMARY:
Ms. K, a 28-year-old Latin American female with past psychiatric history of depression/anxiety/post traumatic stress disorder, initially presented to our unit after a suicide attempt by cutting and overdose on vitamins. Within the past year, she had new onset auditory hallucinations, amnestic episodes, dissociation, paranoia, and a delusion that she was on a TV show and everyone she interacted with were actors. Prior to this, she had a history of suicide attempt by overdose and multiple psychiatric hospitalizations. She had a long history of self-inflicted injury by cutting, which she recently adapted to use during her episodes of dissociation. Initially, we believed her dissociative and psychotic episodes were a result of a schizophrenia spectrum disorder. As she improved we began to believe her symptoms were a reaction to trauma and extreme emotional stress, as can be seen in borderline personality disorder or with PTSD. However, her symptoms quickly returned after she was discharged from our unit, despite her diligent practicing of new coping skills and compliance with psychiatric medications. However, she did admit that she returned to her daily marijuana use after discharge. Upon careful interview and chart review, it was revealed that she had changed to a new drug dealer this year, who had likely been selling her marijuana laced with phencyclidine (PCP) without her knowledge, at which time her new psychiatric symptoms emerged. The multidisciplinary team continued to collaborate to provide her care. Through interviews, therapy and gaining the rapport and trust of the patient, we were able to determine that her presentation was in fact due to bipolar disorder, currently depressed, borderline personality disorder, and cannabis use disorder. Her effective diagnosis and treatment were only possible by the collaboration of a multidisciplinary team. This consisted of a psychiatry attending and intern who provided medication management and supportive therapy, a PGY-2 psychiatric resident who conducted brief and targeted cognitive behavioral therapy for suicidality, and licensed clinical social workers and counselors who conducted group therapy sessions and connected her to outpatient resources and follow ups. This case illustrates the importance of the collaboration of a multidisciplinary team and detailed history taking and chart review. In this poster, we also discuss differentiating psychosis and dissociation from chronic PCP use, bipolar disorder, and borderline personality disorder.

No. 88
WITHDRAWN

No. 89
Acute Psychosis as the Sole Manifestation of Polyglandular Autoimmune Syndrome Type II (Schmidt Syndrome): A Rare Case Report
Poster Presenter: Kareem Seoudy, M.D.
Lead Author: Jason C. Pickett, M.D.
Co-Author: Christopher Rowley

SUMMARY:
Polyglandular autoimmune syndrome type II (PAS-II), formerly known as Schmidt syndrome, is a rare autoimmune disorder in which there is a steep drop in the production of several essential hormones by the glands that secrete them. PAS-II is defined by the combined occurrence of autoimmune adrenal insufficiency plus autoimmune thyroid disease or type 1 autoimmune diabetes [1]. The condition was first described by, and eventually named after, Martin Benno Schmidt in 1926, after he published two cases on patients with Addison''s disease and chronic lymphocytic thyroiditis [2]. The estimated prevalence of PAS-II is 1.4 to 2.0 per 100,000. [3] Psychotic disorders caused by a known medical disorder or substance use are called secondary psychoses. It is often challenging to identify the etiology of a secondary psychosis that is not caused by substances of abuse or medications. In this case report, we highlight a rare presentation of polyglandular autoimmune syndrome type II (PAS-II), manifesting solely as severe psychosis. A 52-year-old Caucasian male with a past medical history of hypothyroidism and gout and no prior psychiatric history who presented to the emergency department with new-onset, first-occurrence, florid

psychosis. Medical screening did not identify any organic cause for his psychosis, and he was admitted to the psychiatric hospital. While there, he reported various vague complaints such as an insatiable thirst for water, salt-cravings, nausea, leg cramps, and lightheadedness. Further investigation revealed that he had autoimmune adrenal insufficiency, which in the context of also having hypothyroidism, is consistent with a diagnosis of polyglandular autoimmune syndrome type II. This new information challenged his initial diagnosis of a late-onset primary-psychiatric diagnosis. After appropriate treatment of his adrenal insufficiency, the patient showed a drastic resolution of his psychotic symptoms. This case serves as a reminder to physicians to keep an open mind and consider secondary causes of psychosis. Identification of an underlying medical, toxic, or iatrogenic cause in a patient presenting with new-onset or worsening psychosis can be challenging. Careful history taking, physical examination, and judicious use of medical testing guided by the medical history can help the clinician with the appropriate diagnosis and, therefore, optimum intervention. PAS-II should be on the differentials for anyone with hypothyroidism presenting with acute onset psychosis.

No. 90

Culturally Informed Assessment of Schizoaffective Disorder in a Chinese Active Duty Army Impacting Diagnosis and Treatment

Poster Presenter: James Mooney, M.D.

SUMMARY:

Cultural factors are important in the assessment and thus diagnosis and treatment of any person. This was especially true for a 28-year-old male native to central China with no previous psychiatric history and no familial psychiatric history who initially reported what appeared to be acutely psychotic to a major medical facility. Initial diagnosis and later treatment were impacted by this individual's specific cultural background. As such a DSM V guided cultural formulation was helpful to inform the care of this service member. It also can prove to be helpful as an example of why cultural formulations to include but not limited to race, religion, education level, cultural views on mental health, gender, sexual identity, the political environment of the home country, and citizenship as were prominent in this case.

No. 91

Misdiagnosis of Schizophrenia in an African American With Psychotic Depression: Revisiting Racial Disparities in the Diagnosis of Psychotic Disorders

Poster Presenter: Cecilia Nease
Co-Authors: Tamara Murphy, M.D., Mohammed Ranavaya, Adam Schindzielorz, M.D.

SUMMARY:

While large scale epidemiologic data have demonstrated no racial differences in the prevalence of psychotic disorders, significantly higher rates of schizophrenia diagnoses and related hospitalizations are observed in African American patients compared to those of European descent. Schizophrenia misdiagnoses compromise the physician-patient relationship and render patients vulnerable to social and occupational discrimination, suicide, and adverse outcomes associated with undiagnosed mood disorders. Furthermore, physical complaints in patients with existing psychiatric diagnoses are routinely undertreated, a disparity which may be compounded by racial biases observed in the assessment of physical symptoms. A 55-year-old African American male previously diagnosed with schizophrenia was admitted to the burn unit after attempting suicide by self-immolation. The patient described an eight-year history of depression with coinciding auditory hallucinations and severe headaches. Although initial imaging was reportedly suggestive of a lesion, his physicians did not feel that further workup was necessary. Due to the temporal relationship of his mood and psychotic symptoms, his diagnosis was revised to major depressive disorder with psychotic features and he began treatment with an antidepressant and antipsychotic. Repeat imaging showed evidence of previous cerebrovascular injury as well as concern for malignancy. Currently, his symptoms have dramatically improved and he is undergoing further workup to ascertain whether multiple myeloma or other organic etiologies may have contributed to his presentation. Racial disparities in psychotic disorder

diagnoses have been well documented in the literature since the 1980s, however misdiagnoses in African American patients have persisted into the current decade. This case demonstrates the importance of obtaining a full medical and psychiatric history when assessing psychotic patients across demographic groups to minimize adverse outcomes associated with misdiagnoses and delayed treatment.

No. 92

When Family Decisions Conflict With Standard of Care: Case Report of a Korean Immigrant With Schizophrenia and Medication-Resistant Catatonia

Poster Presenter: Crystal Han, M.D.

SUMMARY:

Mr. N is a 39 year old Korean-American male with a history of schizophrenia with features of catatonia who was admitted to the inpatient psychiatric unit after a presumed suicide attempt. He was born in South Korea and immigrated to the United States with his parents at age 16. Since his early 20s, he had been hospitalized over 20 times for suicide attempts, severe catatonic features including mutism, immobility resulting in inability to eat or drink, as well as disorganized and impulsive behavior. On admission, Mr. N was mute, with severe psychomotor slowing requiring assistance for all his activities of daily living, and would impulsively expose himself and attempt to grab female staff. In past years he had responded to high dose Ativan but during this admission, symptoms of catatonia persisted despite Ativan titrated up to a total of 18 mg daily. His parents were closely involved with the patient and his medical decision-making. Mr. N and his parents declined a trial of clozapine due to concern regarding the required blood draws for monitoring. Over his 5-month admission, he failed multiple medication regimens. Many discussions were held with his parents about the recommendation for electroconvulsive therapy (ECT), but his parents consistently declined due to fear of brain damage and their belief that going to church and avoiding medications would ultimately improve the patient's symptoms. They maintained these decisions despite many attempts at psychoeducation. Due to the severity and persistence of symptoms, the poor response to medications, and concern regarding the patient's ability to maintain his safety outside of the hospital, court-appointed guardianship for the patient was pursued and obtained. The patient responded well to ECT and Mr. N was discharged to a capitation program with supervised housing. He currently remains functional with ECT maintenance and his parents continue to be closely involved in his life. ECT has been found to be one of the most effective and rapid treatments for medication-resistant catatonia. However, it is widely underused due to negative perceptions and inaccurate or lack of knowledge in patients and relatives about the treatment. Current literature suggests that patients and families feel poorly informed about the process and risks of ECT, but the majority report positive views after patients undergo ECT. There is very little literature on East Asian attitudes about ECT. Studies have suggested that surrogate decision makers prioritize patient wellbeing as their top guiding principle, but there are few studies on surrogate decision making conflicting with standard of care in psychiatry. In this poster, we discuss the challenges of treatment management when family decisions conflict with standard of care and patient safety, as well as East Asian attitudes toward ECT through a review of the literature.

No. 93

A Clinically Beneficial Overdose: Cessation of Purging After Excess Ingestion of Fluoxetine

Poster Presenter: Marvin Joseph Weniger Jr., M.D.
Co-Author: Sara Beth Berner-Orcutt, D.O.

SUMMARY:

This case highlights the difference between the FDA recommendation and the manufacturer's recommendation for initial dosing of fluoxetine for bulimia nervosa. Fluoxetine is the only antidepressant medication approved by the FDA for treating bulimia nervosa. The FDA recommends starting at 20mg daily and increasing by 20mg every week or longer up to 60mg daily. However, the manufacturer that held the original patent for fluoxetine states that current clinical practice is to start at 60mg daily. A 20 year-old female with Other Specified Eating Disorder (purging without bingeing)

and Generalized Anxiety Disorder with panic attacks presented to her outpatient psychiatrist 10 days after she took 100mg of fluoxetine, 3.5mg clonazepam, and one serving of alcohol to relieve a severe panic attack. She stated she progressively took more pills to attempt to relieve the anxiety symptoms. She did not seek medical attention because she was adamant it was not a suicide attempt and she had minimal side effects. She then had no purging behaviors for 3 weeks after the overdose whereas, prior to the overdose, she was purging approximately once per week. Her only medications were fluoxetine 20mg daily and clonazepam 0.5mg three times daily as needed for anxiety. After the episode, fluoxetine was increased to 40mg daily and clonazepam was discontinued. She continued to have close outpatient follow-up to monitor her symptoms. This case is significant because it may demonstrate the value of higher doses of fluoxetine for treating the purging behaviors frequently associated with bulimia nervosa. It is a useful teaching case to illustrate the difference between initial dosing recommendations. While there is insufficient evidence from this case to show that the single, high dose of fluoxetine caused the temporary resolution of the patient's purging behaviors, the case highlights the need for more study of the efficacy of higher initial doses fluoxetine for treating bulimia nervosa. This additional study could then be used to support a change in the FDA initial dosing recommendation. The views expressed in this abstract are those of the authors and do not necessarily reflect the official policy or position of the Department of the Navy, Department of Defense, or the United States Government. I am a military service member. This work was prepared as part of my official duties. Title 17 U.S.C. 105 provides that "Copyright protection under this title is not available for any work of the United States Government." Title 17 U.S.C. 101 defines a United States Government work as a work prepared by a military service member or employee of the United States Government as part of that person's official duties.

No. 94

Case Report of Anorexia Nervosa in a Active Duty United States Navy Lieutenant

Poster Presenter: Jason Garton, D.O.

SUMMARY:

Disordered eating comprises a varied spectrum of psychologically driven behaviors which have classically proven difficult to treat. Scarce is the literature with regards to prevalence in the active duty population let alone the population in the United States service academies. Presented is a case of Anorexia Nervosa diagnosed in an active duty Navy Lieutenant and graduate of the United States Naval Academy. Discussed are features of this notoriously difficult to treat illness as well as attention to the prevalence in the general military female population. Lastly, consideration paid to the potential contribution to disordered eating inherent in military life.

No. 95

Case Report of Purging in a Senior Enlisted Sailor on Active Duty

Poster Presenter: Jason Garton, D.O.

SUMMARY:

Eating disorders have been classically associated with the adolescent, high achieving female population. Far less has been observed or discussed in the literature about occurrence in the male population and even less in the active duty population. With potentially lethal consequences, the eating disorders are a notoriously secretive grouping of behaviors and thought processes which have proven difficult to effectively treat. Presented here is the case report of an active duty senior enlisted Sailor who came to the attention of outpatient psychiatry after a visit to the dentist and is care while a patient in the resident psychiatric clinic.

No. 96

Impact of the Covid-19 Pandemic in Patients With Anorexia Nervosa: Challenges in Treatment

Poster Presenter: Sridivya Chavali, M.B.B.S.
Co-Authors: Divya Khosla, M.D., Laura Planche, M.D., Sagarika Ray, M.D.

SUMMARY:

Anorexia nervosa is an eating disorder characterized by an abnormally low body weight, an intense fear

of gaining weight, and a distorted perception of weight gain. A combination of biological, psychological, environmental abnormalities contribute to the development of this illness. There are significant associations with psychiatric comorbidities including depression, anxiety, personality traits, and medical complications including fatigue, refeeding syndrome, electrolyte imbalances, cardiac abnormalities, anemia, bone loss, muscle loss, and menstrual irregularities. It is also important to recognize the profound parental caregiver burden, which impacts goals of care. The COVID-19 pandemic has greatly increased environmental stress leading to increased risk for de-compensation in the psychiatrically vulnerable population. Not much is known about how a pandemic can impact individuals suffering from eating disorder. We aim to present two patient scenarios from New York, the U.S. epicenter of the coronavirus, with a prior diagnosis of anorexia nervosa, both presenting with worsening of their illness following the onset of the pandemic. In this poster we present two patients with a diagnosis of anorexia nervosa, a 16 years old female in an inpatient setting and an 18 years old female in an outpatient setting, both reportedly were making gains in treatment prior to the pandemic, but both began to rapidly decompensate as the global pandemic emerged. Like many adolescents across the nation, both of these patients were forced to deal with sudden changes to their social life and daily routine, the inability to access proper education, adjusting to remote learning, worsening anxiety related to social isolation, and worsening fears around insecurity with food. In addition to these factors, our 16 years old client also struggled with a chaotic home environment. These challenges ultimately exacerbated feelings of sadness, despair, anxiety, and stress in the already vulnerable patients dealing with a chronic psychiatric disorder such as anorexia nervosa. A collaborative multidisciplinary approach with the patients and their families was the key to design a safe treatment plan for both the patients, despite the challenges associated with the new norm of social distancing and remote treatment options. This poster intends to look into the impact that a pandemic can create for an eating disorder client. We also want to highlight the need for a critical balance of medical and psychiatric interventions along with careful navigation of the hurdles in disposition to aid in the management of severe, debilitating psychiatric disorder like anorexia nervosa, despite the complications associated with the ongoing global pandemic.

No. 97
WITHDRAWN

No. 98
"The World Will End and No One Can Save Us": A Case Series of Coronavirus Related Exacerbation of Psychosis During the COVID Pandemic
Poster Presenter: Samuel J. Rothman, M.D.
Co-Author: Eric Garrels, M.D.

SUMMARY:
Introduction: COVID-19 (Corona Virus Disease-19) was first noted in the Wuhan, Hubei Province area of China in December 2019 and has since become a global pandemic. The virus has affected humanity in all facets of society including healthcare, economics and politics. COVID-19 is well known for its devastating physical syndrome, responsible for over 170,000 deaths in the United States as of August 15, 2020 alone. However, a lesser discussed area of healthcare which has been deeply afflicted is Mental Health. While social distancing and home isolation measures have been shown to greatly reduce the physical spread of COVID-19, the sharp decline in socialization and interaction may play and enormous role in the onset of psychiatric illness and potential outcomes in Mental Health patients. In addition, further burden may be identified in the fallout of the virus as society aims to resume normal operations, the results of which could place immeasurable strain on both the inpatient and outpatient settings. **Case Series**: The authors will present a series of three cases whose acute exacerbations of psychiatric illness can be directly correlated with the multi-faceted disruption of everyday life caused by the coronavirus pandemic. Informed consent for publication was obtained from the patients prior to their discharge. The first case exemplifies how means to control spread through social distancing and self-isolation can lead to a devastating psychiatric presentation, in this case: first-break psychosis. The second, showcases how individuals

with well-controlled psychiatric conditions are vulnerable to serious decompensation under the stressors of this pandemic. In the final case, we demonstrate how severe stressors, such as COVID-19, can be the central theme of psychiatric symptoms, in the context of missing outpatient visits. **Conclusion**: Past studies on other pandemics and traumatic events such as SARS, MERS, H1N1, and 9/11 have shown similar patterns in exacerbations of psychiatric decompensation. These studies may encourage the use of methodologies used in those events to provide guidance for behavioral health workers today. The pandemic has had a widespread impact on mental health in the community: from rising anxiety and depression, to exacerbation of paranoia, to missed appointment leading to decompensation and readmission. This calls for brainstorming and developing emergency preparedness plans in both inpatient and outpatient settings and utilize this knowledge in the future in order to ensure an equitable access to care during similar situations.

No. 99

Parkinsonism-Hyperpyrexia Syndrome: A Differential to Consider in Psychiatric Dysautonomias

Poster Presenter: Michael Vincent Pinter, M.D.
Co-Authors: Luke David Piper, M.D., Ahmad Hameed, M.D.

SUMMARY:

Case Presentation: A 62-year-old male with a history of Parkinson Disease (maintained on Carbidopa/Levodopa and deep brain stimulation) presented to the hospital emergency department with complaints of fever, abdominal pain and altered mental status. Initial examination revealed significant encephalopathy and unstable vital signs with a temperature of 38.3C, respiratory rate of 22, and blood pressure of 147/88. Initial labs showed a normal WBC, CT imaging showed no acute intracranial abnormalities abnormalities, LP was unremarkable, and EEG demonstrated bi-hemispheric dysfunction with background slowing but no epileptiform discharges. Physical examination yielded diffuse muscular rigidity in all extremities. History supplemented by the patient's daughter revealed that his Parkinson disease had been managed through Carbidopa/Levodopa 25/100 mg every 3 hours, and bilateral deep-brain stimulation (DBS) targeting the subthalamic nuclei. He had a similar presentation to an outside hospital three weeks prior, where he was treated with empiric antibiotics for a suspected infection, even though no definitive etiology was found. Further history revealed that the patient had become non-compliant with his Carbidopa/Levodopa approximately five weeks prior to that presentation because of worsening visual hallucinations and agitation. Initially, reintroduction of Carbidopa/Levodopa alone did not appreciably improve symptoms. However, interrogation of his DBS device revealed that his intermittent pulse generator was defective, and the DBS technician estimated that the DBS began malfunctioning approximately around the same time of the patient's initial presentation to the outside hospital. Ultimately, he was treated with the restarting of his DBS and increasing his Carbidopa/Levodopa to 50/200 mg orally four times per day to which he demonstrated significant improvements with his vital signs, mental status, and muscular rigidity. Discussion: This case describes a presentation with clinical features quite similar to the neuroleptic malignant syndrome, despite the patient not being treated with neuroleptic medication. Functionally, the patient's dopaminergic tone may have been significantly altered by the combination of a deactivated DBS device and cessation of Carbidopa/Levodopa, producing a neurochemical state of acutely reduced dopamine neurotransmission, similar to that seen in a medication-induced neuroleptic malignant syndrome. While the patient's refusal of Carbidopa/Levodopa was more immediately apparent as a potential precipitant to his presentation, his minimal improvement after being resumed on this medication suggests that the deactivation of his DBS device played a more central role in his clinical deterioration. Providers should be aware of the potential for NMS-like presentations – even in patients not receiving neuroleptics – should other factors be in place that may acutely diminish dopaminergic tone.

No. 100

Older Adult IDD Patients – Who Will Manage Their Care When They Lose Their Primary Caregiver

Poster Presenter: Hira Ayub Silat, M.D.
Co-Author: Marla Frances Wald, M.D.

SUMMARY:
Parents of children with intellectual developmental disorders (IDD) are a very important source of support for their children throughout their lives. (Seltzer et al, 2011.) As these patients get older, and they lose their parents, they either learn to live independently or have their care transferred to a relative or the state. This poster discusses two cases which illustrate the current gaps in advanced care planning for IDD patients and the unique needs of this vulnerable population. Findings from the literature are discussed. Advanced care planning for older adults with IDD should be a routine practice, done in collaboration with primary care provider, patient, and family. Parents should consider identifying their successor as substitute decision maker if needed. (Lougheed 2019). Often, this could be the patient's siblings, though siblings require additional support and counseling. (Leanne, 2019). Advanced care planning will enable a smoother transition for the patient, preserve their wishes and minimize medical errors.

No. 101

"This Is a Prison!": Trauma From Involuntary Hospitalization and the Impact on Management of Mental Illness

Poster Presenter: Aditya Sareen, M.D.
Co-Authors: Abhishek Wadhwa, M.D., Catherine Soeung, M.D., Panagiota Korenis, M.D.

SUMMARY:
Article 12 of the UN Convention on the Rights of Persons with Disabilities (2014) says, "Equal recognition before the law, and specifies that forced treatment, among other discriminatory practices must be abolished in order to ensure that full legal capacity is restored to persons with disabilities on an equal basis with others."(1) In 1975, the U.S. Supreme Court defined the criteria for an involuntary commitment while being cognizant of the patient's rights. (2) Our case study describes a patient with bipolar disorder who while being treated on an involuntary status developed severe extra-pyramidal symptoms. Given the nature of the involuntary treatment and adverse effects experienced by the patient, severe resistance to all forms of management was noted in subsequent admission, including psycho-education, psychotherapy, psycho-pharmacology and community treatment. This case report demonstrates the need to involve the patient in every step of the treatment process including the process of treatment over objection. The advantages of such engagement have long term benefits for the patient in terms of patient-physician alliance and treatment compliance.(3) However, when the patient is not a part of formulating a treatment plan, it leads to resistance to treatment and poor prognosis. Our report also shows the importance of universal laws governing involuntary treatment of mentally ill individuals.

No. 102

Intersectional Capacity Assessments: Religious and Ethical Considerations

Poster Presenter: Melissa A. Peace, B.A.
Co-Author: Meghan Schott, M.D.

SUMMARY:
Ms. R., a 72-year-old African-American female with no past psychiatric history and medical history of DM and HTN presents to the psychiatric consult service with significant altered mental status and tangential speech. The medical team's initial workup revealed uremic encephalopathy and concern over the patient's decision-making abilities, with regards to dialysis initiation is present. Capacity assessment is conducted by the psychiatric team, who deems she does not have capacity to refuse dialysis. Of note, during the encounter she reveals she is a Jehovah Witness. While Jehovah Witnesses' beliefs necessitate the refusal of blood products, acceptance of dialysis varies individually.1 Providers consulted the ethical committee and facilitated meetings between the patient, spiritual leaders and her family, which resulted in the patient and next of kin agreeably transitioning to home care. At baseline, this case underscores the importance of assessing spiritual history of capacity evaluations

surrounding refusal of medical treatment, but even greater is the complex ethical situation that arises in wanting to respect a patient's autonomy with religious beliefs in the setting of impaired capacity. Importance should be placed on obtaining collateral information to understand the patient's depth and longitudinal relationship to religion.2 In terms of primary prevention in the outpatient setting, clinicians can advocate for patients with significant religious considerations to have an advanced directive to aid in complex ethical healthcare situations such as this one.3 In our poster, we present the considerations and strategies psychiatrists can employ during decision-making capacity evaluations complicated by religious beliefs.

No. 103
Ethical Considerations After a Suicide Attempt: Lessons for Unsettled Times
Poster Presenter: Pauline Chen, M.D.
Co-Author: Jacqueline A. Hobbs, M.D., Ph.D.

SUMMARY:
In 2000, about 1 person died from suicide every 40 seconds with increasing suicide rates over the years (1). Despite awareness, difficulties addressing suicide persist including ethical considerations for life sustaining treatment in someone with a Do Not Resuscitate (DNR) document following a suicide attempt (SA). While one study recommended against resuscitation in terminally ill patients with DNR status after a SA, treatment decisions remain difficult (2). In this case, we present a 68-year-old female with a history of hypertension and major depressive disorder (MDD) who presented following an overdose on medications including opiates, acetaminophen, aspirin, zolpidem, and duloxetine. She suffered from liver failure, acute kidney injury, and respiratory failure due to encephalopathy. Psychiatry was consulted and determined that the patient did not have capacity. The patient's sister was identified as surrogate decision maker or proxy and stated the patient wanted to have DNR status. The patient also had a living will declaring comfort care measures only. The patient, while encephalopathic, stated that she was diagnosed with MDD 20 years ago and that her depression was not adequately treated. Due to the SA and lack of terminal illness, aggressive treatment was pursued following a team-based decision with input from legal services. However, in less than 24 hours, the patient's condition was considered irreversible. DNR status was applied and the patient expired. This case required time critical decision making while weighing autonomy, beneficence, and nonmaleficence. Due to concerns that the patient could improve, treatment was pursued under beneficence. However, nonmaleficence was prioritized when her condition became irreversible. Autonomy of the patient was questioned given her incapacitated state and concern for uncontrolled depression despite the patient's living will and proxy input. The principle of proportionality, where the input of the patient's representative is weighed, was utilized in this case to help guide decision making (3). While challenging, it is important to consider the delicate balance of autonomy, beneficence, and nonmaleficence prior to making irreversible decisions.

No. 104
Free Fallin': Ethical Considerations of Psychiatric Conservatorship of Minors
Poster Presenter: Ilang Guiroy, M.D.
Co-Authors: Erica Shoemaker, M.D., Charles Manchee, M.D.

SUMMARY:
Human behavior is notoriously difficult to shape or control, especially in teenagers. Caregiver compassion and duty is sometimes outmatched by adolescent ingenuity and endurance. At this crossroads, we find a small subset of patients who push the mental health, juvenile justice, and child welfare systems to their limits, opening the rare path to psychiatric conservatorship for minors. One such patient is "Josephine." She is a 15-year-old girl with impulse control disorder, marijuana use disorder, and insulin dependent type 1 diabetes who repeatedly ran away from group homes, always leaving without her supply of insulin or needles to be "just be free". She presented to the ER in diabetic ketoacidosis then transferred to inpatient psychiatry after being placed on a 72-hour-hold for danger to self after attempting to elope during her hospitalization. While hospitalized, she was transferred to the pediatric ER multiple times for

poor blood sugar control due to intermittent medication refusal and eating snacks peers had hidden for her. Open placements were quite familiar with her and declined admission. Eventually she was conserved for grave disability secondary to an impulse control disorder and transferred to a locked residential facility, where three months later she has not attempted to elope from again.   Josephine has made her preferences quite clear: to be free from her DM and to do as she pleases. Denial enables immediate, momentary freedom but generates an expensive debt to be paid later. Therefore, we would heavily weigh interventions that preserve the ability to make future decisions for herself. Thus long-term, in order for Josephine/ to live free from DM, good blood sugar control is paramount. Though conservatorship sacrifices current freedom, Josephine's placement in a locked facility would limit her access to risk while giving her brain and self a chance to mature past some of the impulsivity and frustrating dependence of adolescence.   The handful of psychiatrically conserved minors represent some of the most extreme cases on a continuum of a problem that almost every psychiatrist faces. Josephine is one of children that are profoundly difficult to keep safe, even in a highly controlled environment. There is no question that we have a duty to these children that don't just fall through the cracks, but live there. We put forth a call to our field that we must have a rigorous discussion as to how to best meet their needs and sustainably balance them against ours and society at large.

No. 105
Suicidality in Chronic Medical Illness: A Case Report
Poster Presenter: Anum Khan, M.B.B.S.
Co-Author: Mitchell S. Nobler, M.D.

SUMMARY:
We present the case of a 46 year old female who was admitted to the medical floor after an intentional carbon monoxide inhalation as a corollary to increasing physical limitations due to progressive MS.   Patient was diagnosed with MS in 2011 with the onset of optic neuritis. Her neurologist started her on Ampyra (dalfampiride) in 2013 which she had discontinued in 2015 because of insurance issues. She had developed muscular contractures and neuropathic pain which had led to diminished ADLs leading a successful professional to go on disability. All these factors led her to contemplating suicide- she chose to intentionally inhale carbon monoxide. On arrival at the hospital and ensuing medical management she was evaluated by psychiatry. While on the medical floor, she continued advocate for physician assisted suicide.   She did not fulfill criteria for major depressive disorder or any psychiatric diathesis. Cymbalta was offered for adjunct treatment for neuropathic pain. Neurology provided her with information about some specialized MS treatment centers. In addition, she was restarted on her Ampyra. Ultimately, she agreed to inpatient psychiatric admission.   Patient was started on Nucynta, Baclofen and Cymbalta for pain management, physical therapy was also introduced. She became more receptive to treatment. Once relatively stable with better pain management; she was discharged to subacute rehab with close follow up.   This case highlighted some need for clarity with our health care policies which requires psychiatrists to admit patients who are acutely suicidal but does not account for the exceptions of patients who do not have a psychiatric diagnosis. Treatment goals and end-points were also somewhat less clearly delineated in this patient. The fact that this patient did not have access to disability preventing MS medication because of insurance issues opens another area for discussion.

No. 106
Turf Wars and Interspeciality Conflict: Navigating Ethical Conundrums on a Psychiatric Consult Service
Poster Presenter: Hadley Aledia Cameron-Carter
Co-Author: Areef Kassam, M.D., M.P.A.

SUMMARY:
Mr. M is a 38 year old African-American male with a past medical history of schizoaffective disorder, bipolar type, who presented with sepsis secondary to necrotizing fasciitis and extensive osteomyelitis. The patient was started on intravenous antibiotics and vascular and podiatry consults were ordered. Despite consultations agreeing on life-saving surgery, the patient was reactive with decision-making with oscillating between wanting immediate

surgery versus resistant within the same conversation. Psychiatry was consulted to assess capacity for decision making as it related to his medical illness. On examination, psychiatry opined that the patient lacked sufficient decision-making capacity and the team filed for legal guardianship and started an antipsychotic for his untreated psychiatric disorder. Guardianship was granted, however, the patient continued to have agitation as it related to the upcoming surgery. Given the marked level of agitation in this case, providers on the team were split between not willing to give further care due to the pathos of the situation and others wanting to push forward with the life-saving surgery. A bioethics consult was placed and several bioethics meetings were called to represent the patient's best interest countered with the inter-specialty conflicts which had arisen over this emotional case. Mr. M was noted to still be in need of surgery and lacking clinical decision-making capacity. Members of the team who did not wish to proceed forward recused themselves from the case, and the patient was able to receive bilateral lower extremity amputations followed by being discharged in stable condition to a long-term care facility. This poster analyzes the ethical constructs at play on a psychiatric consult-liaison service between specialties and how clinical capacity, psychosocial factors, and physicians play roles that impact care.

No. 107
WITHDRAWN

No. 108
Patient or Criminal: Pressing Criminal Charges in the Psychiatric Inpatient Setting
Poster Presenter: Gina Bertinette Capalbo, D.O.

SUMMARY:
There is minimal literature mentioning hospital-related violence in respect of reporting and incriminating patients. Surveys consistently show that these crimes are often unreported and without repercussions for the offender. This poster will explore decisions to charge or not charge criminal behavior in the psychiatric inpatient setting. Ms. B is a 29 year old, African American, transgender female with mild intellectual disability, extreme affective dysregulation, and poor impulse control. Parallel and at times intersecting was a persistent and pervasive pattern of physical, sexual, and emotional violence without remorse. She was deceitful regarding involvement in violent behaviors and destructive in relationships. Ms. B had several documented instances of exposing her genitals and masturbating in front of one-to-one sitters and custodial staff. She contributed 3,790 dollars' worth of property damage on the psychiatric unit. Neuropsychological testing performed verified mild intellectual disability. MMPI and MCMI-III were inconclusive. Treatment modalities utilized included behavioral modifications and medications. She was discharged to a group home for individuals with developmental disabilities and TBIs. A decision by the hospital not to charge Ms. B for any offenses was made secondary to questions of competency related to her bipolar disorder and intellectual disability severe enough to warrant an involuntary hospitalization and court-ordered treatment. In fact, despite her extensive history of violent behavior, Ms. B has never been criminally charged. Ms. B was a hazard within the intellectual disability community due to her potential of violence perpetrated on a susceptible population. Upon reflection, this case begs several questions about pressing criminal charges on psychiatric inpatients. If charges were brought against Ms. B for her violent behavior, would this provide her with further incentive to stop beyond that which psychiatric and behavioral interventions would facilitate? Could charging Ms. B with criminal offenses occurring on the psychiatric unit provide her with greater resources to assist in her recovery? And would such charges help hold Ms. B accountable for her antisocial behaviors and disincentivize further violence moving forward? If Ms. B were discharged to a long-term forensic psychiatric facility as opposed to a group home, she would have closer observation, a more structured environment, and access to programs targeted to reduce recidivism of criminal behavior. Even after discharge from a forensic psychiatric facility, she would likely have continued surveillance with a parole officer with case management expertise helping her navigate outpatient resources. With this poster, we hope to facilitate discussion and encourage further research to elucidate the risks

versus benefits of criminally charging violent psychiatric inpatients.

Poster Session 3

No. 1

The Potential Impact of Body Camera Footage on Equity and Justice in Criminal Responsibility Cases

Poster Presenter: Raina Aggarwal, M.D.
Co-Author: Christopher M. Wilk, M.D.

SUMMARY:
Body camera footage can have critical implications for equity and justice in criminal responsibility cases. We examine these implications through the lens of one complicated case in which the defendant's statements on interview strongly suggested a criminal motive, that he understood the criminality of his conduct, and that he knew how to conform his behavior to the requirements of the law but chose not to do so. However, careful review of the police body camera footage indicated a very different narrative; ultimately, we opined he was not criminally responsible for the assault charges. Without the body camera footage, it is very possible we would have formed a different opinion. We explore the role racial bias and socioeconomic background may have played in this case. We also discuss how body camera footage and its potential importance in cases such as this could impact justice, racial disparities, and socioeconomic disparities.

No. 2

Validity of Telephonic Psychiatric Evaluation of Asylum Seekers

Poster Presenter: Samuel Yang
Co-Author: Yasin Taha Ibrahim, M.D.

SUMMARY:
The main goal of psychiatric evaluation of asylum seekers is to comment on the asylum seeker's credibility. Given the shortage of mental health providers trained in this particular type of evaluation, in person evaluation may not be feasible. Telephonic interview has been occasionally utilized to fill this void. The validity of such evaluations in assessing credibility has not yet been studied. In the case of telephonic interviews, the evaluators have no access to facial or body language cues. Objective Cues of deception can be appreciated from clients' narrative, facial expressions, and body language. We will present a case of a client evaluated via telephone that was deemed credible and eventually released to pursue asylum in the US. Assessment of Credibility was based solely on cues obtained from client's narratives and their style of interaction with the evaluator. We will highlight the findings from the client's speech that supported credibility in the case and discuss the challenges of assessing asylum seeker's credibility via telephonic interview. Telephonic evaluation of credibility can be considered a valid method despite major challenges, but psychiatric evaluators should be aware of the limitations of telephonic evaluations given the high possibility of secondary gains and deception.

No. 3

A Case of First-Episode Mania With Postpartum Onset and Gender Dysphoria in a Transgender Patient Receiving Testosterone Therapy

Poster Presenter: Sara Myung-Su Chun, M.D.
Co-Author: Elizabeth Chun, B.A.

SUMMARY:
We present a case of a 42-year-old female-to-male transgender patient with a past psychiatric history of unipolar depression, and a family history of bipolar disorder, who was brought to the emergency room by his wife after experiencing 6 days of decreased sleep, mood lability, grandiosity, and aggression in the context of having given birth to their second child 6 weeks prior. These symptoms also emerged two weeks after re-initiating their gender-affirming intramuscular testosterone treatment at 100 mg after a year-long hiatus surrounding conception and pregnancy. The patient also held a delusion that their return to menstruation represented a postpartum hemorrhage that required emergent obstetric attention. While manic symptoms improved on lithium and haloperidol, the patient continued to exhibit distress regarding the return of his menstrual cycle and the cessation of gender-affirming testosterone injections. While understanding the potential for testosterone to precipitate mania and psychosis, our patient's transgender identity and gender dysphoria added a

level of ethical complexity for withholding testosterone treatments. Endocrinology successfully reinitiated intramuscular testosterone at a decreased dose of 50 mg every 10 days without worsening the patient's manic or psychotic symptoms. Transgender men face specific challenges when navigating pregnancy, including an increased risk for worsening gender dysphoria and depression. This case suggests that while abrupt administration of high doses of testosterone may put transgender men at risk for mania or psychosis in the postpartum period, cautious reintroduction of intramuscular testosterone with concurrent use of mood stabilizing medication is potentially safe in transgender men who have experienced a recent mood or psychotic disorder.

No. 4

A Plausible Explanation of Increased Suicidal Behaviors Among Transgender Youths With Interpersonal Theory of Suicide: Systematic Review and Case Series

Poster Presenter: Antonia Phillip, M.D., M.B.A.
Co-Authors: Ramkrishna Makani, Roshi DeSilva, D.O., Ashabari Pellechi, M.D., Keith Semler, D.O.

SUMMARY:

Growing data of suicidal behaviors among the LGBTQ+ community, particularly its subgroup transgender population demonstrates there is a stark elevation in suicidality relative to its cis-gender counterparts. Among the available theories of suicide, the Interpersonal Theory of Suicide (IPTS) is a plausible explanation for the increased suicidal behaviors among transgender youths. This study is a literature review and case series on five transgender youths with treatment resistant suicidal behaviors. Objective: To examine the pathological basis of treatment resistant suicidality in transgender youth despite supportive environments using the theoretical framework of the interpersonal theory of suicide supported by five patient cases and a literature review. Method: We conducted a systematic review using PubMed and Psych Info with key words "suicidal ideation, "suicidality", "transgender", transgender youth", "gender dysphoria" and "interpersonal theory of suicide". Seventy-eight articles, non-English and irrelevant were narrowed down to 20 related articles published up to April 2020. Results: After receiving verbal consent, five transgender youths ages 11-17 were found to correlate with studies implying rationale for elevated rates of suicide, independent of supportive structure. Reasons for suicidal behaviors among the patients included thwarted belongingness and perceived burdensomeness leading to perpetual suicidal behaviors. Contributing factors of the IPTS model: thwarted belongingness, perceived burdensomeness, and acquired capability for suicide suggest a basis exists. The IPTS theory explains the associated increased pain tolerance and losing fear of suicide leads, in fact, to lethal suicide attempt. Perceived burdensomeness appears to have greater correlation with developing suicidal behaviors than thwarted belongingness alone, but presence of both demonstrates the highest risk of suicidality in transgender youths. Transgender youths experience about four to six-fold increase in suicidal behavior compared to the general population. Conclusions: Transgender youths are at extremely high risk of suicidal behaviors but there is little research devoted to the etiology and plausible explanation of this vulnerability despite growing awareness and support. This review suggests further research is required on the triadic factor interactions of the IPTS model that could help us to better understand and intervene this high-risk population.

No. 5

Advancing Affirming Practices for Transgender and Gender Diverse Youth

Poster Presenter: Thara Meenakshi Nagarajan, M.D.
Co-Author: Oakland Walters

SUMMARY:

Psychiatrists have various opportunities to support the mental and behavioral health of transgender and gender diverse (TGD) youth, with particular urgency in ameliorating disparities among this population. We aim to familiarize our audience in current terminology pertaining to TGD youth, with specific emphasis on welcoming and working with non-binary youth, and highlight the role of psychiatry in supporting mental health and wellness of transgender and gender-diverse youth and their families. Current evidence continues to support the

need for affirming practices in transgender and gender diverse youth, an underserved population with high rates of comorbidities and health disparities. We present a clinical case, which highlights the intersection of both the biologic and sociologic facets of gender dysphoria in the setting of a clinical evaluation. We aim to highlight the varied and multifaceted roles of psychiatrists in understanding TGD youth as they exists within social systems, with particular emphasis on theoretical perspectives that inform existing health disparities at rates much higher than that of cisgender youth. We will explore the complexities of evaluation and treatment for medical and psychiatric care, and the current clinical interventions that continue to develop and overall support gender-affirming care. With a better understanding of the unique complexities of the TGD youth population, providers will be better equipped to serve these individuals in clinical practice.

No. 6

Diagnosing Gender Dysphoria in a Patient With Schizophrenia

Poster Presenter: Anna J. Sheen, B.S.
Co-Authors: Philip Wong, M.D., Najeeb U. Hussain, M.D.

SUMMARY:

TC is a 24 year old male-assigned, self-identifying female with a past psychiatric history of schizophrenia and cannabis use disorder who presented to the emergency department with worsening bizarre behavior and agitation. Two weeks prior to admission, the patient became non-compliant with medications and started acting more isolative, argumentative, intrusive, and inappropriate. Of note, the patient had a history of prior hospitalizations due to violent or self-injurious behavior, psychotic episodes, and non-compliance with outpatient treatment and medications. Patient was then admitted to the inpatient psychiatric service for stabilization. During admission, the patient stated that she has identified as a female since approximately one year prior and consistently expressed distress regarding her male genitals. Concurrently with her gender dysphoria, the patient continued to exhibit actively psychotic behavior including internal preoccupation, verbal abuse towards staff, and bizarre religious and fantasy related beliefs. While the acute psychosis was the priority in the inpatient setting, the diagnosis and management of gender dysphoria should not be neglected. A comprehensive and patient-centered approach should be taken to avoid de-legitimizing the patient's gender-related distress and functional impairment while also taking care to differentiate gender dysphoria from delusional or psychotic processes [1, 3]. Chronology, prolonged observation, response to antipsychotic treatment, and the dynamics of particular symptoms are of particular importance [2, 3]. The purpose of this poster is to discuss these diagnostic and management challenges of gender dysphoria in a patient with schizophrenia.

No. 7

Gender Dysphoria With Concurrent Borderline Personality Disorder: A Case Report

Poster Presenter: Steven Anthony Vayalumkal, M.D.
Co-Author: Michaela F. Margolis

SUMMARY:

Extensive research has been done to explore the etiology, treatment, and course of Borderline Personality Disorder (BPD) due to its highly tumultuous course. Our understanding of this disorder has drastically improved over the years, however, the comorbidity of BPD with gender dysphoria has not sufficiently been explored. This case explores an 18-year-old transgender female to male, currently on hormone therapy, with a past psychiatric history of recurrent severe Major Depressive Disorder (MDD) and gender dysphoria who presented to the Emergency Department secondary to active suicidal ideations. During the course of his hospital stay, the patient exhibited attention-seeking behavior, and a strong fear of abandonment. This, in addition to his extensive history of suicidal ideation, attempts, and self-harm, made a concurrent diagnosis of BPD likely. Additionally, the patient improved over the course of his hospital stay on Lithium. It is known that LGBTQ persons are exposed to homophobic beliefs from society at a young age. This ultimately leads to an increased burden of suicidal ideation and attempts. If ignored, or undiagnosed, BPD poses its

own threats of mortality in patients. Thus, concurrent BPD and gender dysphoria diagnoses may pose an even greater risk, therefore calling for increased awareness of the concurrent diagnoses. The relationship between BPD and sexual minorities is unclear, as research needs to further explore this relationship. Given the increased incidence of gender dysphoria diagnosis, it is increasingly important for those in mental health fields to look at this sexual minority and its mental health burden. The purpose of this case report is to explore the interaction and overlap of gender dysphoria and BPD, and to further the discussion on the role of gender minority on outcomes in patients with BPD.

No. 8

Gender-Affirming Therapy in Transgender Individuals With Psychiatric Comorbidities: Impact of Testosterone on Impulse Control

Poster Presenter: Valeriy Zvonarev, M.D., M.P.H.
Co-Authors: Hirsch K. Srivastava, M.D., Anisha Chinthalapally, M.D., Usama Mabrouk, M.D.

SUMMARY:

We present a case of a 21-year-old biologically born (XX) female with a past psychiatric history of PTSD, MDD, bipolar I disorder, bulimia nervosa, suicidal behavior, and substance abuse, who is undergoing gender reassignment via testosterone therapy. The patient presented to the ER in July 2020 with suicidal thoughts of ending his life by overdosing on psychotropic medications; actions that he has taken twice before—October 2019 and February 2020. The patient described intense internal deliberations questioning his gender identity and described a significant history of engaging in impulsive behaviors and potentially dangerous risky behaviors (e.g., impulsive spending, interpersonal aggression, violence against his mother and threats to slice her neck, and substance use). Furthermore, he reported a history of self-harming behavior, including wrist cutting, since the age of 14 and multiple suicidal gestures, such as severe scratching of forearms and lower legs, interfering with wound healing on thighs. These episodes of self-harm have increased in frequency and intensity over the past 6 months. The patient also described an increase in impulsively engaging in addictive behaviors without regard for the consequences since October 2019. Interestingly, the patient has begun hormone therapy with testosterone cypionate 200 mg/mL in October 2019. He reported that the therapy has significantly boosted his confidence, and improved self-image. However, he has simultaneously been experiencing frequent, inappropriate eruptions of intense anger and irritability, accompanied by verbal outbursts, raging, breaking objects, which is triggered by seemingly insignificant stressors since he began the hormone therapy. In addition, the patient exhibited weight gain, increased Hb, and creatinine levels while receiving the therapy, and those findings were consistent with literature [1-3]. The cross-sex hormone therapy also alleviated eating disorder symptoms, which can be evidenced by decreased frequency of binging and purging behaviors over several months [4]. Hormone therapy positively correlated with the frequency and severity of manic symptoms and the number of suicide attempts [5-7]. In summary, the initiation of testosterone in 2019 can be associated with increased affective instability (e.g., dysphoria, anxiety with panic attacks, hypomania) and impulsivity (e.g., drug use, binge drinking, recurrent job loss, and interrupted education), irritability (e.g., feeling easily annoyed by his mother and having a short fuse at home), and exacerbation of primary psychiatric symptoms over the last 10 months. In addition to primary psychiatric conditions, other factors can negatively affect the degree of adaptation, such as a patient's age and borderline personality traits [8]. In this poster, we evaluate the impact of gender-affirming hormone therapy on impulsivity and affective instability in transgender individuals to guide clinicians in minimizing behavioral risks.

No. 9

Lifelong Anorgasmia in the Context of Long-Term Fluoxetine Use: A Case Report

Poster Presenter: Gabriela M. Saez, M.D., M.S.
Co-Author: Anita H. Clayton, M.D.

SUMMARY:

BACKGROUND: SSRI's are first line treatment for many psychiatric conditions in adults, adolescents, and children. While psychiatrists commonly identify SSRI-induced sexual dysfunction, there is a lack of

literature focusing on the long-term outcomes in sexual function among individuals treated with SSRI's through puberty and into adulthood. We present a case report of a 29-year-old female with lifelong anorgasmia in context of nearly two decades of treatment with fluoxetine and amphetamine/dextroamphetamine. CASE: KH is a 29-year-old female with history of ADHD and unspecified anxiety and depression, who presented for evaluation of lifelong inability to achieve orgasm--with sexual partners, independently, or with use of stimulatory devices. The patient was diagnosed with ADHD at age 7, unspecified anxiety and depression at age 10, and was treated consistently with stimulant therapy and Fluoxetine 10-40 mg through age 25. She self-discontinued both medicines during graduate school, as she believed she had been misdiagnosed in childhood. While she noticed no adverse effects from discontinuation of stimulants, she became depressed once more and resumed treatment with fluoxetine, augmented by bupropion to address anorgasmia. However, she was unable to tolerate Bupropion doses higher than 300 mg due to worsening anxiety. Fluoxetine was eventually discontinued entirely and she has been on Bupropion XL 150 mg daily monotherapy for over 4 years, still unable to achieve orgasm. She denied history of sexual trauma. She used oral contraceptives from 2006 to 2016. She was on no other medications known to cause sexual dysfunction. On presentation to our clinic, we obtained SHBG and free testosterone which were 44 (12-137) and 5.9 (0.6-6.8), respectively. She reported intact sexual interest and arousal, though scores on the Changes in Sexual Function Questionnaire were low in all subscales (interest/desire, arousal, and orgasm/completion). Initially, Mirtazapine was added for antidepressant and anxiolytic effects and we plan to trial another increase of Bupropion in the near future. Future options include off-label sildenafil and bremelanotide (event-related treatment). DISCUSSION: Female Orgasmic Disorder is characterized by the delay in, infrequency of, or absence of orgasm, or reduced intensity of orgasmic sensations, which leads to marked distress for the patient. Subtypes include acquired vs. lifelong, and generalized vs. situational. FOD affects roughly 11-41% of women, and is more common in women with depression or being treated for depression. While there are currently no approved pharmacologic agents to address FOD specifically, we review excitatory, inhibitory, central and peripheral neurotransmitters and hormones involved in sexual climax, and discuss theoretical targets for pharmacologic intervention. We also review available pharmacologic treatments for other forms of female sexual dysfunction, including hypoactive sexual desire disorder.

No. 10
WITHDRAWN

No. 11
A Case of Chronic Delusional Parasitosis With Striatal and Parietal Infarcts

Poster Presenter: Sarah Beasley, M.D.
Co-Authors: Sumana Goddu, M.D., Venkata Siva Sudhakar Reddy Lokireddy

SUMMARY:
Background: Delusional parasitosis (DP) is a rare psychotic disorder centered upon the fixed but false belief that one is infested by parasites. Patients can experience tactile hallucinations (TH) which further strengthen those beliefs. Limited data available demonstrates a female predominance, incidence increasing with age, and large proportion of cases in patients with no history of psychotic disorders. Treatment with antipsychotics has a favorable course, with partial to full remission rate in 60-100% of patients and average duration of delusion 3 years. Etiology can be primary vs secondary, with case reports documenting structural brain abnormalities such as strokes can give rise to DP. One study found 4 of 5 DP cases to be secondary to striatal lesions, specifically the putamen, and others have found lesions in the parietal lobe (PL). Case Report: A 76 year old female with a history of HTN, HLD, CHF, Afib, PVD, and no known psychiatric history presented to an outpatient psychiatry clinic for an evaluation of her sensation of having bugs in her head and TH of worms coming out of multiple facial orifices. It started 4 years prior but had worsened within the last few months. Family reported the patient would make motions like she was pulling them out of her head and gathering up the unseen worms to throw in the garbage. She had associated

depressed mood and anxiety related to the delusion starting a year after its onset. The patient was initially started on risperidone 0.5 mg nightly for her delusions/TH and continued on her citalopram 20 mg daily.TSH, CBC, CMP, folate, HIV, and hemoglobin A1c were unremarkable. Vitamin D was low (23 ng/mL). RPR and FTA-ABS were reactive but her RPR titer was 1:2 indicating a history of infection but unlikely current active infection. At one month follow up, patient had improvement with regards to the intensity of her delusions and was much less preoccupied about feeling infested. MRI (Brain) had demonstrated prior infarctions in the medial left PL with laminar necrosis of involved sulci as well as infarction of the R putamen and small remote infarcts in the thalami. Discussion: Due to the patient's age, gender, family history, and no previous episodes, new onset BD and schizophrenia seemed unlikely. She did not exhibit signs of delirium and lab workup was largely unremarkable outside a reactive RPR with a low titer. A diagnosis of DP was given. Her DP was responsive to low dose antipsychotic. MRI obtained demonstrated significant infarcts in the PL, R putamen, and thalami, which is consistent with a survey of case reports correlating onset of DP with striatal and parietal infarcts. Understanding the pattern of structural damage that correlates with onset of symptoms of DP is a potentially important diagnostic tool when determining the etiology of psychotic symptoms. Therefore we recommend neuroimaging for cases of new onset DP.

No. 12

Bipolar Mania Complicated by Delirium in a Geriatric Patient

Poster Presenter: Tiffany Y. Lin, M.D.

SUMMARY:

Mr. L is a 76yo married Caucasian male with past psychiatric history of bipolar I disorder, post-traumatic stress disorder, unspecified anxiety disorder, cannabis use disorder, and alcohol use disorder who is admitted to an inpatient med-psych unit from a skilled nursing facility with symptoms of mania. On initial presentation, the patient's speech was disorganized, tangential, hyperverbal, and pressured. He had experienced prominent insomnia for several weeks prior, and he was also poorly oriented to time and situation. His wife described increasing confusion leading to several falls within the past month, as well as recent antibiotic treatment for urinary and bronchial infections. Patient reports that he had not been receiving his psychiatric medications including valproic acid, diazepam, and prazosin while at the SNF. On admission, his sodium level was 131, which was stable compared to recent labs performed within two weeks prior to admission. After several days of inpatient treatment with mood stabilizer and antipsychotic medications, the patient did not demonstrate significant improvement in symptoms. Rather, on the evening of day 4, he displayed prominent symptoms of delirium including worsening orientation and physical and verbal aggression towards staff, requiring IM medications to address behavioral agitation. Upon rechecking of labs, the patient was found to be hyponatremic to 122. As the patient's hyponatremia improved, his delirium resolved as well, and subsequently, the patient's manic symptoms were easily treated with mood stabilizer and antipsychotic medications. The patient's initial presentation of mania was likely complicated by mild delirium that was not detected upon admission. His delirium risk factors included subtle metabolic abnormalities, recent infections, and elderly age. This case highlights the difficulty of distinguishing between manic features and signs of delirium, especially in an elderly patient with a history of bipolar I disorder. In this poster, we discuss the unique challenges of treating acute mania in the geriatric population and the necessity of a thorough review of medical history and diagnostic labs and imaging to identify any additional factors that may be contributing to the acute presentation and preventing treatment efficacy.

No. 13

Early Detection of Neuroleptic Malignant Syndrome in the Setting of Delirium

Poster Presenter: Maria Puzanov, M.D.
Co-Authors: Michael Andrew Levy, M.D., Seshagiri Rao Doddi, M.D.

SUMMARY:
Neuroleptic malignant syndrome (NMS), a rare adverse reaction associated with antipsychotic use, has high morbidity and mortality if not recognized and treated earlier in the course. NMS has traditionally been more often associated with first generation antipsychotic use, though it can occur with the use of all classes of antipsychotics. This report describes a 75 year old male with Major Neurocognitive Disorder due to Alzheimer's and vascular dementia who has chronic expressive and receptive aphasia sustained from a prior stroke. He presented to the emergency room for worsening agitation and behavior disturbance and remained in the ED for 14 days while awaiting a geriatric psychiatry bed. Over the course of his ED stay he was given standing quetiapine as well as quetiapine, olanzapine, and Geodon as needed for agitation nearly every day. On the third day after transfer to a geriatric psychiatry unit, the patient began to exhibit hypoactive altered mental status. Complicating his presentation was his chronic aphasia, limiting his ability to communicate his symptoms. His treatment team detected rigidity, discontinued antipsychotics, and subsequently started the workup of NMS. Meanwhile, the patient became febrile. Labs returned with leukocytosis and elevations in CK and LFTs. The patient was transferred to a higher level of care where he received IV fluids, dantrolene, and bromocriptine which eventually resolved his NMS. While treating NMS, he was found to have pseudogout of his left knee and constipation, which was thought to have contributed to the patient's initial agitation requiring escalation of antipsychotic medications in the ED. This case illustrates the importance of detecting NMS early, as any delay in recognizing its symptoms and starting treatment can rapidly lead to fatal outcome. We will discuss typical and atypical NMS features associated with second generation antipsychotics, evidence for treatment, and the development of NMS during antipsychotic treatment of delirium or agitation in medically ill patients.

No. 14
Joy Journal: A Behavioral Activation Technique Used in the Treatment of Late-Life Depression Associated With Hopelessness During Covid-19 Pandemic
Poster Presenter: Rikera Taylor
Co-Authors: Nikita Bodoukhin, M.D., Luminita Luca, Mousa Botros, M.D.

SUMMARY:
Late life depression (LLD) can occur in the setting of adverse life events related to aging such as declining health, personal losses, and dependency (1). Depression in older adults has a chronic remitting course, leading to poor quality of life and emotional distress. If left untreated, late life depression can worsen medical comorbidities. Depression is identified as an independent risk factor for heart failure, decrease in bone mineral density, and Alzheimer's disease (2). We present a case report about an elderly female with severe depression, experiencing significant hopelessness after an unexpected job loss during the COVID-19 pandemic. Depressive symptoms subsided after the behavioral activation intervention "Joy Journal", was added to the psychopharmacological regimen. The patient's age and profound hopelessness at the onset of her depressive episode and improvement of symptoms after starting a "Joy Journal", merits further discussion of the efficacy of behavioral activation in depressed elderly patients.

No. 15
WITHDRAWN

No. 16
Managing Catatonia in an Older Adult Patient With Bipolar Disorder With Psychotic Features
Poster Presenter: Celena Ma

SUMMARY:
Catatonia is an often underdiagnosed syndrome featuring motor dysregulation and affective disturbances caused by psychiatric, medical, and neurological etiologies. It was reported to be present in up to 28% of patients with bipolar disorder, with even higher prevalence in those with a history of psychosis. In a study evaluating acute geriatric

psychiatry unit patients, catatonia occurred in 39.6% of them. Prolonged catatonia can lead to serious complications such as deep vein thrombosis, pulmonary embolism, infections, contractures, or pressure ulcers due to immobility, poor oral intake, and autonomic dysfunction. This case of a bipolar patient with prolonged catatonia can provide guidance on ensuring better outcomes by accurately identifying and managing older adults with catatonia. ML is a 63-year-old male with a history of alcoholism, bipolar disorder, and head injury who was admitted to the psychiatric unit after a suicide attempt. 1 year ago, he was similarly admitted and had experienced a catatonic episode. During this admission, he had auditory hallucinations and catatonic symptoms including stupor, negativism, mutism, echolalia, and social withdrawal which started 6 months prior. His cognitive deficits included disorientation, anomia, and poor concentration. He reportedly lost 100 pounds in 8 months and he had iron deficiency anemia on admission. Olanzapine was started for appetite stimulation, mood stabilization, and hallucinations. He was also given amantadine, which has been used with some success for catatonia. Lorazepam, the most studied and preferred treatment for catatonia, was initially held due to his hypotension. After his blood pressure increased, a lorazepam challenge test caused dramatic improvements in his motivation, cognition, mood, perceptual disturbances, and psychomotor activity. As his catatonia lessened, his underlying mood disorder and psychosis were better addressed and he was eventually discharged with improvements in all domains. ML's risk factors for catatonia include his mood disorder with psychotic features, prior catatonic episode, prior brain injury, history of alcoholism, and recent weight loss. His cognitive deficits coinciding with his prolonged catatonia increased suspicion for a comorbid neurocognitive disorder, and it should be noted that pseudodementia is associated with more than double the risk of a later diagnosis of true dementia. Delirium also needed to be ruled out as an explanation for his symptoms, especially given his weight loss and anemia. Managing delirium includes the avoidance of benzodiazepines and treatment with antipsychotics. Alternatively, managing catatonia includes the avoidance of antipsychotics due to the risk of worsening catatonia or neuroleptic malignant syndrome and treatment with benzodiazepines. This case highlights complexities surrounding catatonia and clinicians should maintain a high level of suspicion for it especially in patients with an acute psychiatric illness.

No. 17

Psychotropic Medication Use in a Geriatric Patient With Prolongled QTc

Poster Presenter: Clare Gallego Bajamundi, D.O.
Co-Author: Cecilia Nease

SUMMARY:
In the geriatric population a major concern with prescribing psychotropic medications is the potential to prolong QTc which could lead to serious side effects such as torsades de point. Studies on this topic have shown variable results in regards to how much psychiatric medications increase QTc (1). Geriatric patients are also more likely to have alternative factors that contribute to QTc prolongation (2). This case report highlights psychiatric medication management in a 70 y/o male with prolonged QTc. We will also review the most recent literature regarding safe prescribing of psychiatric medication in situations where there is a concern for prolonged QTc. Mr Y is a 70 y/o male with Bipolar Disorder Type I who was psychiatrically stable on Lithium 600 mg at bedtime, Seroquel 200 mg at bedtime and lamictal 200 mg at bedtime for the past two years. However the patient had an episode of syncope at home and was admitted to his community hospital for workup. Prolonged QTc >500 ms was noted on two EKGs done as part of workup for syncope. The outpatient psychiatrist conferred with the patient's cardiologist and elected to decrease seroquel to 100 mg at bedtime and repeat an EKG. Repeat EKG one week after the decrease was still >500 ms so seroquel was discontinued. Repeat EKG one week after the decrease showed QTc of 464 ms. However after coming off seroquel the patient began to experience severe insomnia and changes in mood. Two weeks after discontinuing seroquel the patient began to have suicidal thoughts and was admitted to our state psychiatric hospital. On admission EKG was noted to show a QTc of >500 ms although the patient was only taking lithium at bedtime and had not been on seroquel for two

weeks. A right bundle branch block was noted and it was felt that this could be affecting accurate reading of the QTc. Repeat EKG the next day showed QTc of 479 ms.THe patient continued to complain of insomnia so seroquel was restarted at 50 mg at bedtime. Repeat EKG after reinitiation of seroquel continued to show QTc of approximately 480 ms so seroquel was uptitrated to 200 mg QHS to address mood and insomnia without any serious complications.. As this case illustrates geratric patients can often have variability in QTc interval which can lead to stopping psychiatric medications even when these patient have tolerated these medications without side effects. The clinical reasoning behind this decision may be due to concerns that psychotropic medications could cause further QTc prolongation,although the studies determining how much psychiatric medications actually cause enough QTc prolongation to cause a serious adverse effect are variable and inconclusive (1). This can cause interruptions in treatment that can be detrimental to the patient. Underlying causes of QTc prolongation including pre existing cardiac conditions, electrolyte abnormalities, substance use should be considered and ruled out before adjusting psychiatric medications (3).

No. 18

A Case of Eco-Anxiety Leading to Suicidal Ideation

Poster Presenter: Kimberly Grayson, M.D.
Co-Author: Cristian Zeni

SUMMARY:

Background: Grappling with the effects of climate change can lead to fear, anger and feeling powerless and hopeless about the future for oneself and future generations. Many can be deeply affected by feelings of loss, helplessness, and frustration due to their inability to feel like they are making a difference in stopping climate change. These feelings as well as natural disasters that have been occurring more frequently can lead to depression, anxiety, panic attacks, trauma and even suicidal thoughts. Case Report: Miss R is a 15 year old girl with a history of anxiety who was admitted to an inpatient psychiatric unit for suicidal ideation. She was brought in by her parents after her boyfriend discovered suicide notes she had written. She initially denied all depressive symptoms and did not appear manic or psychotic. Her reasoning for wanting to take her own life was that her existence on this planet contributed to climate change and she felt helpless to do anything to stop it. She had been experiencing daily panic attacks and worsening anxiety for 2 weeks. She had recently moved from a more rural area to the city and found herself missing being among a more natural environment. Of note, there had recently been multiple students die by suicide at the patient's high school. The patient was provided with psychotherapy and eventually admitted to some depressive symptoms in addition to suicidal ideation. She was kept for observation and therapy, and after extensive discussion with patient and family, was discharged after a short stay with close follow up. Discussion: This case illustrates the significant impact climate change and its effects can have on our patients, especially adolescents. The feelings of powerlessness it can derive can lead to worsening anxiety, depression and even suicidal thoughts. Particularly in this case, the symptoms of depression were easy to miss and she was able to calmly plan her suicide without anyone close to her detecting a change to her mood outside of more frequent panic attacks. Conclusion: It is important to take seriously our patient's concerns regarding the environment, whether they be related to climate change and uncertainty about the future, or anxiety or trauma related to natural disasters. This topic should garner special attention within adolescents who can feel especially powerless to enact change.

No. 19

Covid-19 Impacting Mental Health in the Gulf Coast: A Case Series on Covid-19 Related Illnesses

Poster Presenter: Samantha Lee
Co-Authors: Praveen Narahari, M.D., Jeanetta Malone, Michael Marshall, M.D., Darshana Sachin Pai, M.D.

SUMMARY:

This case series focuses on four patients with acute mental illnesses self-reportedly triggered by the unexpected and drastic situation of the current COVID-19 pandemic. The current COVID-19 pandemic was first detected in Wuhan, China in

December 2019, and has spread globally, impacting not only physically those infected but also the mental health among many. COVID-19 has affected daily routines by requiring people to adapt to new lifestyle changes. Many suffered from the fear of contracting the virus, uncertainty about the future, job loss, and isolation with decreased access to services. This case series explores four patients with varying mental illnesses and how COVID-19 played a role in their disorders: new onset psychosis, alcohol use disorder, worsened depression by caretaker fatigue, and exacerbation of a chronic mental illness. Reflecting on the psychiatric effects of past outbreaks, it is crucial to consider what effects the current COVID-19 pandemic might have on mental illness in the present day and its long-lasting effects. There is scarce research currently on the impact of past pandemics/epidemics on mental health in the general public and psychiatric patients as well as the effects of our current COVID-19 outbreak on mental health. Together these cases conclude how the pandemic adversely affects the mental health of those without pre-existing mental illnesses and how it can exacerbate those with a pre-existing mental illness.

No. 20

Homelessness as a Pathologic Condition

Poster Presenter: Lukmanafis Babajide, M.D.
Co-Author: Erin Zerbo, M.D.

SUMMARY:
Psychiatric pathology is seen often as a cluster of symptoms that manifest in dysfunctional behaviors in the context under which they manifest. However, the very conditions a person may find themselves in contribute to the purported dysfunctional behavior enacted by the patient. Here, we see a case that may be relatable to many practitioners and experienced by many patients we may see. We explore the way in which structural, political, and systemic constraints may cause dysfunction in a patient''s life as opposed to inherent patient behavior. This is all in an endeavor to explore ways in which interventions on a more systemic and political aspect can be adopted in order to benefit patients that we treat.

No. 21

Misuse of Corticosteroids in a Patient With Bipolar Disorder and Secondary Adrenal Insufficiency

Poster Presenter: Hadley Aledia Cameron-Carter
Co-Authors: Christine Hopp, D.O., Kimberlie Wells, D.O., Taimur Khalid Mian, M.D., Kierra Hayes, D.O.

SUMMARY:
A 41-year-old African American female with a past medical history of bipolar disorder and secondary adrenal insufficiency presented to a community hospital for psychosis with paranoid and grandiose delusions, while taking corticosteroids. The patient was taking corticosteroids originally for an unknown rheumatological condition in her twenties and developed secondary adrenal insufficiency. Since that time she had taken replacement corticosteroids, but it was documented that she would frequently misuse her steroids, including self injecting excessive amounts and had at least one previous episode of psychosis due to this. She was initially stabilized on a medical unit then transferred to a psychiatric unit where she stayed for 15 days. She was then re-admitted 2 weeks after for an additional 17 days for continued paranoid and delusional thinking. Psychiatry and endocrinology teams worked together to treat her with antipsychotics and a corticosteroid taper due to concern that they were causing or worsening her psychiatric symptoms. The patient remained medically stable and had improvement of her paranoid and delusional thinking and increased insight into past events. In this poster, we discuss the conundrum of treating a bipolar patient who is dependent on corticosteroids due to secondary adrenal insufficiency and who also has a history of taking them in excess. This case emphasizes the need for astute medical and psychiatric interdisciplinary care in complicated patients.

No. 22

WITHDRAWN

No. 23

Acute Onset Apathy in the Context of Malignancy: A Case Report

Poster Presenter: Ehsan Samarbafzadeh, M.D.

Co-Authors: Sahar Alee Koloukani, M.D., Archana Adikey, M.B.B.S.

SUMMARY:
Apathy is defined as a significant decrease of motivation for self-initiated goal-directed behavior, cognitive activity, or emotion 1. It frequently occurs as a consequence of medical or psychiatric conditions. It is thought that disruption of key brain regions e.g. the anterior cingulate cortex and ventral striatum, and changes in neuromodulators such as the mesolimbic dopaminergic system explain most cases of apathy. Pure apathy as a stand-alone psychiatric presentation is rare, and for this reason we present a patient who was hospitalized for respiratory symptoms with co-occurring apathy. A 64-year-old heavy smoker Caucasian man with multiple medical comorbidities and a psychiatric history of major depressive disorder with good response to Duloxetine 60 mg daily, presented complaining of left-sided weakness, fatigue, chest pain, shortness of breath, and was found to have apathy. Brain CT showed multiple metastatic lesions in the frontal lobe, right precentral, and temporal region, most prominent in the left hemisphere. Malignancy workup revealed non small cell lung carcinoma with metastasis to various lymph nodes and adrenal glands. Psychiatric consultation was requested for apathy. On the initial visit he reported feeling unmotivated and denied other depressive symptoms. His mental status exam was significant for a barely reactive apathetic affect with narrow range, slowed low volume monotonic speech, and linear thought process that lacked specific goals, with thought poverty. He was barely insightful to his condition but his judgment was fair. The consulting team recommended continuing preadmission dose of Duloxetine 60 mg daily with addition of Aripiprazole 2 mg daily for depression augmentation. He received two doses of the medication and after palliative care was suggested he decided to discontinue it on the day of discharge. Apathy as a pure presentation is very rare and usually occurs in the context of another condition. Our patient was found to have apathy due to metastatic lung cancer to the brain. To the best of our knowledge, there is no clear literature or established guideline regarding the treatment of apathy specifically in the context of brain tumors. The focus of most studies has been on apathy in the context of dementia, depression, schizophrenia and post stroke apathy. Non-pharmacological approaches e.g. tailored personal contact, music therapy and cognitive stimulation, are the preferred first line treatment. Antidepressants, antipsychotics, acetylcholine esterase inhibitors, and nefiracetam have all been used in clinical trials but the strongest evidence exists for stimulant use. Currently there is an urgent need for studies specifically focusing on treating apathy due to brain tumors

No. 24
Beating All Odds: A Rare Presentation of Edwards Syndrome (Trisomy 18)
Poster Presenter: Tanvi Gupta, D.O.

SUMMARY:
Introduction: Trisomy 18 syndrome (also called Edwards syndrome) is the second most common trisomy detected in live births, manifesting about once in 5000 live births. Edwards syndrome is associated with a wide range of body abnormalities leading to a very poor prognosis, with only 5-10% of children with the condition surviving past their first birthday. Even with survival there is severe lifelong intellectual disability. In this case report we present a 24 year old African American male with Edwards syndrome who not only beat the odds of being in the 5-10% surviving past his first birthday, but also has celebrated his 24th birthday in the last months of 2018. Case Presentation: The patient was seen as psychiatric consultation for agitation and aggressive behavior. Upon initial survey, the patient was met squatting on the floor, and soon started pacing around the hallway soon after. He was breathing heavily, drooling, making repeated hand wringing motions and holding his hands up to his ears. Physical findings include microcephaly, hypertonia, prominent occiput, flexed fingers, with the index finger overlapping the third finger and the fifth finger overlapping the fourth. Cognitive and behavioral findings include mental retardation, developmental delay, mood disorder, and agitation. The patient is dependent in all ADLs and eats a puree diet supplemented with ensure pudding. The patient is completely non-verbal, non-cognizant, with safety and aspiration precautions. Treatment Plan: The

current medication treatment plan is to continue Quetiapine 125 mg PO QAM and 300 mg PO QHS, Olanzapine 2.5 mg PO PRN Q8H (agitation), Docusate Sodium, Ergocalciferol, Magnesium Oxide (impulse control), Pyridoxine (impulse control). Music therapy, art therapy, and one-one visits to promote overall development and awareness. Discussion: The patient in question shares many of the physical characteristics commonly found in those diagnosed with trisomy 18. However, it remains to be seen if the patient will also develop many of the complications common to those affected by the condition. No treatment exists for the chromosomal abnormality and management is usually directed at improving the patient's disposition, cognitive performance, and maximizing the patient's ability to function. Medical therapy is targeted toward symptoms and improving quality of life. The most well known, longest recorded survival time of a patient with Edwards Syndrome was in Elaine Fagan who passed away at the age of 25. Like her, the patient in this case has reached an age that less than 1% of newborns diagnosed with Edward's Syndrome will.

No. 25

Calm After the Storm: Memantine for the Treatment of Behavioral Disturbance in Unspecified Major Neurocognitive Disorder

Poster Presenter: Peyton H. Terry
Co-Authors: Brigette T. Torrise, Meredith Lee, D.O., Keri Stevenson, M.D.

SUMMARY:

Major neurocognitive disorder (NCD) currently affects up to 5.7 million people in the United States, with numbers expected to reach 65.7 million in 2030. Unfortunately, behavioral disturbances are exceedingly common in patients with major NCD, representing a significant source of morbidity and mortality in this population. This is particularly burdensome to patients in hospitals and assisted-living facilities (ALFs), leading to increased lengths of stay and decreased quality-of-life measures. Furthermore, behavioral disturbance increases psychological stress and fatigue imposed on family and caregivers. Despite the overwhelming consequences of behavioral disturbance in major NCD, we have relatively few options for treatment that lack robust supportive data. Memantine, an NMDA antagonist used in moderate-to-severe Alzheimer dementia (AD), has been shown to improve behavioral disturbance in AD patients. In this case report, we describe the use of memantine for the treatment of behavioral disturbance in a patient with unspecified major NCD. The patient is a 76-year-old male with bipolar 1 disorder presenting with unspecified major NCD with behavioral disturbance characterized by threatening staff at his ALF when food preferences were not accommodated. He reported no symptoms and showed no signs of mania or depression. His initial MoCA score was 16/30. In the hospital, he exhibited a disruptive and confrontational attitude, hyperphagia with excessive carbohydrate consumption, forgetfulness with perseveration on requests for denture cream and Chapstick, and disinhibited sexual commentary concerning for frontotemporal dementia. Hypertension and atrial fibrillation raised concern for possible vascular dementia. He had a gradual decline in memory function over several years, with MMSE scores trending from 29/30 to 20/30 over the past 7 years, raising concern for possible AD. He also exhibited intermittent paranoia. He refused brain MRI. Memantine 5 mg daily was begun and increased by 5 mg each week until reaching 10 mg BID. After beginning treatment, he exhibited reductions in social isolation, disruptive/disinhibited behavior, intrusiveness, perseverative requests, and paranoia. MoCA score improved by 2 points after 2 weeks of therapy, and by 5 points after 7 weeks of treatment. It was concluded that memantine may have the potential to improve behavioral disturbances in patients with unspecified major NCD. Furthermore, the clinically significant improvement in this patient's paranoia suggests that memantine may also augment the potency of clozapine, which he was prescribed prior to and throughout admission. Moreover, memantine's favorable side-effect profile makes it a relatively safe drug without significant associated risks. Given the observed efficacy in this clinical case as well as its safety, memantine warrants further exploration as a potential therapy to improve behavioral disturbance in patients with unspecified major NCD.

No. 26

Charles Bonnet Syndrome & Dementia: More Than Meets the Eye

Poster Presenter: Aniruddha Deka, M.B.B.S.
Co-Authors: Hannah Grace Statz, M.D., Neha Sharma, M.D., Sandra S. Swantek, M.D.

SUMMARY:

Introduction: The diagnosis of Charles Bonnet syndrome (CBS) relies upon three tenets: the presence of visual loss, clearly formed and recurrent visual hallucinations (VH), and insight (full or partial) that these VH are not real [1]. CBS's etiology is poorly understood but involves loss of vision, causing sensory deprivation and spontaneous firing of the visual cortex resulting in release VH [2]. We discuss a case of CBS, highlighting the ramifications of the depth of insight and the importance of assessing for dementia. Case description Ms. A is a 79-year-old female with hypertension, Fuch's dystrophy, glaucoma, cataracts, corneal transplants and extensive vision loss and no past psychiatric history. At age 76, she first reported VH initially of lights and pattern distortions, which became increasingly complex, resulting in a diagnosis of CBS. At that time, she retained full insight regarding the neurological basis of her VH. Neurology prescribed gabapentin, carbamazepine, and quetiapine with limited benefit. At age 78, concern for cognitive decline emerged as the VH became increasingly vivid and distressing. Her insight into the VH waned, and she began making quasi-delusional statements and conjured confabulatory stories regarding misplaced household items. She denied other perceptual disturbances. Increasing distress resulted in psychiatric hospitalization. The initiation of risperidone calmed her VH triggered distress. Cognitive assessments were indicative of mild cognitive impairment. Discussion: Ms. A initially demonstrated insight regarding her VH. In time her insight and cognition declined. As cognitive decline advanced, the VH became increasingly bothersome, and she attributed agency to the VH. We postulate that cognitive decline underlies reduced insight, prompting reliance on VH to explain memory gaps. Our understanding of CBS, visual hallucinations and cognition is evolving. The classic description of CBS emphasizes the retention of cognition and insight. Contemporary thought suggests that patients can retain partial insight [3]. There is also evidence that CBS predicts future cognitive decline. In one retrospective study, about 26% of patients diagnosed with CBS ultimately developed dementia [4], such as dementia with Lewy body (DLB). The presence of partial insight, mild cognitive impairment and VH of familiar figures at the diagnosis time may predict later dementia [3]. Visual loss is an independent risk factor for dementia [5]. The pathophysiology of dementia in CBS is unclear. There are three hypotheses for the development of dementia in CBS - intrinsic CBS pathology, sensory impairment or a continuum on the road to DLB [6]. Conclusion: The diagnosis of CBS should prompt serial cognitive assessments to monitor decline and allow for early interventions that improve patients' and families' quality of life. Further research is needed to clarify the link between CBS and longitudinal development of dementia.

No. 27

First Onset of Psychiatric Symptoms After 50 as a Prodrome of a Neurodegenerative Disease

Poster Presenter: Bruna Campos Souza
Co-Authors: Alvaro Costa, M.D., Larissa Yano Souza Martins, Matheus Flores, Tatiana Mourao-Lourenco, M.D.

SUMMARY:

Abstract A case report of a patient with Neurocognitive Disorder with Lewy Bodies, started with symptoms of visual hallucinations and depression after the 50 years of age, with no past history of psychiatric symptoms. From the case, we discuss the Mild Behavioral Impairment (MBI) criteria, that describes neuropsychiatric symptoms starting in adults and elderly after 50 years of age, persisting at least intermittently for at least 6 months and occurring before or in conjunction with cognitive decline without dementia as a prodrome of a neurodegenerative diseases like Neurocognitive Disorder with Lewy Bodies, Alzheimer's Disease and Frontotemporal Neurocognitive Disorder. A thorough medical evaluation and the recognition of the abnormality of psychiatric symptoms arising at this age can help in the early detection of degenerative diseases, allowing for an early start of correct treatment, avoiding the use of neuroleptic,

and a better prognosis. In this poster, we discuss the highlights of the clinical picture, the importance of suspect - and how to suspect - that the underlying symptoms in psychiatry may represent neurological degenerations.

No. 28

Improvement of Superimposed Pseudo Seizures in a Patient With Anxiety Disorder

Poster Presenter: Caridad Benavides Martinez, M.D.
Co-Author: Sindhura Kompella, M.D.

SUMMARY:

Introduction: Pseudoseizures or psychogenic non epileptic seizures (PNES) are associated to mental health disorders and stress1. PNES can often present superimposed with seizure disorder and abnormal EEG, making it harder to be recognized and treated2. We present a complex case of seizure disorder status post CVA with superimposed PNES in the context of Bipolar disorder, Somatization and Anxiety disorder. Case Description: LA is a 39 yo female with PMHx of CVA (previous large right middle cerebral artery stroke with dense left hemiplegia), thyroid disease, seizure disorder and recent Clonazepam withdrawal seizures who presents with active jerking movements in left lower extremity that started during her neurology outpatient visit. Patient was AAOx3. Neurological examination was significant for residual severe spasticity and hyperreflexia along the entire left side upper greater than lower extremity. Patient presented during the visit with active shaking spasm predominantly along the left leg with just a very brief crossover to the right leg for over an hour. This episode seemed to slow down with distraction as when the patient was asked about her pet and her nephew. Emergency EEG was performed with patient having active shaking and tremor-like symptoms, showing normal results. Symptoms resolved after patient learned that EEG did not show active ictal activity. Later that week, patient attended her outpatient psychiatry follow-up. Upon psychiatric evaluation, patient endorsed anxiety, insomnia, mood swings, and somatic symptoms, including generalized pain and headaches. MSE was negative for active SI/HI, paranoia or psychosis. Testing for HAM-A3 was 27 and Somatic symptom scale-84 was 18. Patient was started on Lamotrigine, Sertraline and Clonazepam, with improvement of her symptoms. Discussion: This case highlights the importance to be vigilant for pseudoseizures1 since misdiagnosis can often lead to inappropriate treatment, increase in readmission rates and comorbidities5.

No. 29

Psychiatric Profile of a Child With 16p11.2 Microduplication and 15q11.2 Microdeletion Co-Occurrence

Poster Presenter: Mallory Blackwood

SUMMARY:

This is the case of a 9-year-old patient, Ms. G, with several rare chromosomal anomalies predisposing her to intellectual disability and numerous neuropsychiatric conditions. In addition, her social history of trauma and abandonment increased her risk for psychopathy. Initially, Ms. G presented to the Carilion Roanoke Memorial Hospital (CRMH) Pediatric Inpatient Psychiatric Rehab due to escalating self-harm behaviors and auditory hallucinations. The previously diagnosed 16p11.2 microduplication and 15q11.2 microdeletion put her at increased risk for schizophrenia. The patient's own description was often "my brain tells me to do bad things like hurt myself and hurt you guys right now." However, the clinical team did not observe any thought disorganization, or response to internal stimuli typical of schizophrenia, and the formulation was that these symptoms reflected intrusive recollections related to her trauma and developmental delays, rather than frank auditory hallucination. Formal neuropsychiatric supported this, as she demonstrated no impairment in reality testing on the Rorschach Performance Assessment System (R-PAS). Testing also revealed a full-scale IQ of 75 on the Wechsler Abbreviated Scale of Intelligence-II (WASI-II), placing Ms. G in the 5th percentile for intelligence. Notably, her scores on the Vineland-3 Parent Rating Form indicated Ms. G was <1 percentile in communication, socialization, and daily living skills. These low ranks reflect a more profound impairment than would be expected given her FSIQ score alone. Taken together, this testing and clinical observation suggest Ms. G does not demonstrate all the conditions reportedly conferred

by either chromosomal anomaly alone. Rather, she displays a complex intellectual disability with a pronounced social impairment. In this poster, we will describe this patient's unique psychiatric presentation and how it differs from previously reported cases of either individual chromosomal anomaly alone.

No. 30

The Challenges and Unique Features of Lewy Body Dementia

Poster Presenter: Christine Nunez
Lead Author: Jorge Caballero
Co-Authors: Stephanie Bonafoux, D.O., Mousa Botros, M.D.

SUMMARY:

Background: Lewy Body Dementia (LBD) is the second most common form of neurodegenerative dementia in older adults, after Alzheimer's disease. There is significant discrepancy between the number of cases of LBD diagnosed clinically and those diagnosed at postmortem autopsy. The clinical diagnosis includes several core features: visual hallucinations, REM sleep behavior disorder, fluctuating cognition, and Parkinsonism, with cognitive deficits preceding motor symptoms. We present the case of a patient diagnosed with LBD with progressive cognitive decline and psychosis to highlight the challenges of clinical diagnosis and management of the disorder. Case Presentation: A 64-year-old female presented to the psychiatric inpatient unit for involuntary evaluation of progressively worsening visual hallucinations and physically aggressive behavior towards family. The patient enjoyed a relatively good state of health and worked as a professor until one and a half years prior to admission. Approximately ten months prior to admission, her daughter noticed progressively worsening short-term memory impairment. Two to three months prior to admission, the patient endorsed well-defined visual hallucinations of people that she would speak with. Hospital Course: Patient initially exhibited paranoia, disorganization, tangentiality, and hypervigilance, with poor memory of the events leading to her hospitalization; Mini Mental Status Exam (MMSE) was 18/30, 3 days later 14/30. She was initially treated with Haloperidol for agitation which resulted in paradoxically worsening aggressive behavior. Cogwheel rigidity was noted as well as somewhat improved organization and orientation in the mornings compared to at night. Brain MRI was performed demonstrating chronic small vessel ischemic changes and mild asymmetric atrophy of the posterior parietal lobules bilaterally. Labs for reversible causes of dementia were within normal limits. Treatment: Patient's behavior improved following discontinuation of Haloperidol and initiation of Quetiapine 25 mg by mouth at bedtime. In the days leading to discharge, she was calm, cooperative, organized and denied auditory or visual hallucinations. Results and conclusion: Our patient had a cognitive decline, followed by well-defined visual hallucinations, cogwheeling, parasomnias, waxing and waning orientation, and agitation worsening with use of conventional antipsychotic. Cognitive screening using MMSE was especially deficient in attention, spatial recall, and reasoning. Those unique features are most consistent with LBD. After the diagnosis of LBD was made, education was provided to the patient's family on diagnosis, prognosis and long-term care options. LBD has been identified as the costliest form of dementia with significant caregiver burden, thus, further investigation in improving both diagnostic accuracy and treatment outcomes represents an opportunity for easing future economic and social burdens.

No. 31

Valproic Acid as Monotherapy for Hyperactive Delirium

Poster Presenter: Ryan Frost Cooper
Co-Authors: Mallory Morris, M.D., Adam Schindzielorz, M.D.

SUMMARY:

Traditional first-line medications for hyperactive delirium, such as antipsychotics and benzodiazepines, are not without potential side effects and the risk of worsening delirium.3 Such adverse reactions are of particular concern in older populations who are more prone to developing delirium and are more likely to suffer from medication side effects, creating a need for alternative agents.4 Most of the current research on

the use of valproic acid for delirium has been retrospective and studied as an adjunctive therapy to standard agents. A recent study showed that when used as monotherapy in 35 patients, valproic acid led to delirium resolution in 69% of cases.2 Also, when used alone or as an adjunctive agent it led to decreased use of sedatives and analgesics.1,2 The patient we present was seen on our hospital's psychiatry consultation-liaison service. Symptoms included waxing and waning sensorium, acute combativeness, agitation, perceptual disturbances and paranoid delusional ideation. As the patient was unable to take medications by mouth, trials of intramuscular haloperidol and olanzapine had been made. Antipsychotic use resulted in QTc prolongation which prompted use of valproic acid IVPB at 250mg q6h. No dose titration was required and the patient had resolution of symptoms over 72 to 96 hours. Our case adds to the literature by providing likely successful use of valproic acid for hyperactive delirium in a patient who could not tolerate antipsychotics. We provide further evidence that valproic acid may be used as monotherapy in patients who are more vulnerable to traditional therapies warranting further research such as a randomized controlled clinical trial.

No. 32
WITHDRAWN

No. 33
A Flare of Grandiosity: Psychosis in the Setting of Multiple Sclerosis
Poster Presenter: Keith Semler, D.O.

SUMMARY:
Multiple sclerosis (MS) has been well-documented to manifest psychiatric symptoms at some point during the natural history of disease. One study observed mood symptoms in 79% of patients with MS. Psychosis, on the other hand, is far less commonly observed, with the same study reporting “delusions” in only 7% of cases. Another large Canadian study found that only 2-4% of patients with MS would experience at least one psychotic episode. Further, it appears that persecutory delusions are the most common psychotic presentation. Grandiose delusions, as seen in this case, may represent the least common form of delusion seen in MS psychosis. In contrast to primary psychotic disorders, the incidence of psychosis in MS increases with age. Additionally, patients with a lesion load particularly around the periventricular areas were more likely to experience psychosis. Some have alternatively suggested that many episodes of psychosis are a result of the potent immunomodulation that is common in the treatment of MS flares. In this report, we present the case of a 58-year-old female suffering from MS with an active periventricular lesion load and no prior psychiatric history who presented to the psychiatric ED with grandiose delusions regarding the cure for COVID-19 whose delusions, rather than becoming exacerbated, responded well to treatment with steroids.

No. 34
Anxiety Symptoms in Type1 Neurofibromatosis: Can This Be a Precursor of Schizophrenia?
Poster Presenter: Tazeen Azfar, M.D.
Co-Authors: Nungshitombi Chongtham, M.B.B.S., Sagarika Ray, M.D.

SUMMARY:
BACKGROUND Neurofibromatosis type 1 (NF1) is an autosomal dominant genetic disorder, with a prevalence of 1/3000. Approximately one-half of the cases are familial (inherited). The remainder is the result of de novo (sporadic) mutations in NF1 gene, located on chromosome 17q11.2. The NF1 tumor-suppressor gene encodes neurofibromin. Neurofibromin is a cytoplasmic protein product that encoded by the gene (NF1), is expressed in many tissues, including brain (neurons, Schwann cells, oligodendrocytes, and leukocytes), kidney, spleen, and thymus. NF1 include cafe-au-lait macules, neurofibromas, freckling in the axillary or inguinal regions, optic glioma, Lisch nodules (iris hamartomas), and distinctive osseous lesions [2]. In addition to these clinical features, Neurofibromatosis type 1 (NF1) is often associated with psychiatric disorders, which are more frequent in NF1 than in general population (33% of patients) especially in children. Dysthymia is the most frequent diagnosis (21% of patients). There is also a high prevalence of depressive mood (7%), anxiety (1-6%), and personality (3%) disorders. The risk of

suicide is four times greater than in the general population. Bipolar mood disorders or schizophrenia appear to be rare[3]. The majority of studies have focused on physical health and neurocognitive function in NF1, whereas psychiatric disorders associated with this disease remain unclear and poorly documented. This poster is based on a clinical case and discusses the relationship between neurofibromatosis type 1 and psychiatric disorders, particularly anxiety disorders which can later present as schizophrenia.[1] PRESENTATION OF CASE This case presents a 19-year-old girl, with no past psychiatric treatment diagnosed with Neurofibromatosis 1 since birth, referred for a Psychiatric evaluation from her individual Therapist for significant symptoms of anxiety and paranoia. Ongoing evaluation and assessment concluded a diagnosis of Schizophrenia and patient responded very well to treatment with antipsychotics. CONCLUSIONS: The current psychiatric literature does not provide full explanations of anxiety and other psychiatric symptoms associated with NF1. Researchers have tried to explain the link between NF1 and psychiatric disorders, and several etiopathogenic hypotheses have been discussed[1] but it needs further investigation. In our case the patient with NF1 presented with anxiety symptoms since childhood later developing Schizophrenic symptoms like paranoid delusions that worsened gradually and became a primary target for treatment. The question that arises is: Is there any association with NF1 and Schizophrenia or are they psychiatric manifestations induced by a multisystemic disease? More detailed investigations are necessary to clarify the etiopathogenic and psychopathological mechanisms that can cause psychiatric comorbidity associated with NF1.

No. 35
Atypical Psychiatric Symptoms in the Presence of Huntington Disease
Poster Presenter: Davis P. Fleming, M.D.
Co-Author: Lindsey A. Wilbanks, M.D.

SUMMARY:
Huntington disease (HD) is an inherited neurodegenerative disorder characterized by choreiform movements, psychiatric symptoms, and dementia. There is a subset of common psychiatric symptoms seen in HD that has been outlined in the literature, preceding the onset of motor dysfunction. However, we present a patient whose illness demonstrated unique psychiatric symptoms, warranting further exploration on the relationship between substance use and HD.

No. 36
WITHDRAWN

No. 37
Catatonic (Hypoactive) Delirium: An Unusual Presentation of Pulmonary Embolism in a Patient With MDD
Poster Presenter: Prabhsimran Batra
Co-Author: Randon Welton

SUMMARY:
Introduction: The etiology and presentation of hypoactive delirium is unique and challenging. Careful medical and psychiatric work-up must be performed to correctly characterize, diagnose, and treat a patient presenting with delirium vs. catatonia. Case Description: Ms. X., a 52 y/o female with psychiatric history of major depressive disorder, medical history of peripheral arterial disease and smoking history of 30 pack-years, was seen in an inpatient state psychiatric hospital as a transfer from a medical emergency department (ED) for evaluation of suicidal ideation, altered mental status (AMS), and possible hallucinations. As described by her husband and the ED physician, the patient had been in her normal state of health until two days prior to admission, at which time she became impoverished of speech and unresponsive to questions, exhibited prolonged staring, would not eat, and neglected her grooming. The patient would whisper that she was sorry and that she “should die” and would become tearful often. She mumbled her late mother’s name repetitively; her mother had died five months prior. On ED evaluation, the patient was stuporous and did not describe or deny any medical or psychiatric symptoms. Physical exam showed underweight body habitus, waxy posturing, slightly shallow breathing, and significantly decreased psychomotor activity. Her labs and imaging showed elevated sodium and

decreased calcium, normal liver function, normal urine drug screen, and normal resting ECG. The ED physician hypothesized psychiatric etiology and transfer to our psychiatric hospital was arranged. On presentation to that hospital, the patient exhibited similar symptoms, but would at times become clearly alert, respond to questions clearly and directly, and demonstrate normal psychomotor activity. These "breakthrough" periods would last less than a minute and occurred four times in six hours. Because of her unusual presentation, symptoms of catatonia, and changing mental status, the patient was diagnosed with catatonic delirium. The patient was transferred back to the medical hospital for further workup of medical etiology. In that workup, blood gas analysis collected due to AMS revealed hypoxemia and hypercapnia. A subsequent chest CT revealed a submassive saddle pulmonary embolism. The patient received treatment with low molecular weight heparin (LMWH) with complete resolution of catatonia/delirium in 3 days. The patient was continued on LMWH for an additional two months, with no recurrence of symptoms. Discussion: This case illustrates that careful characterization of altered mental status and complete medical work-up is essential for psychiatrists in the assessment of delirium, especially in an exclusively psychiatric inpatient setting. In this poster, we discuss the debate surrounding diagnostic criteria and management of catatonia vs. hypoactive delirium, and current research on tools for psychiatric and medical workup for hypoactive delirium. Topics: hypoactive delirium, catatonia

No. 38

Cerebellar Cognitive Affective Syndrome: A Case Report and Literature Review

Poster Presenter: Feier Liu, D.O.
Co-Authors: Ianna Hondros-McCarthy, Walter Kilpatrick

SUMMARY:

Introduction: The cerebellum is known for its vital role in sensorimotor function. Schmahmann and Sherman first described Cerebellar Cognitive Affective Syndrome(CCAS) in 1998 and presented landmark evidence of the cerebellum also being important for cognitive and emotional regulation. However, CCAS is still not widely recognized and has only had limited attention in the literature. We present an additional case and summarize current evidence for CCAS to call for attention for psychiatrists to be more aware of this diagnosis. Case Report: Patient is an 81 year old female with past psychiatric history of depression, onset post CVA, who presented for mental status changes and abnormal behavior such as being able to talk to God, reading people's thoughts, insomnia, flight of ideas, and pressured speech. She was admitted to the medical unit for evaluation of organic etiology for her mental status change. A number of tests including EEG and CSF studies were completed and were negative. Her brain MRI did not show any acute changes however was significant for old ischemia involving the corona radiata, right thalamus, left superior cerebellum and left inferior cerebellum. With consideration that new-onset mania would be very atypical for her age and that other organic etiologies were ruled out, the lesion in her cerebellum was most likely to have caused her acute mania. Patient was started on Depakote and olanzapine by the time of her discharge. On follow up two weeks later, she reported 80% improvement and there was notable improvement in her speech and thought process. Discussion: Our patient presented with acute manic symptoms a year after her stroke. All other potential causes were ruled out and it is unlikely to be a primary bipolar diagnosis at her age. She has a significant lesion in her cerebellum, although initially asymptomatic, it could have taken a year for axonal regeneration to present with affective symptoms. Schmahmann and Shermann identified posterior location of lesion and disruption in cerebellar modulation of multiple neural circuits as integral causes of cognitive and affective symptoms. These were confirmed again by a meta-analysis and a cerebellar imaging study. Our case adds to current evidence for CCAS and calls for psychiatrists to be aware of this phenomenon to correctly diagnose CCAS in patients with affective presentations.

No. 39

Comparing Anti NMDA Receptor Encephalitis Patients: Young and Old

Poster Presenter: Marian Zgodinski, D.O.

Co-Authors: Graham Hughes, M.D., Lendita Haxhiu-Erhardt, M.D.

SUMMARY:
Anti NMDA receptor encephalitis is a rare, autoimmune disease where autoantibodies develop against NMDA receptors in the brain and manifest in a wide array of neurologic and psychiatric symptoms. Patient A is a 21 y/o African-American female with a history of seizures and obesity. No past psychiatric history. She initially presented to the Emergency department the day after Christmas with headache, lightheadedness and shaking. Her workup was negative at that time and she was discharged home with a psychiatric referral for anxiety. A few weeks later, she returned to the Emergency department with suicidal ideation and significant change in behavior. Family reports that the patient became violent, striking others, confused, and threatening suicide by diving under a car. She had a very difficult time verbally communicating with the hospital staff and thus, history was largely provided by her parents. Patient B is a 66 y/o African-American female with a past medical history of hypertension, hyperlipidemia, chronic kidney disease, epilepsy, and leukoplakia of the vocal cords with laryngeal papilloma. No past psychiatric history. She presented to the Emergency department for new bizarre behavior after a biopsy of her throat. She appeared to be confused, spitting, singing, repeating herself, fighting hospital staff and experiencing auditory hallucinations. Each patient was admitted to an inpatient psychiatric floor for evaluation of their acute psychosis. The differential for both patients included Schizophreniform disorder, Schizophrenia, delirium secondary to another medical condition, and Unspecified Psychosis. It was not until the emergence of other symptoms and treatment failure did the primary team start to consider Anti NMDA Receptor Encephalitis as a possibility for their psychotic presentations. The goal of this poster is to compare Anti NMDA Receptor Encephalitis in two opposing age spectrums, given that this disease usually occurs in young adults or children. We hope to contribute to the existing, though limited, knowledge on how to differentiate this diagnosis from psychiatric disease states. If the proper diagnosis can be found for these patients in a timely manner, this will expedite treatment and dramatically increase their rates of successful recovery and remission.

No. 40
WITHDRAWN

No. 41
Development of New Onset of Psychosis in HIV Positive Patient
Poster Presenter: Farah Shaikh, M.D.

SUMMARY:
Psychosis can be classified into primary (schizophrenia, schizoid disorder, schizophreniform, disorder) and secondary (underlying medical conditions, drugs side effect). HIV positive individuals can develop secondary psychosis. It can be due to HIV infection itself, opportunistic infections, substance-induced or side effects of antiretroviral drug therapy (1). The new onset of psychosis is a fatal complication of HIV infection. It can contribute to greater morbidity and mortality in HIV patients (2). Thus, it requires to take a comprehensive history and careful physical, medical, and neurological examination to rule out other causes of psychosis(3). HIV induced psychosis usually start suddenly and has no prodromal stage(4). Grandiose, persecutory, and somatic delusions are the most common presenting symptoms. Also, mood symptoms and hallucinations may be present(5). Here we are presenting a case of 54 years old HIV positive male not on antiretroviral medication with no known past psychiatric history, and no past illicit drug use suddenly developed aggressive behavior, decreased appetite, and disorganized speech. He had a persecutory and grandiose delusion. In this case report, we will review the causes of psychosis in HIV patients.

No. 42
Difficulties in Managing Psychosis in a Patient With a History of Arteriovenous Malformation Status-Post Embolization
Poster Presenter: Rachel H. Han, M.D.
Co-Authors: Lino A. Gutierrez III, M.D., Theodore Nam, M.D.

SUMMARY:
The patient, a 23 year-old white female with a past medical history of a right frontal lobe arteriovenous malformation (AVM) status-post two Onyx embolizations and past psychiatric history of adjustment disorder and post-traumatic stress disorder (PTSD), presents to the emergency department (ED) with a two-day history of disorganized thinking, altered mental status and possible manic behavior. The patient underwent a second Onyx embolization of her AVM two weeks prior to her presentation with a steroid taper and 7-day antiepileptic drug (AED) prophylaxis. She was initially evaluated at a local ED but was discharged home after labs were unremarkable and a non-contrast head CT was negative. The patient continued to act out of character, sending text messages that were illogical, paranoid and irrational with no sleep. She was taken to a second hospital where her neurosurgery team was located. The ED staff consulted neurosurgery and psychiatry; imaging showed focal inflammation around the site of embolization with no acute intracranial process. The patient was admitted to the inpatient psychiatric ward. Neurology was consulted due report of stable behavior with AED use post-surgery; after a normal EEG, valproic acid was recommended. The patient exhibited a severely disorganized thought process, thought blocking, emotional lability, irritability, paranoia and delusions. Her differential included a myriad of etiologies: infection, seizure activity, intracerebral ischemia, drug-induced psychosis, mood disorder, and exacerbation of PTSD. Given her atypical presentation with decreased sleep and concern for psychosis, mania and seizure activity, the treatment team started Seroquel at bedtime with rapid response over two days. After discharge the patient had a second hospitalization after she discontinued her medications. Her presentation and resolution mirrored her first admission. Her case led to a literature search for psychosis in the setting of AVM embolization with minimal results that were not explicitly relevant. Further, we reviewed management of post-stroke psychosis because of theorized similarities in ischemic brain changes to guide future management decisions for this patient such as time course of therapy. In this poster, we discuss the challenges of differentiating psychotic symptom etiology for patients with neurologic comorbidities, specifically intracranial AVM embolization, which is not well documented, along with the relevance of a right-sided frontal lobe lesion. We also discuss the multidisciplinary work-up and how to manage similar cases in the inpatient and outpatient settings.

No. 43

Frontotemporal Dementia, Schizophrenia, Brain Sagging, or All of the Above?

Poster Presenter: Jonathan Hirschauer, D.O.
Co-Authors: Alex Ledbetter, D.O., Virmarie Diaz Fernandez, M.D., Daniel Witter, M.D., Sarah Fayad, M.D.

SUMMARY:
Introduction: Frontotemporal brain sagging syndrome (FBSS) is characterized by the gradual onset and progression of behavioral and cognitive dysfunction accompanied by headache, caused by cerebrospinal fluid (CSF) leak in the spine. This causes loss of CSF volume to support the brain and spinal cord, resulting in intracranial hypotension. The following is clinical data of a patient who was presumptively diagnosed with FBSS. Case Report: Patient is a 57-year-old African-American female with no past psychiatric history who presented after impulsively “destroying her house”. She had one-month history of depression and behavioral changes, including paranoia directed towards coworkers and intent to remarry her estranged ex-husband and leave the country with him. Patient’s family reported similar episode six months prior, which resolved with no intervention. The patient was admitted to the behavioral health unit. Initially, she was diagnosed with unspecified schizophrenia spectrum disorder. Olanzapine was started and eventually titrated to 10mg by mouth daily. Her symptoms improved somewhat over the course of her one-week hospitalization. She realized that remarrying her ex-husband and leaving the country was unrealistic, and could have deleterious consequences. The neurology team was consulted after moderate atrophy was noted on brain CT. MRI brain revealed prominent atrophy in the frontotemporal lobes but no corresponding ventriculomegaly ex vacuo. MRI of the cervical, thoracic, and lumbar spine was negative

for CSF leak. Laboratory workup including CBC, CMP, vitamin B12, folate, TSH, HIV Ag/Ab, RPR, and urinalysis, were unremarkable. The leading diagnosis at time of discharge was FBSS vs. frontotemporal dementia (FTD). Discussion/Conclusion: FBSS is a potentially reversible disease secondary to CSF leak in the spine causing loss of CSF volume to support the brain and spinal cord. Symptoms include personality changes which can be mistaken for neurodegenerative conditions, including frontotemporal dementia. Clinical suspicion is important to detect FBSS, and the diagnosis involves imaging of all levels of the spinal cord and in some cases, lumbar puncture.

No. 44

Genesis of Mental Disorders—Could It Be Cavum Septum Pellucidum et Vergae: A Case Report of CSP With Catatonic Schizophrenia

Poster Presenter: Nitin Pothen, M.D.
Co-Authors: Adriana Fitzsimmons, M.D., Shveta Kansal, M.D.

SUMMARY:

Learning Objectives: 1) Recognize the association a large CSP with a subgroup of schizophrenic patients 2) Raise awareness of possible increased susceptibility to psychosis associated with developmental anomalies in midline structures Abstract: A male in his 20’s with a history of schizophrenia and no known past medical history was brought to the hospital after being found on a bench non-responsive. Patient was given 3 doses of naloxone in the field with no response, evaluated in the emergency room, and admitted to the ICU. CMP, CBC, UDS, BAL, CXR, EEG and head CT no abnormalities. MRI revealed Cavum Septum Pellucidum et Verge of 21mm in size. After three days he was medically cleared and transferred to the inpatient psychiatric unit. He had a flat affect, dysphoric mood, and poor oral intake and was trialed on citalopram and mirtazapine. After a few days the patient demonstrated catatonic symptoms of mutism, negativism, and immobility/stupor, and was not compliant with treatment. He showed a temporary response to a lorazepam challenge, however his catatonic state progressed to non-responsiveness, requiring transfer back to the medical floor. Ultimately decision for ECT treatment was made. He showed minimal response to olanzapine, methylphenidate, and high-dose lorazepam throughout the hospital stay. Five months after admission, permanent guardianship was obtained for ECT treatment consent when a family member was available, and the patient was transferred to facility where ECT was available, where ECT was initiated with a significant effect for the patient after 6 sessions. After a total of 12 sessions of ECT, he was discharged, psychiatrically stable, on Invega susstena 156 mg IMmonthly for psychosis, Zoloft 50 mg daily for depression, Ativan 0.5mg twice daily for catatonia prophylaxis and outpatient follow up. Conclusion: Septum pellucidum is a brain midline structure which fuse in first 3 to 6 months of life. Abnormally the failure of the fusion leads to occurrence of Cavum Septum Pellucidum. Many studies have suggested that CSP pay a role in genesis of mental disorders and some correlations with symptoms of schizophrenia.(1). There have been reports of associations between large CSP and functional psychotic disorders, particularly schizophrenia as well as a case report of late-onset catatonia with no psychiatric history, associated with enlarged cavum septum pellucidum and cavum vergae with a response to ECT treatment.(2)(3). Our case appears to be among the very few unique cases ever reported with large CSP and CV associated with catatonia. Incidental MRI findings of such anatomical variations found in susceptible individual warrant an in depth psychiatric history for further care and early intervention.

No. 45

WITHDRAWN

No. 46

Mania in a HIV Infected Patient: A Unique Presentation of CNS IRIS

Poster Presenter: Kyle J. Bowers, M.D.
Co-Author: Lokesh Shahani, M.D., M.P.H.

SUMMARY:

Background Immune reconstitution inflammatory syndrome (IRIS) refers to the constellation of symptoms and clinical features that occurs in

previously immunosuppressed patients during rapid restoration of immune function. The initiation of antiretroviral therapy (ART) in HIV patients in the presence of an opportunistic infection can bring about such a presentation, leading to a paradoxical worsening in clinical status despite improvements in viral load and CD4 count. Patients who have opportunistic infections of the central nervous system (CNS) are at particular risk, as resulting inflammation in the brain can cause increased intracranial pressure and eventual herniation. In light of this, IRIS of the CNS can lead to a variety of unique clinical presentations. We describe a unique case of an HIV-infected patient with IRIS in the context of ongoing progressive multifocal leukoencephalopathy. Case Presentation A 40-year-old male with past medical history significant for HIV and past psychiatric history significant for schizophrenia and synthetic marijuana use presented with new onset grandiose delusions, disorganized behavior, agitation, and decreased need for sleep. He was initially given trials of risperidone and quetiapine, with little improvement. Three months prior, patient had been hospitalized for a presentation of encephalopathy in the setting of non-compliance with ART. At that time, cerebrospinal fluid (CSF) studies showed elevated protein and predominant lymphocytosis, CSF cultures obtained were negative, and MRI brain showed increased hyperintensity in the left occipital lobe. The patient was restarted on ART and in the ensuing three months demonstrated marked improvements in his CD4 count and viral load. This combination of worsening psychosis refractory to treatment with recent improvement in HIV treatment status led to the consideration of IRIS of the CNS. His follow-up MRI brain showed significantly increased periventricular bilateral T2 hyperintensity as compared to his prior scan, indicating worsening inflammation. Upon adding anti-inflammatory therapy to the patient's regimen, his symptoms began to improve. Further CSF studies were obtained in the outpatient setting, with positive result for JC virus DNA in the CSF, leading to a diagnosis of PML-associated IRIS. From this case we address the value of a thorough medical workup in determining the etiology of a psychiatric presentation in patients infected with HIV infection.

No. 47
WITHDRAWN

No. 48
Neuropsychiatric Manifestations of Brain Tumors: A Case of a Brain Metastasis Appearing as Depression and Delirium

Poster Presenter: Maria Hadjikyriakou, M.D.
Co-Authors: Neil Mehta, Zelde Espinel, M.D., Maria A. Rueda-Lara, M.D.

SUMMARY:
Mr. K is a 50-year-old male with a history of a large thyroid goiter and without a known psychiatric history, who was diagnosed with lung cancer in the fall of 2019. After initial diagnosis, he had to leave the United States and, while outside of the country, reportedly obtained further work-up of his lung cancer with PET scan and EBUS transbronchial biopsy. Upon returning to the United States, due to insurance difficulties, the COVID-19 pandemic, and a bout of pneumonia, he was unable to start neoadjuvant chemotherapy until the spring of 2020. At this time, he underwent a left pneumonectomy and remained in the hospital for further work-up and stabilization. By hospital day 14, the primary team noticed increasing social withdrawal, refusal of treatment, refusal to speak to family members, and declining oral intake over 4 to 5 days. Psychiatry was consulted for the evaluation of depression on hospital day 18. Per collateral history, family noted that it was very unusual for him to decline speaking to family members during this hospitalization and that he did not appear to be depressed prior to the last week. On evaluation, patient was noted to be somewhat drowsy, hesitant to respond to questions before losing eye contact, and often staring ahead blankly. The few word responses he did provide were nonsensical. The suspicion for altered mental status, more specifically a case of hypoactive delirium, grew. The consultation-liaison team discussed the case with the primary team and recommended delirium lab workup in addition to obtaining an MRI brain scan with and without contrast. Bloodwork returned within normal limits. However, the MRI brain scan revealed a large necrotic enhancing mass in the left medial frontal lobe with extensive vasogenic edema

and midline shift. Several days later, the patient underwent a frontal craniotomy for resection of the left frontal brain metastasis. Improvement in his mental status and verbal expression was noted by the next day. He was discharged 8 days later, by hospital day 30, reportedly back to his baseline with planned whole brain radiotherapy post-discharge. In this poster, we present a case of a brain metastasis that acutely contributed to hypoactive delirium, but was initially interpreted as depression. Delirium is commonly misdiagnosed as other psychiatric disorders, including depression, dementia, and catatonia. As each of these entities require different modes of treatment, the correct differentiation and recognition of these disorders is necessary for proper work-up and management. (Breitbart and Alici, 2012; Sarutzki-Tucker et al, 2014). It is even more important to do so in medically complex patients, especially in the case of brain metastases, when patients can commonly present with neuropsychiatric symptoms, including depression and abulia in the case of left frontal and medial frontal lobe tumors. (Madhusoonan et al, 2015).

No. 49

No Mere Child's Play: Childish "Speech Mannerism" as an Initial Presentation of Catatonia

Poster Presenter: Duncan McDermond, B.A.
Co-Author: Yassir Osama Mahgoub, M.D.

SUMMARY:

INTRODUCTION: Patients with catatonia might present with mutism or peculiar speech. We describe a case of a patient with schizophrenia who presented with childish and prosectic speech and later displayed other catatonic signs before being adequately treated. METHODS: Case report and brief literature review. CASE SUMMARY: A 49 year old woman with history of schizophrenia, previously maintained on haloperidol decanoate 100 mg injection every month, presented with worsening of psychosis secondary to medication non adherence. She was noted to have childish voice with elevated pitch, and whining. She spoke with limited vocabulary using one to two words. She was occasionally difficult to understand due to poor articulation with voice muffling and softening. She perseverated on how she was poisoned by alcohol and was noted to be laughing inappropriately. Her abnormal speech pattern and thought perseveration raised concerns for catatonia. She received lorazepam 1mg and afterward, her adult voice returned and was clearer. Over the next 48 hours, she refused lorazepam and the childlike voice and poor articulation returned. She progressively demonstrated withdrawal; near stuporous; near mute with limited lexiconal access and simplified syntax, responding in two-word sentences; thought perseveration; prosectic speech; negativism; and gegenhalten paratonia. Lorazepam was resumed and increased to 2mg BID. Her catatonic features resolved and she was using an adult voice intermittently with clearer articulation. DISCUSSION: Speech is the expression of thoughts or feelings by spoken words. Lanaguage components include prosody, the sound of someone's voice as they speak: pitch, intonation, and stress; phonology, how sound sequences are organized in languages; lexicon is a person's vocabulary; syntax describes how words and phrases are arranged; and articulation, the physical process of forming sounds by controlling the jaw, tongue, and lips to alter air movement. All of these speech components can have catatonic features. Patients commonly present with mutism, a state of minimal or complete verbal unresponsiveness. Speech content may reflect other signs like negativism or withdrawal. Literature has described many other features of catatonia like speech promptness, a form of automatic obedience. Mannerisms, abnormal repetitive goal directed movements and behavior, can manifest in various forms of speech utterance such as echolalia, repetition of a person's speech, or verbigeration, repetition of phrases or sentences during conversation. Our patient presentation of child voice, progressively fading tone, limited vocabulary, shortened responses, poor grammar, and mumbling can represent mannerism of speech phonology, prosody, lexicon, syntax, and articulation. CONCLUSION: Catatonia can present with both mutism and variable speech mannerisms. Catatonia signs can overlap. Speech content, utterance, and paralinguistic components of speech can be altered in catatonia.

No. 50

Post-Stroke Akinetic Mutism Versus Catatonia: Lorazepam-Challenges, MRIs, and Psychostimulant-Challenges to Investigate a Differential

Poster Presenter: Joshua C. Eloge, M.D.

SUMMARY:

Background: Isolated strokes of the Anterior Cingulate Cortex (ACC) are relatively rare, with few case reports in the literature, but they have been known to cause apathy, abulia, and akinetic mutism. It is not uncommon for consulting psychiatrists to be asked to assist in motivation to participate in acute rehabilitation when depression and apathy are present. While post-stroke depression is relatively well understood, it can be difficult to know when repeat neuroimaging is warranted in the setting of post-stroke depression with new behavioral features. Further, negativism from catatonia and abulia are phenomenologically quite similar. Case History: Shortly after entering rehabilitation for a pontine infarct, a 72 female with no past psychiatric history developed an acute episode of mutism and abulia after several days of refusing her warfarin. ECT was initially recommended for presumed post-stroke major depressive disorder complicated by catatonia, but after a negative lorazepam-challenge and repeat MRI brain, a new infarct in her left anterior cingulate cortex was found, likely explaining her acute behavioral change. She responded quickly to a psychostimulant-challenge with resolution of her akinetic mutism. Conclusions: Acute changes in the quality of depression with abulic features should lead the astute clinician to evaluate for damage to the frontal lobes and basal ganglia. Neuropsychiatric manifestations of anterior cingulate cortex damage, similarities and differences of akinetic mutism and catatonia, and psychostimulant treatment for abulia are discussed.

No. 51

Post-Stroke Onset and Persisting Manic Episode With Right Hemispheric Encephalomalacia

Poster Presenter: Joseph Brock Jr., D.O.
Co-Author: Ram Bishnoi, M.D.

SUMMARY:

We present a case of a 58 year old African-American male who presented to the inpatient psychiatric unit with symptoms of acute mania of unknown duration. His past psychiatric history was significant for substance use disorder, however, there was no prior history of a mood disorder. Interestingly, six years prior to this hospitalization, he suffered right hemispheric ischemic stroke and soon after was involved in a criminal act leading to five years in prison. Shortly after release from prison, he was admitted to psychiatric unit. Prison reports suggested similar symptoms during his time there, but unfortunately he was not diagnosed or treated. After admission to the inpatient unit, brain imaging study revealed extensive right fronto-parieto-temporal encephalomalacia. He was treated with standard of care for an acute manic episode, combination of divalproex and aripiprazole. He was also provided with neurology and medical care. With this treatment regimen, he showed good response and was discharged back to independent living. New onset mania after an ischemic stroke is a rare neuropsychiatric complication, especially in those with right-sided lesions, and far less prevalent than post-stroke depression. Predisposing genetics factors, subcortical brain atrophy and injury to the right corticolimbic pathways seem to play a significant role in developing new onset mania. Additionally, right-hemisphere hypoactivity, or left/right imbalance, seems to influence manic behavior post-stroke. This report presents an interesting and rare neuropsychiatric complication of right hemispheric stroke and highlights the importance of screening patients and treatment of post-stroke neuropsychiatric sequalae.

No. 52

Psychiatric Manifestations of Wernicke-Korsakoff Syndrome

Poster Presenter: Rajesh Gaddam, M.D.
Co-Authors: Adam Westrick, Alysha Lubana, M.D., Ghulam Sajjad Khan, M.D.

SUMMARY:

Wernicke encephalopathy, and Korsakoff (amnesia syndrome) syndromes are related disorders widely understood to be progressive forms of the same

etiology. Both are related to degenerative changes in the brain caused by Thiamine (Vitamin B1) deficiency. Thiamine deficiency is commonly described in chronic alcohol use but can be seen in any patient with this deficiency. Manifestations of Wernicke-Korsakoff syndrome (WKS) are hallmarked by the central nervous system effects; ophthalmoplegia and nystagmus, altered mental status, cerebellar dysfunction (Wernicke Encephalopathy) and persistent confabulatory amnesia (Korsakoff amnesia). Despite the well-recognized pentad of symptoms WKS commonly manifests, most patients have a variable presentation of neuropsychiatric symptoms, with only 15-30% of patients manifesting all the aforementioned symptoms. In this paper, we center our discussion on a case of a 57 year old Caucasian Female with a chronic history of alcohol use presenting with the classic pentad of symptoms, including horizontal nystagmus, intermittent confusion, gait disturbance, cognitive deficits including amnesia, and confabulation. We intend to further examine how the degenerative effects of WKS present psychiatrically.

No. 53

Psychosis and Depression in Spinocerebellar Ataxias: Two Case Presentations

Poster Presenter: Maureen Cassady, M.D.
Co-Authors: Joan Han, D.O., Jennifer Reid, M.D., Samantha Latorre, M.D.

SUMMARY:

Introduction: Spinocerebellar ataxias (SCAs) include a number of genetically diverse diseases, commonly known for their motor presentations. However, there is also evidence for increased prevalence of psychiatric symptoms in this population, including both a well described cerebellar cognitive affective syndrome and less common case reports of psychosis. We present two patient cases with diagnosis of SCAs and no known psychiatric history who developed depression and psychosis years following motor symptom onset. Case 1: 53 year-old Caucasian male with history of progressive familial ataxia had his first psychiatric encounter when admitted after a suicide attempt by shooting himself in the face. Prior to the attempt, he developed new paranoid delusions about mold infestation in his bodily fluid and living environment, began responding to internal stimuli, and also ingested Lysol days prior to the gunshot. While medically hospitalized, he was guarded due to ongoing paranoia and olanzapine 2.5mg nightly was started. Neurologically, he had saccadic eye movements, resting tremor of his upper extremities, and ataxia. Neurology diagnosed the patient with SCA given his family history and clinical presentation. He was admitted for inpatient psychiatric treatment where olanzapine 2.5mg nightly was continued until his delusion gradually resolved. His neurovegetative symptoms improved on dextroamphetamine-amphetamine 5 mg twice daily and mirtazapine 30mg nightly. Since discharge, the patient is followed collaboratively by neurology and psychiatry pending genetic testing. Case 2: 62 year-old African American male with diagnosis of SCA3 and confirmed pathogenic ATXN3 gene was recommended for psychiatric evaluation by his neurologist in his early 50s for difficulty accepting his diagnosis and symptoms of depression. He deferred evaluation until paranoid delusions of being followed emerged in his mid 50s. He engaged in therapy but refused pharmacological intervention until auditory and tactile hallucinations developed in his late 50s. He experienced hallucinations of two children belittling him while ejaculating on his lower back which led to passive death wishes. Through the integrated care of psychiatry and neurology he started sertraline 25mg daily and paliperidone 3mg nightly. To date, his hallucinations and depression have decreased. Intermittent paranoid delusions continue, however, medication and cognitive behavioral therapy have improved reality testing and patient reported quality of life. Discussion: These cases illustrate uncommon neuropsychiatric sequela in patients with SCAs. In this poster we will: 1) Review the literature on psychiatric comorbidity in SCAs, 2) review nonmotor function of the cerebellum and discuss current hypotheses for mechanism of cerebellar role in cognitive, affective and psychotic symptoms, and 3) highlight the need for interspecialty collaboration and suggest considerations for medication management.

No. 54
Psychosis Secondary to Brain Glioma
Poster Presenter: Lily Valad, M.D.
Co-Authors: Anu Stephen, M.D., Brian Harlan, M.D., Srinath Gopinath, M.D.

SUMMARY:
A glioma is a primary brain tumor that can present with neurological, psychiatric, and cognitive symptoms. Psychiatric manifestations can range from problems with mood and personality changes to hallucinations and/or psychosis. Gliomas are the most common primary malignant neoplasm with an incidence of about 6 people per 100,000. Here we present the case of a 20-year-old African American female with a history of autoimmune demyelinating disease and acute disseminated encephalomyelitis (ADEM). The patient was diagnosed in 2014 with ADEM secondary to an infectious process following an extensive workup that began with symptoms of an upper respiratory infection and acute mental status changes. She was unable to tolerate haloperidol and lorazepam and received steroids and intravenous immunoglobulin treatment. She was then managed on methylprednisolone, clonidine, and melatonin. She remained asymptomatic for six years until presenting for evaluation of acute behavioral changes significant for psychosis. In the initial encounter, the patient was noted to be responding to internal stimuli and auditory hallucinations, disorganized in behavior and speech, and harboring paranoid delusions regarding sexual trafficking. Organic work-up was negative with the exception of an elevated WBC, bacteriuria on urinalysis, low TSH, and elevated free T4. Psychiatry was consulted and olanzapine 5mg nightly with additional as needed doses for agitation was recommended. This dose was increased to 10mg scheduled nightly, however, she became increasingly anxious and dosing at 5mg was maintained. She continued to exhibit symptoms of psychosis while on olanzapine so the decision to augment with divalproex 500mg twice daily was made. The dose was titrated up as tolerated and clonidine 0.1mg every morning + 0.2mg every evening for anxiety/impulsivity were started. At this time, the differential diagnoses were demyelinating encephalomyelitis versus a space-occupying lesion of the brain. MRI with spectroscopy demonstrated intrinsically bright T2/flair signal lesion in the anterior convexity of the right frontal lobe, with findings suspicious for a progressively enlarging low-grade neoplasm rather than an enlarging demyelinating plaque without associated inflammation. Consultation with neurosurgery led to the recommendation for brain glioma resection. The patient's mother, who served as a proxy decision-maker, refused recommended interventions and requested that the patient be discharged. On discharge, the patient was alert and oriented but maintained delusions. She continues to be followed by outpatient Neurology with plans for repeat brain imaging. This case report illustrates a patient with a frontal lobe brain glioma that manifested in personality changes, mood alterations, and psychosis. It is an interesting case that was challenging to manage and involved many consulting services including Psychiatry, Child Neurology, Neurological Surgery, and Pediatric Endocrinology.

No. 55
Putaminal Hemorrhage Takes Out Tics
Poster Presenter: Sarah Richards, M.D.
Co-Authors: Raman Marwaha, M.D., Bradley Moore, M.D.

SUMMARY:
Putaminal Hemorrhage Takes Out Tics   Abstract Introduction: Tourette's disorder consists of motor and vocal tics which can be difficult to control and disruptive to daily functioning. This disorder is difficult to treat but patients can get some relief with habit reversal training and different classes of medications such as alpha adrenergic agonists, antidopaminergic agents, and others. The exact mechanism of tic generation and tic suppression is not known, but a growing body of evidence suggests abnormal activity of the putamen is implicated in tic generation. This is a case report of a patient with Tourette's disorder whose tics were decreased after a putaminal hemorrhage. Case: This patient was 48 at the time of the encounter with history of HTN and Tourette's disorder. He presented with right-sided deficits in the setting of a hypertensive left putaminal hemorrhagic stroke. The patient was right-handed. CT imaging showed a left putaminal hemorrhage measuring 3.8 x 2.3 cm in axial cross

section, slight edema, and mild mass effect. Prior to the stroke, the patient suffered from multiple motor tics including lip pursing, blinking, beard stroking, and cheek twitching. He also suffered from vocal tics including sniffing and yawning. The patient reported complete loss of tics immediately after the stroke. The tics gradually returned in a stepwise fashion starting about two days after his stroke but remained diminished throughout his admission compared to baseline. Discussion: Upon review of the available literature, no such case was found. This appears to be a novel example of clinical decrease in tics secondary to putaminal damage. Since abnormalities in the putamen are implicated in tic generation, this case suggests putaminal damage disrupts this mechanism. The dominant putamen appears to have a role in initiating both motor and vocal tics. In this case, when the putamen suffered damage, tic frequency decreased. Conclusion: While there is growing evidence to suggest the putamen is involved in tic generation, further research is needed to clarify the mechanism of tic generation and suppression. This line of study could guide pharmacologic developments to target tics in Tourette's disorder. It could also guide surgical treatment options such as deep brain stimulation for patients with Tourette's disorder refractory to therapy and medication.

No. 56
WITHDRAWN

No. 57
Riluzole for Treatment of Catatonia Associated With Creutzfeldt-Jakob Disease
Poster Presenter: Anca-Maria Bejenaru, M.D.

SUMMARY:
Background/Significance: Creutzfeldt-Jakob disease (CJD) is a devastating neurodegenerative disorder that presents with neurocognitive deficits, motor abnormalities, and neuropsychiatric symptoms with an invariably fatal outcome. Catatonia has been infrequently described in CJD, with only four cases reported in our literature search (Wang, 2017; Wintown-Brown, 2016; Shekhawat, 2012; Grande, 2011). Catatonia is a neuropsychiatric phenomenon with a heterogenous presentation and multiple etiologies, and can include symptoms such as hyperactive or hypoactive motor dysfunction. Theories that attempt to explain the underlying mechanisms behind catatonia tend to include discussions of low GABA and dopaminergic activity, and glutamatergic hyperactivity. Standard of care in the treatment of catatonia involves initial use of benzodiazepines, but their use can sometimes be limited by oversedation. There are limited additional treatment options. We present a case of CJD complicated by catatonia in which benzodiazepines were not tolerated due to oversedation, and a discussion of a novel use of riluzole, a glutamate release inhibitor and indirect GABA agonist, in the treatment of CJD-related catatonia. Methods & Results: We present the case of a 72-year-old woman, originally from the Dominican Republic, who presented with altered mental status and catatonia. Though she had no formal psychiatric history, her family was concerned that the patient was depressed as she had been deteriorating over the past year. Her clinical course deteriorated rapidly. While she initially manifested subtle involuntary myoclonus and grimacing, she eventually stopped eating and developed stupor, mutism, oppositional paratonia, rigidity of her upper extremities, and a dystonic posturing of her neck, with hemodynamic instability (Bush-Francis Catatonia Rating Scale score of 22). Further workup revealed a diagnosis of sporadic Creutzfeldt-Jakob disease, including a positive 14-3-3 protein in CSF, corresponding signs in brain MRI and EEG, and negative NMDA-R Ab, GAD65 Ab, GABA-B-R Ab. The patient could not tolerate a lorazepam trial due to oversedation and overall medical frailty. We attempted to use riluzole 50mg twice daily for catatonia, given its novel mechanism of action as a glutamate release inhibitor and indirect GABA agonist. Treatment was ineffective after two weeks, and ultimately the patient was referred for hospice care. Discussion & Conclusion/Implications: We discuss further rationale for the use of riluzole as an agent for treatment of catatonia, and raise questions for potential further research.

No. 58
Seizing a Complex Case: Atypical Neuropsychiatric Manifestations of an Undiagnosed Seizure Disorder
Poster Presenter: Laura Leigh French, M.D.

Co-Author: Elena Ortiz-Portillo, M.D.

SUMMARY:

Seizure disorders affect about six out of every 1,000 individuals in the United States. Unfortunately, seizure disorders can cause a multitude of neuropsychiatric symptoms that frequently appear identical to symptoms of substance use, aggression, anxiety, panic attacks, or psychosis. Further complicating diagnostic clarity, patients with seizure disorders are at higher risk for comorbid psychiatric illness. For this reason, it is essential that psychiatrists consider epilepsy in their differential diagnosis. In the following case, we will discuss a perplexing case of auditory and visual disturbances, disorganized thought, depression, anxiety, obsessive thought, and derealization/depersonalization, which was misdiagnosed for many years. Ms. K, a 26-year-old female with a past psychiatric diagnosis of schizoaffective disorder, depressive type, presented to a community mental health clinic for continuation of mental health services after an extensive history of psychotropic medication trials and hospitalizations. On evaluation, Ms. K displayed no overt signs of psychosis while on olanzapine, yet reported a history of disorganized thought and auditory hallucinations. She reported on-going struggles with atypical visual disturbances, intrusive thoughts, anxiety, depression, obsessive thinking about philosophy and religion, and a near-constant feeling of derealization and depersonalization. Further neurological work-up revealed paroxysmal generalized spike and wave discharges on her EEG stemming from her left temporal parietal area, suggestive of a seizure disorder. After initiation of the antiepileptic levetiracetam, Ms. K's symptoms significantly improved, allowing her to discontinue olanzapine with no return of past psychotic symptoms. Ms. K continued to require psychiatric treatment with sertraline monotherapy for generalized anxiety disorder and major depressive disorder, which are common comorbid conditions. In this presentation, we hope to review this intriguing case, discuss some of the countless ways in which seizure disorders may mimic psychiatric disturbances, and provide recommendations for when a neurological work-up may be merited for a patient with neuropsychiatric symptomatology.

No. 59

Wernicke Korsakoff Syndrome Versus Autoimmune Encephalitis

Poster Presenter: Gary Aaron Stocker
Lead Author: Katie Alexandra O'Connell
Co-Author: David Richard Spiegel, M.D.

SUMMARY:

Patient is a 66-year-old white female who presented for altered mental status (AMS) and was diagnosed with autoimmune encephalitis. Magnetic Resonance Imaging (MRI) demonstrated increased T2 flair involving bilateral temporal lobes. She was treated with intravenous immunoglobulin (IVIG) and rituximab and reportedly her cognition returned to baseline. Three months later the patient presented to an outside emergency department with AMS and short-term memory loss. According to family and not known during the prior admission, the patient had been misusing alcohol for at least three decades. As the possibility of alcohol withdrawal for AMS was initially considered, the patient was treated with symptom-triggered benzodiazepines, thiamine, and folate. Intravenous thiamine treatment was initiated with 200 mg on day 1, 100 mg on days 2-3, 200 mg on days 4-8, and maintained on 100 mg orally once daily for the remainder of her hospitalization. Of note, no thiamine level was drawn on admission. Thiamine levels were measured on day 23 of this hospitalization and were within normal limits. Despite symptom-triggered treatment with benzodiazepines, the patient became increasingly agitated. She was transferred to the intensive care unit for 5 days and psychiatry was consulted at this time. Repeat MRI showed diminished temporal lobe disease. The patient was re-started on IVIG and adjunctive treatment with valproic acid and ziprasidone was initiated. She finished a course of 5 IVIG treatments followed by rituximab. However, following this regimen she did not exhibit any substantial improvement in cognition/delirium. With neurology consultation, it was decided to not pursue plasmapheresis. Repeat MRI brain was attempted twice but could not be completed due to patient restlessness. Notably, her fluctuation of mentation did lessen although residual memory impairment was evident. Her mini Mental State Examination score was 23, being unable to retrieve any of 3 words, even with recognition with a five-minute

delay. The differential diagnosis for this patient included both autoimmune encephalitis and Wernicke Korsakoff Syndrome (WKS). Radiology interpreted MRI brain findings as limbic encephalitis but lack of response to immunotherapy and diagnostic workup for malignancy, including body positron electron tomography scan, was unremarkable. WKS became the working diagnosis. WKS is significantly underdiagnosed. The diagnosis is confirmed in 0.4-2.8% of autopsies yet may be overlooked in 68% of patients with alcohol use disorder (AUD) and 94% of patients without an AUD. Korsakoff syndrome is defined in DSM 5 as the acute onset of severe anterograde and graded retrograde amnesia without other significant cognitive deficits. We recommend that thiamine levels should be evaluated in all patients presenting with AMS, especially in patients with AUD. Early treatment can reduce the progression of the deficits caused by WKS but may not completely reverse memory impairment.

No. 60
Psychiatric Challenges of Growing Older With Rubenstein Taybi Syndrome
Poster Presenter: Joan Ruth Winter, M.D., M.S.

SUMMARY:
Rubinstein Taybi Syndrome (RTS) is a congenital chromosomal mutation affecting chromosome 16, and notably, CREB binding protein. CREB is known to play an integral part of dopamine and serotonin signalling, thus the altered functionality of CREBBP is hypothesized to be related to the underlying mechanism of psychiatric disorders in these patients. Children with RTS have been observed to have motor stereotypies, poor coordination, short attention span, and are often overweight. In adolescence, depression, anxiety, and aggression have been seen. As they proceed into adulthood, they have an increased incidence of bipolar disorder, depression, anxiety, tic disorder, and obsessive compulsive disorder. Their gene mutation also alters their processing of medications, and puts them at increased risk of extrapyramidal side effects and neuroleptic malignant syndrome. This is especially important, as antipsychotics are often used to treat patients with aggression and mania. Finally, they also experience a number of comorbid medical conditions due to their chromosomal abnormalities which affect their quality of life and can complicate treatment including: developmental delay, congenital heart disease, lymphoma and leukemia, renal anomalies, hypotonia, and problems with gastric motility. In this case, we explore the psychiatric management of Mr H, a 40 yo man with a past history of Rubinstein-Taybi syndrome, non-Hodgkin''s lymphoma, eosinophilic gastritis and functional abdominal pain syndrome. He was admitted to the general medicine service for decreased intake through his PEG tube, which was thought to be due to abdominal pain with tube feeds after initiating chemotherapy. Psychiatry was consulted for management of agitation after the patient threw a meal tray. Per his family, the patient had been having escalating outbursts prior to admission as well as depressed mood and anhedonia. There have been a limited number of randomized controlled clinical trials studying the symptoms and treatment of people with RTS. Through this poster presentation, we hope to educate attendees about the nuances in treatment for patients with this gene mutation. As medicine progresses, these patients are increasingly living to adulthood, and it is important that psychiatrists understand how to treat them safely.

No. 61
Psychiatric Manifestations of Chromosome 15q13.3 Microdeletion Syndrome: The Interconnectedness of Biological, Psychological, and Social Factors
Poster Presenter: Steven Nemcek, M.D., M.S.
Co-Author: Michelle B. Hornbaker-Park, M.D.

SUMMARY:
J.W., a 10-year-old African-American male with a past psychiatric history of intellectual disability, attention deficit hyperactivity disorder, opposition defiant disorder, and conduct disorder, childhood-onset type, presented to the inpatient child psychiatric unit after setting fire to his legal guardian's apartment building. This patient had a tumultuous childhood; he had lived in a total of 14 different foster homes leading to a maladaptive attachment style, had a history of behavioral concerns to include harming animals, sexual

misconduct towards three female peers at school, and frequent tantrums and outbursts that became violent. He also had a significant trauma history with allegations of physical abuse from one of his former foster fathers. Due to reported intellectual disability in the patient's mother, a CGH microarray analysis had been performed at an outside hospital, and the patient was found to have a chromosome 15q13.3 microdeletion, which, according to the NIH, may lead to intellectual disability including, "delayed speech and language skills," behavioral problems including, "short attention span, aggression, impulsive behavior, and hyperactivity," and psychiatric disorders such as "autism spectrum disorder, schizophrenia" in addition to physical disorders such as, "heart defects, minor abnormalities involving the hands and arms, and subtle differences in facial features."2 Treatment for this patient involved a multipronged approach using a behavioral chart with earned rewards as incentives, select skills from the dialectical behavioral therapy skill set, and the use of psychiatric medications to include stimulants, mood stabilizers and antipsychotics. In this poster, we discuss the known potential psychiatric and behavioral manifestations of Chromosome 15q13.3 Microdeletion Syndrome, and the potential epistemological questions related to treatment when both nature and nurture are obviously contributory to a patient's presentation.

No. 62

"Obsessive-Hypervigilant": The Intimate Relation Between Obsessive-Compulsive Disorder and Post-Traumatic Stress Disorder

Poster Presenter: Rebecca Sturner, M.D.
Co-Authors: Abigail Clark, M.D., Ph.D., Lama Muhammad, M.D.

SUMMARY:

Background: In recent years, many studies suggest a high prevalence of comorbid Obsessive-Compulsive Disorder (OCD) and Post-Traumatic Stress Disorder (PTSD). PTSD is prevalent in patients with treatment-resistant OCD and OCD can comorbid treatment-resistant PTSD. However, no major studies elucidate the etiological relationship, and there is no standard protocol to guide the management of these complex co-morbid cases. Methods: The authors will describe three cases of patients with trauma histories who developed OCD behaviors. The authors then will review the literature about symptomatology, diagnoses, and pathophysiology of comorbid OCD and PTSD, then will propose a novel protocol for management. Results: Case 1 A 54 y/o old female with a history of treatment-resistant OCD. Detailed history uncovers sexual trauma and PTSD. The patient improved after providers targeted PTSD with trauma-focused therapy and a high dose of selective serotonin reuptake inhibitor medication SSRI. Case 2 A 28 y/o old female with a treatment-resistant PTSD. Detailed history uncovers OCD symptoms characterized by rumination focused on trauma-related memories. The patient's symptoms improved after reaching a high dose of SSRI and working with her therapist to contextualize the intrusive thoughts and integrate the traumatic memory into a more helpful narrative. Case 3 A 46 y/o male with a history of treatment-resistant anxiety, denies any other psychiatric problem before a major car accident. Detailed history uncovered PTSD as well as obsessive compulsive symptoms which met criteria for OCD. Symptoms got better after trauma-focused psychotherapy with a high dose of SSRI medication. Discussion: The association between PTSD and OCD appears to be important when assessing patients with treatment-resistant OCD and/or treatment-resistant PTSD. The relationship between trauma and OCD is such that trauma may play a major role in the development of OCD. Some studies described an association specifically between dissociative symptoms and the severity of OCD. A genetic factor that may be responsible for mediating this association has also been discussed. Until now, there are no established guidelines for concurrent management of these highly comorbid conditions, despite the association between their comorbidity and treatment resistance. Many studies support the need to understand the physical, psychological, and emotional distress related to a patient's reported trauma in order to better understand the obsessions and compulsions of the patient with treatment-resistant OCD. Conclusion: Understanding the association between PTSD and OCD is vital and can change management. A specific management approach can be utilized to simplify the complexity

of such cases, and therefore change the prognosis in patients with these comorbid conditions.

No. 63

A Case of Schizo-Obsessive Disorder Presenting as Primary Polydipsia

Poster Presenter: Regan Pelloquin
Co-Author: Colleen Bono

SUMMARY:
Mr. S is a 45 year old Caucasian male with a past psychiatric history of obsessive-compulsive disorder and alcohol use disorder who was transferred to the psychiatric inpatient unit from the ICU where he had been treated for anasarca and hypervolemic hyponatremia with a sodium of 106 resulting from psychogenic polydipsia. Extensive medical workup for secondary polydipsia including brain imaging found no clear medical etiology. He had been seen greater than 50 times in the past six months in the emergency room for complaint of vomiting and dehydration and was found to be hyponatremic at various visits, although he had not previously required hospitalization. Collateral sources suggested that Mr. S had been demonstrating new psychosis with paranoid behaviors and auditory hallucinations since the cessation of his alcohol use the year prior. The patient demonstrated no insight into his medical or mental illness and refused medications despite the continuation of excessive water-intake, necessitating one-to-one supervision during his stay. He required involuntary medication administration and was started on antipsychotics and mood stabilizers and demonstrated slow treatment response. He refused SSRIs. Throughout his hospitalization he was seen responding to internal stimuli and demonstrating compulsive behaviors. This led to a primary diagnosis of schizo-obsessive disorder to explain his new psychotic symptoms and compulsions.

No. 64

An Unusual Obsession Presentation in a Man With OCD and Comorbid Schizophrenia: A Case Report

Poster Presenter: Veniamin Mayevskiy, M.D.
Lead Author: Mohamed Wagdy Mohamed Elsayed, M.D.
Co-Author: Pongsak Huangthaisong, M.D.

SUMMARY:
Fish defines obsessions of obsessive compulsive disorder (OCD) as “thoughts that persist and dominate an individual’s thinking despite awareness that the thought is without purpose, relevance, or usefulness” [3]. There is a comorbidity between OCD and schizophrenia and many psychotic patients present with obsessions during their psychotic illness [2] [8]. DSM-5 added the specifier of OCD with delusional insight to describe obsessions with complete conviction that obsessional beliefs are true [1]. Distinguishing an obsession with poor insight with co-occurring delusions from an obsession with delusional insight is a challenge [5] [7]. Studies have proposed the use of fluvoxamine for treatment of schizophrenia with comorbid OCD [4] [6]. We report a case of schizophrenia with an interesting form of obsession that responded to Fluvoxamine treatment added to a typical antipsychotic. Mr. A is a 32 y/o man with a history of schizophrenia diagnosed at age 19. He presented with auditory hallucinations and violent behavior leading to an inpatient admission. His symptoms were well controlled with Haldol decanoate 100 mg IM monthly. Mr. A then began creating scenarios in his mind about himself and people he encountered in his life. The scenarios were first limited to a guy who molested him and then 3 boys who tricked him on a bus. The re-imaginings were pleasurable for Mr. A—not purposeless or repulsive—but once the scenario started, he was compelled to see it to its end to prevent distress. Gradually, these scenarios caused increasing anguish for Mr. A because the constant attention would disrupt his studies, attempts to fall asleep, and other daily activities. Mr. A became convinced that the universe was sending him messages to kill the people in his scenarios so that the thoughts would stop. He did not pursue the violent thoughts because he knew of the societal implications. A trial of Lexapro 20 mg with Haldol decanoate failed to abolish his symptoms. His symptoms were successfully controlled with a combination of Haldol decanoate 125 mg IM monthly and Fluvoxamine 300 mg daily (in divided doses). The scenario frequency and duration decreased resulting in better focus and sleep. This case presents an unusual obsession in the backdrop of psychosis occurring with obsessions.

No. 65

Exposure and Response Prevention Therapy in the Age of Telemedicine and Covid-19

Poster Presenter: Jessica Wang, D.O.
Co-Author: Natalia Ortiz, M.D.

SUMMARY:

A 21-year-old Caucasian female with no significant past medical history presented to the outpatient clinic with chief complaint of worsening obsessions and compulsions, primarily contamination-related, over the past year. Although she had never been formally diagnosed with obsessive compulsive-disorder, she stated that her symptoms began around age 11, improved in high school without formal treatment, and returned during her first year of college. The patient had a score of 25 on the Yale-Brown Obsessive Compulsive Scale shortly after intake. In addition, she reported depressive symptoms including anergia, insomnia, decreased appetite, and decreased libido in the context of her worsening obsessive-compulsive symptoms. Routine lab testing was unremarkable. The patient was started on sertraline for both obsessive-compulsive disorder and depression, and she tolerated gradual titration to 200 mg daily. Psychoeducation was provided, and the patient expressed interest in exposure and response prevention therapy, which is considered the gold standard of treatment for obsessive-compulsive disorder. After a few sessions, however, the coronavirus disease 2019 spread to the United States, and the patient, despite being motivated for treatment, was no longer able to attend appointments in person. The decision was made to have remote sessions weekly, and both her obsessive-compulsive and depressive symptoms improved over time. In this poster, we look at the literature supporting the efficacy of exposure and response prevention therapy when delivered through telemedicine. Current studies focusing on this population lack large sample sizes but show promise that modern technology can help reduce barriers and improve these patients' access to psychiatric care in times of uncertainty.

No. 66

Self-Enucleation in First Episode of Psychosis: A Case Report

Poster Presenter: Alvaro Teixeira, M.D.
Co-Author: Stephanie Bonafoux, D.O.

SUMMARY:

Mr. R. is a 19-year-old male with a past psychiatric history of cannabis use disorder who was presented to the psychiatric inpatient unit following a traumatic right eye self-enucleation in the context of acute psychosis. On presentation, the patient reported command auditory hallucinations, hyper-religious delusions and intrusive thoughts. He claimed to have heard God telling him to remove his right eye and then used his fingers to manually remove his eye from the orbit, as well as a corkscrew and scissors to cut it off, while reciting a Bible verse. He reported feeling no pain during the course of action. The patient described a history of performing rituals when faced with obsessions and preoccupations related to sexual guilt and hyper-religiosity accompanied by the urgent need to hurt himself to compensate for those thoughts. The treatment team considered the differential diagnosis of Schizophrenia, Obsessive Compulsive Disorder, Bipolar Disorder and Major Depressive Disorder with psychotic features. He was started with pharmacotherapy in addition to psychotherapy and underwent a thorough medical workup. He was continuously monitored with one-on-one observation and closely evaluated in conjunction with the Ophthalmology team. The patient''s psychotic symptoms initially intensified and he self-injured his right wrist in an unsuccessful attempt to cut his hand off using the weight of his own body. After 13 days of inpatient care, he reached baseline functioning and was psychiatrically stable for discharge with outpatient follow up. Self-enucleation is a rare yet drastic form of self-mutilation. Considering that those patients are at high risk of further self-harm, a comprehensive and early approach is needed to avoid catastrophic consequences. In this poster, we discuss the value and the challenges of psychiatric intensive care with the close cooperation of the multidisciplinary team in patients with severe self-mutilating behavior.

No. 67
The Conundrum of Juvenile OCD and EVALI
Poster Presenter: Roshi DeSilva, D.O.
Co-Authors: Antonia Phillip, M.D., M.B.A., Melanie Beck, D.O., Wakilu Shittu, M.D., M.B.A., David Huang, M.D.

SUMMARY:
Obsessive-compulsive disorder (OCD) is commonly considered as a debilitating disorder characterized by intrusive, recurrent, or persistent thoughts and associated compensatory behaviors or mental actions. Almost half the adult population with diagnosed OCD report their symptoms originated in their youth14. Though the prevalence of other psychiatric conditions among patients with OCD is high, little is known about OCD comorbid with substance use disorders (SUDs) in the pediatric population. A study by Mancebo et al in 2009 found that about one quarter of all participants with OCD had a co-occurring SUD. OCD and SUDs are similar in that both disorders often entail repetitive behaviors with negative consequences. With the advent of flavored e-cigarettes, coupled with lack of regulation, use among youths has skyrocketed17. This led to an unfortunate and unexpected surge in cases of severe acute lung injury directly related to e-cigarette additives13. Etiologically, there is a compound neurobiological effect on the frontal lobe. To our knowledge, there are no articles that report on the occurrence or management of SUD, specifically vaping of nicotine and marijuana, coupled with OCD in youths. We present and discuss a case of juvenile OCD compounded with severe e-cigarette use disorder complicated by acute lung injury. In addition, we discuss a literature review of relevant articles after selecting for the inclusion criteria of children or adolescents with OCD and nicotine or marijuana use disorder. A PubMed search resulted in 25 articles, later narrowed to 9 relevant publications. Targeted screening for e-cigarette use and adequate education, together with psychopharmacology and psychotherapy, may assist in the prevention of the dire consequences associated with such use in OCD patients. We found that use of specialized health services is small for families with pediatric OCD and thus is needed.

No. 68
WITHDRAWN

No. 69
"Cathartic Self-Mutilation in the Setting of Paraphilic Disorder: A Case Review and Review of the Literature"
Poster Presenter: Joseph Edward Kaizer

SUMMARY:
Mr. M is a 32-year-old male with a history of obsessive-compulsive disorder, major depressive disorder, autism spectrum disorder, borderline personality disorder, who presented to the emergency department with extensive genital mutilation. The patient was a victim of sexual abuse as a child and later developed persistent unwanted thoughts and desires manifesting in the form of a child pornography addiction. He expressed extreme feelings of guilt, and he resolved those feelings through self-injurious behavior stating he is "punishing himself for improper thoughts." His history of self-harm included the ingestion of staples, paper clips, a self-inflicted pneumothorax, abdominal wounds requiring multiple surgeries, and a self-inflicted stab wound resulting in right atrium perforation. This case exhibits an individual whose sexual arousal patterns caused him significant distress and guilt. The DSM-5 made a distinction between paraphilia and paraphilic disorder to indicate an impairment in which the satisfaction includes personal harm or risk of harm to others. Current recommendations for pharmacologic treatment involve suppressing primary sexual desires and managing comorbid conditions. Suppression of sexual impulses is achieved with antiandrogen medications, and SSRIs, clomipramine, and antipsychotics help prevent impulsive/compulsive activity. Common comorbid psychiatric conditions include Axis I and II disorders. Treating non-paraphilic comorbid disorders can indirectly decrease unwanted impulses and ultimately reduce instances of self-harm. Psychotherapeutic interventions include behavioral therapy, social skills training, and CBT. Individuals often suffer from a lack of social support and there are several online forums that provide a community to those with paraphilic disorder (Virped,

ASAP, ATSA). Individuals with paraphilic disorder are met with grave challenges in finding help and are ostracized by the community. A thorough history should be obtained to identify comorbidities and to direct treatment. While individuals have an increased risk of self-harm/suicide, psychiatric intervention can play a pivotal role by helping them control their sexual arousal patterns and self-injurious behavior.

No. 70

Coming Up for Air: Sexual Masochism With Asphyxiophilia as Emotional Release in Suicidal Patient

Poster Presenter: Chad Percifield, D.O.
Co-Authors: Jarrad W. Morgan, D.O., J.D., Molly McCarthy, Lacey Croskey

SUMMARY:
Patient is a 34-year-old, Caucasian, cis-gender, heterosexual woman with a past psychiatric history of major depressive disorder and borderline personality disorder and a past medical history of chronic pelvic pain. Patient presented to the emergency department with palpitations and pelvic pain and was ultimately involuntarily admitted to a local psychiatric hospital after expressing suicidal ideation with specific plan and intent. The patient admitted to self-injury in the form of cutting her arms bilaterally with a razorblade and admitted to engaging in bondage and discipline, domination and submission, and sadism and masochism (BDSM) sexual activity with being “choked until I can’t breathe.” During her psychiatric hospitalization, the patient disclosed that she had been paying a male “Dom” (dominant) to engage her in asphyxiation, beating, and bondage. Her seven-year-old daughter had witnessed this activity, and child protective services was alerted. Of note, the patient had begun engaging in BDSM after the death of her husband one year prior. The patient described her engagement in BDSM as a form of coping with negative emotions. She had scheduled sessions with her Dom on anniversaries of painful events and when she experienced extreme distress. Given the potentially dangerous act of erotic asphyxiation, the treatment team faced the question of supporting the patient’s sexuality while ensuring safety. In this report, we review literature regarding the possible benefits of de-pathologizing “kink” and the risks associated with BDSM. Ethical challenges of how to assess a patient’s ability to consent and to ensure safety is debated. We further discuss the role of psychiatry in the treatment of sexual masochism disorder via psychotherapeutic and pharmacologic treatments with special attention paid to the theory of viewing BDSM as having similar neurobiology to addiction.

No. 71

Pedophilic Traits in an Adolescent: A Case Report

Poster Presenter: Zargham Abbass, M.D.
Co-Authors: Shahan Sibtain, M.D., Syed Jafri, B.S.

SUMMARY:
Pedophilia is defined as a sexual attraction towards prepubescent children. The prevalence of a true pedophilic sexual preference is very low. There are multiple precipitating factors and risk factors that may lead to the expression of pedophilic behavior or trait. Psychodynamic and neurobiological models help explain the developmental path and neural anatomical differences in pedophiles respectively. Treatment modalities include psychopharmacology, medical treatments, and specialized behavioral psychotherapy. There is a paucity of research in the area of early adolescent manifestations of pedophilia or pedophilic traits. Here, we present a unique case of a 15-year-old male patient who was admitted to an inpatient unit following suicidal ideation with a plan, who showed strong pedophilic interest as evidenced by legal charges involving child pornography. Furthermore, we will expand upon the prevalence, risk factors, psychodynamic and neurobiological models, diagnostic techniques, and treatment options in pedophilia.

No. 72

“The Angel Dust Made Me Do It!”: A Retrospective Chart Review on Medication Used for Controlling Substance Induced Agitation

Poster Presenter: Khai Tran, M.D.
Co-Authors: Arun George Prasad, M.D., Aditya Sareen, M.D.

SUMMARY:
Agitation is one of the most common psychiatric emergencies that are encountered in the Comprehensive Psychiatric Emergency Programs (CPEP) and Inpatient Units. The reasons for agitation and affective dysregulation range from psychosis, borderline personality traits, substances and delirium. Two substances that have been very well researched for agitation include Synthetic Cannabinoids or K2 and Angel Dust or Phencyclidine (PCP). K2 has recently gained popularity as the substance of choice for those who look for cannabis-like intoxication effects. K2 does not show up in routine Urine Toxicology and up till 2013 was not illegal. However, K2 is known to cause agitation, anxiety and seizures. PCP related agitation during intoxication is well known. Other drugs known to induce agitation include Cocaine, Amphetamines and withdrawal from Benzodiazepines and Alcohol. Our study aims to look at the prescribing practices for management of agitation at an inner city community hospital in the inpatient and CPEP settings. Materials and Methods: This is a retrospective chart review of patients who were physically restrained for episodes of agitation in a period of 6 months in the year 2019. This population was selected as it was noted that the vast majority of restraints occurred in the CPEP within 2-5 days of patient arrival and hence in the period when intoxication from substances was likely. After IRB Approval, data was pooled and 343 episodes were identified. A chart review was done to identify the reasons for restraints, diagnosis, Urine Toxicology, medication used, number of subsequent intramuscular emergent medications and any co-morbid psychiatric conditions. Participants were divided into positive drug use history vs non-positive drug use history. These two arms were compared for differences with the different intramuscular medications as the independent variable and number of subsequent intramuscular medications as the dependent variables. Data was analyzed using statistical software. Results: The study revealed that the two most common antipsychotic combinations used included Chlorpromazine and Diphenhydramine and Haloperidol, Lorazepam and Diphenhydramine. However, Olanzapine was noted to reduce the number of subsequent intramuscular medications. Discussion: Studies related to management of substance induced agitation are limited to case reports and case series which recommend antipsychotics. Two medications: Olanzapine and Ziprasidone have stood out for acute agitation management for having a more rapid onset of action with peak action at 45 minutes to 1 hour. Some of the limitations included the fact that collecting of data on the use of K2 was dependent on user reports rather than objective urine toxicologies and the shortcomings of chart reviews such as inadequate documentation and systemic errors including failure to obtain all labs.

No. 73

Identifying the Challenges in Managing Lithium Toxicity in the Setting of the Novel Coronavirus Disease 2019 (Covid-19): A Case Report

Poster Presenter: Ainsley Backman, M.D.

SUMMARY:
The coronavirus disease of 2019 (COVID-19) is an ongoing public health concern that has resulted in numerous associated deaths worldwide. Lithium is a prescribed medication that has a narrow therapeutic window. Lithium toxicity is often precipitated by acute infections. Current evidence depicts the tremendous impact of several co-morbidities pertaining to COVID-19 infection. Nonetheless, limited evidence demonstrates the importance of early detection of COVID-19 virus in the setting of lithium intoxication. This case report demonstrates the importance of early detection of COVID-19 infection and lithium intoxication in order to prevent poor patient outcomes. A 62 year old African American male residing in a skilled nursing facility with a psychiatric history of Schizoaffective disorder, bipolar type, and a medical history of epilepsy, hypertension, diabetes, chronic obstructive pulmonary disease and benign prostate hypertrophy, presented to the emergency room due to altered mental status. His psychiatric medications included Olanzapine 10mg prescribed daily and Lithium 300mg prescribed daily and Lithium 600mg prescribed at night. On examination, patient was disoriented, non-verbal, but observed to be in no acute distress. Notable laboratory test results on admission demonstrated a white blood cell count (WBC) 7.5 x 103 cells per cubic millimeter (/mm3), neutrophil count of 79.9%, elevated creatinine (cr)

2.10 milligrams per deciliter (mg/dl), lithium level 3.2 mmol/L, sodium level of 149 mEq/L, and potassium level of 6.4 mEq/L. Patient was admitted for management of lithium toxicity and acute kidney injury (AKI). Lithium was immediately discontinued. On day two of admission, patient developed a productive cough and required increased supplemental oxygen support. SARS-CoV2 serology revealed a positive test result and chest x-ray demonstrated a right apical opacity. Over the course of a seventy-two hour period, patient received over 3 liters of intravenous normal saline for treatment of lithium toxicity and management of AKI. Patient's hospital course was complicated by symptoms of delirium secondary to metabolic derangement, AKI, and COVID-19 infection. Despite attempts to administer IV hydration, patient continued to remove the intravenous fluid line, therefore, a nasogastric tube was placed nutritional support, medication administration, and rehydration. Lacking proper restoration of euvolemia, repeat laboratory test results on day six of admission demonstrated significant WBC 19.7x103 cells /mm3, sodium level of 172 mEq/L, creatinine 3.6 mg/dl. Later that same day ultimately, patient expired: cardiopulmonary arrest secondary to complications of COVID-19 infection. This case demonstrates the precarious relationship associated in treating the co-occurrence of COVID-19 infection and lithium toxicity. Rapid identification of lithium intoxication and COVID-19 infection can decrease morbidity and mortality.

No. 74

"Time to Get a Life": Oral Ketamine for Acute Suicidality With Borderline Personality Disorder

Poster Presenter: Misah White

Co-Authors: Gabriel Rivera-Delgado, M.D., Mudhasir Bashir, M.B.B.S.

SUMMARY:

Background: Borderline personality disorder (BPD) is a common, severe, and often debilitating mental disorder with a high prevalence in the psychiatric patient population. Up to 84% of patient with BPD display suicidal behaviors with an average of three suicide attempts in a lifetime; 8-10% of patients with BPD complete suicide [4]. This represents a huge burden on EDs and psychiatric inpatient units, especially given how few options there are for managing BPD. Central to the psychopathology of BPD is malfunction of the affect regulation system, and recent studies implicate the dysregulation of the glutamatergic system of the frontolimbic network [1,2]. New promising data suggest that NMDAR antagonism with memantine can improve BPD symptomatology as an adjunctive therapy [3]. Additionally, emerging evidence supports ketamine, another NMDAR antagonist, as effective in rapidly treating depression and suicidality in MDD through its effects on neural plasticity [5]. Given these positive effects on negative self-schema, its wide availability, cost-effectiveness, and rapid onset, oral ketamine may be a promising option for managing suicidality in BPD. Case presentation: A 62 year-old female was admitted for suicidal ideation in the setting of BPD, treatment-resistant bipolar depression, and PTSD. She endorsed a history of instability of self-image and interpersonal relationships, significant impulsivity, self-injurious behavior, mood lability, chronic emptiness, dissociation with stress, and multiple suicide attempts. We administered 0.5 mg/kg oral ketamine, and the patient experienced immediate and dramatic improvements in mood symptoms, suicidality, and self-assessment of aforementioned BPD symptoms. Prior to administration of ketamine, the patient was actively suicidal on the unit for several weeks, and had attempted suicide on the unit by cutting her wrist. This suicidal ideation rapidly resolved after administration of ketamine and the effect was maintained for 5 days. This was increased to 1 mg/kg for 3 subsequent doses prior to safe discharge. Conclusion: Oral ketamine may be an effective and rapid treatment option for suicidality in patients with borderline personality disorder. This raises the question of the possible utility of ketamine in reducing the length of stay and risk of suicide on the inpatient unit. Additional studies are needed to determine ideal treatment protocol, duration of treatment response, and the role of co-occurring mood disorders on the success of treatment.

No. 75

Covid-19-Negative Psychiatric Units: Mitigating Sequelae of Pandemic Isolation

Poster Presenter: Katrina B. Kostro

Co-Author: Liliya Gershengoren, M.D.

SUMMARY:
Public health guidelines continue to advise social distancing to prevent further spread of the coronavirus disease 2019 (COVID-19). Extended periods of social isolation or quarantine has led to disruption of daily routines, separation from loved ones, and perceived loss of autonomy, the combination of which triggers distress resulting in mood and behavioral dysregulation. Pandemic isolation has contributed to the exacerbation of psychiatric illness including increased anxiety, depression, post-traumatic stress symptoms and even suicide for many individuals. Much of the focus, thus far in the medical literature, has been on COVID-19-positive individuals. However, there is sparse discussion about how COVID-19-negative individuals, specifically in the inpatient psychiatric setting, have been affected. To further illustrate this point, we discuss a case of a patient presenting with psychiatric decompensation in the context of COVID-19 pandemic-associated isolation. We offer recommendations for addressing psychiatric sequelae of isolation on designated COVID-19-negative psychiatric units. We suggest four different practices and their indications: 1) socially-distanced social support in order to mitigate the negative effects of isolation; 2) trauma-guided principles to be utilized during the evaluation process and treatment planning, given the gravity of pandemic-associated traumas; 3) COVID-19 current events groups in the inpatient setting to help clarify a plethora of COVID-19 (mis)information, and provide patients the opportunity to share their own experiences as well as express any concerns; 4) Telehealth proficiency, to provide technical assistance with virtual resources and address the ambivalence patients express about telemedicine. We specify key features of these recommended practices, through which COVID-19-negative psychiatric units can safely cultivate social support to mitigate pandemic isolation, and help prepare patients for outpatient follow-up care in the ongoing uncertainty of the pandemic. This is an opportunity to further examine the infrastructure of psychiatric units in order to better address the needs of patients with serious mental illness, impacted by COVID-19 pandemic-isolation.

No. 76
WITHDRAWN

No. 77
Non-Clozapine Antipsychotic-Induced Neutropenia and Hepatotoxicity in Setting of Chronic Hepatitis C: A Case Report
Poster Presenter: Zackary G. Byard, D.O.
Co-Author: Mansi R. Shah, M.D., M.B.A.

SUMMARY:
Introduction: Clozapine, a second-generation antipsychotic indicated to treat patients with schizophrenia who have not responded adequately to other antipsychotic medications, is known to cause adverse effects including neutropenia, agranulocytosis, and hepatotoxicity.1,2 There are limited case reports of non-clozapine antipsychotics, such as olanzapine3 and haloperidol4 causing neutropenia and hepatotoxicity. Hepatotoxicity and neutropenia, although less common, are serious complications that clinicians need to be aware of before starting any patient on antipsychotic medications.   Case Presentation: We present a case of 33 year old Caucasian woman with past psychiatric history of major depressive disorder, alcohol use disorder, opioid use disorder, and stimulant use disorder, amphetamine type who presented at our community medical center with symptoms of suicidal ideations , worsening depression, paranoia, and auditory hallucinations. The patient's past medical history was significant for chronic hepatitis C. Olanzapine 5mg was started for paranoia and titrated to a total daily dose of 20 mg by day five of admission. Patient's other psychiatric medications included Topiramate, Hydroxyzine and Lorazepam. Olanzapine was improving patient's paranoia. On day six of starting Olanzapine, patient's temperature was 101.9F, WBC count of 2.26 K/uL with ANC of 1.15 K/uL and platelets of 110 K/uL. AST and ALT were approximately 700 each. HCV viral load was 33,000 indicating a chronic infection. Patient started on IV antibiotics, olanzapine was discontinued and patient was transferred to medicine floor from psychiatry. Following day (day seven), lab results showed ANC improved to 2.22 K/uL, AST 371, ALT 841, and ALK-P 330. Due to worsening symptoms, haloperidol was initiated with

a total dose of 2 mg this day. The next day, ANC declined to 1.47 K/uL, platelets 161 K/uL, AST 84, ALT 349, ALK-P 207, total bilirubin 0.6. Given declining ANC, haloperidol was discontinued, receiving total of only 2mg of haloperidol. As per hematology/oncology opinion neutropenia was secondary to olanzapine, then haloperidol use and no further work up was advised at this time. ANC further declined to 1.05 K/uL the following day and other lab values were as follows: platelets 183 K/uL, AST 50, ALT 255, ALK-P 171. ANC further dropped to 1.08, before it started to rise again to 2.73. The following day ANC dropped to 1.23 with platelets 235. Patient left the hospital against medical advice on this day and was lost to follow up care. Conclusion: In this case report, we describe a unique case of acute hepatotoxicity and neutropenia with olanzapine, and then later with haloperidol, in the same patient with underlying history of chronic hepatitis C with a low viral load. Current research studies show neutropenia is commonly associated with antipsychotic drugs like clozapine, but there are limited studies found which indicate neutropenia is seen in patient taking olanzapine.

No. 78

The Toxic Detox: Grapefruit Juice Leading to Quetiapine Toxicity

Poster Presenter: Benjamin P. Morrell, M.D.
Co-Authors: Margaret A. Cinderella, M.D., Sahil Munjal, M.D.

SUMMARY:

Abstract: Background: Grapefruit juice is a potent CYP3A4 enzyme inhibitor (Tassaneeyakul). This has clinical implications on the metabolization and effect of numerous medications (Seden). Quetiapine has high levels of oral absorption but is metabolized and inactivated extensively by the CYP3A4 system on first-pass metabolism (FDA package insert) and thus has very low (9%) overall bioavailability (9%) (Narala). Therefore, inhibition of CYP3A4 would theoretically lead to significantly elevated blood levels and drug toxicity. Case: We present a case of a 28-year-old woman with a history of Bipolar I Disorder, Cannabis Use Disorder and cannabis induced psychotic disorder who developed an acute mental status change while on quetiapine ER 800 mg nightly. She presented to the hospital with tachycardia, nausea, vomiting, severe lethargy, feelings of anxiety, disorganized speech, episodes of eye fluttering, jerking motions, and eye rolling. Medical workup including CT Head, CXR, TSH, Blood Cultures, Ethanol, Acetaminophen level, and Serum Osmolality were negative. Pertinent findings include: CMP (K+ 3.1, CL 84, BUN 46, Anion Gap 26) lactic acidosis 2.3, Urine Drug Screen (+) THC, WBC 22, Urinary analysis (Protein 50, Glucose 30, ketone 20, blood 2+, >30 Hyaline Casts), and EKG QTC 510. Symptoms resolved spontaneously over the next 24 hours with discontinuation of Quetiapine and no further ingestion of grapefruit juice; repeat labs and EKG normalized by day 4 of admission. Quetiapine ER 400 mg was restarted on day 3 and was well tolerated. Patient was subsequently discharged to home with plans to titrate back to initial dose by her outpatient psychiatrist. Discussion: This patient's clinical presentation was consistent with quetiapine overdose due to initial symptoms of alpha 1 receptor blockade (tachycardia) H1 receptor blockade (sedation), and D2 blockade (dystonic-like movements) alongside other symptoms of overdose such as QTc prolongation, nausea, vomiting, anxiety and disorganization. The patient adamantly denied intentional overdose and collateral information revealed both long-term psychiatric stability prior to abrupt change in mental status and recent ingestion of large amounts of grapefruit juice. This led us to conclude that her "overdose" was unintentional and a result of decreased metabolism rather than increased ingestion of quetiapine. Conclusion: This case highlights the potential of grapefruit juice to substantially increase Quetiapine blood levels. The interaction between quetiapine and grapefruit juice has not been described in the literature and represents a novel interaction with strong theoretical background. It is important for psychiatrists to be aware of the potential for grapefruit juice to interfere with metabolism of numerous psychiatric medications.

No. 79

A Case of Enuresis With Use of Risperidone in a Patient With Schizoaffective Disorder

Poster Presenter: Ashish K. Sarangi, M.D.
Co-Author: Daniel Y. Cho, M.D.

SUMMARY:
Risperidone is one of the most commonly prescribed antipsychotic worldwide due to its broad clinical applications. Generally well tolerated, side effects such as, hyperglycemia, weight gain, dyslipidemia, metabolic syndrome, hyperprolactinemia and its consequences are commonly reported. Although enuresis is not one of the more frequently discussed side effects of Risperidone, it can be distressing and disruptive to the patient''s overall functioning. There are many causes of enuresis; it could be psychological, medical, or pharmaceutical in its origin. A comparative cohort study of patients from New Zealand found that 6.2% of participants taking Risperidone experienced enuresis, a much lower percentage than other antipsychotics. It is plausible that individuals who experience Risperidone-induced enuresis will have similar effects with similar antipsychotics; therefore, becoming non compliant with their medications and suffering from a lower quality of life. Other atypical antipsychotics such as, Clozapine are known to carry a significantly higher risk of causing nocturnal enuresis, occurring at a rate of 20.7%; Olanzapine, Quetiapine, and Risperidone were found to have an incidence of 9.6, 6.7, and 6.2%, respectively. Risperidone is known to have lower risk of enuresis when compared to other atypical antipsychotics, but the underlying mechanisms are yet to be completely understood. Although generally well tolerated, side effects such as, fatigue, difficulty concentrating, difficulty remembering things, restlessness, weight gain, and depression are commonly reported. An animal study has suggested that Risperidone impacted the urination response through a variety of mechanisms. Several pharmacologic interventions for Risperidone-induced enuresis such as, anticholinergics, alpha-1 agonists, and desmopressin have been tried and varied in their success. Many cases of Risperidone-induced enuresis have been reported to occur in those taking SSRI's. Various treatments have been effective in treating antipsychotic induced enuresis. Clozapine-induced enuresis has been effectively treated with anticholinergic agents, antidepressants, desmopressin, and alpha-1 adrenergic agonists. Reboxetine, a selective noradrenaline reuptake inhibitor antidepressant, has been used to treat risperidone-induced enuresis, suggesting a central noradrenergic cause of pathologic enuresis. Various genetic polymorphisms in dopaminergic transmission and in proteins involved in crosstalk with serotonergic receptors have shown to be important in risk of developing schizophrenia and responsiveness to anti-psychotics. Likewise, these polymorphisms could explain the varied rates of adverse effects seen from antipsychotic treatment. Here we present a case of enuresis in a 32 year old man with a history of Schizoaffective disorder who endorsed significant enuresis after being initiated on Risperidone. His enuresis promptly disappeared after a switch to Quetiapine was made.

No. 80
WITHDRAWN

No. 81
A Case Report and Literature Review of Olanzapine-Induced Neutropenia
Poster Presenter: Connie Ling Koons, M.D.
Co-Authors: Hassaan Gomaa, M.D., Alfredo Bellon, M.D., Ph.D.

SUMMARY:
Background: Olanzapine is a second-generation antipsychotic that has various FDA approved indications. It is a powerful antipsychotic but has a myriad of side effects such as hyperglycemia, hyperlipidemia, weight gain, tardive dyskinesia, orthostatic hypotension, and increased risk of death for elderly patients. Neutropenia is a rare side effect but could be potentially serious. How olanzapine elicits neutropenia is unknown but could be related to its structural similarity with clozapine. **Methodology**: We present a case of olanzapine-induced neutropenia after two years of tolerating the medication in the setting of medication reinstitution. We also reviewed the literature on olanzapine-induced neutropenia. **Results**: A 55-year-old African American male with history of Human Immunodeficiency Virus (HIV) and a psychiatric history of schizoaffective disorder, alcohol use disorder, and stimulant use disorder, cocaine type who presented to an inpatient hospital with a psychotic episode due to non-adherence to olanzapine. He had been stable on olanzapine for

two years prior to presentation. A few episodes of destabilization occurred due to medication non-adherence. Olanzapine was restarted, and a week later his absolute neutrophil count (ANC) was 670 cells/µL compared to 1670 cells/µL on admission. Olanzapine was stopped and three days later, ANC rebounded to 1410 cells/µL. He was unable to tolerate a trial of ziprasidone due to side effects and requested to restart olanzapine. Olanzapine was restarted and 2 days later, ANC again dropped to 760 cells/µL. Olanzapine was stopped and ANC rebounded to 1220 cells/µL after 4 days. A literature review revealed 22 other cases of olanzapine-induced neutropenia. Typically, olanzapine-induced neutropenia occurs within 0 to 18 months from start of medication. It appears that women are more affected than men (13:9). In addition, multiple cases demonstrated recurrent neutropenia with other second generation antipsychotics. In most cases, neutropenia resolved in less than a week from discontinuing olanzapine. **Conclusion**: Olanzapine may cause neutropenia even if well-tolerated initially. Clinicians should be aware of this potentially serious side effect. Large scale trials are needed to assess the incidence of neutropenia with olanzapine and to establish whether guidelines are needed to monitor neutrophil counts in patients receiving olanzapine.

No. 82

A Case Report of Dramatic Improvement in Treatment Resistant Depression: Memantine Priming Therapy Induces Augmented Oral Ketamine Response

Poster Presenter: Kristin L. Smoot, B.S.
Co-Author: Prajeeth Kumar Koyada, B.S.

SUMMARY:

Background: Treatment resistant depression (TRD) encompasses one third of patients suffering from a depressive episode that fails to achieve remission with at least 2 antidepressant therapies. ECT continues to remain the superior therapy for TRD. However, in recent years, the NMDA receptor (NMDAR) antagonist ketamine has shown rapid antidepressant efficacy in both treatment resistant unipolar and bipolar depression.1,2 A recent meta-analysis demonstrated an average reduction in Hamilton Depression Rating Scale (HAM-D) of 10.9 post-ketamine treatment.3 Ketamine blocks the NMDAR to ultimately augment expression of neurotrophic factors implicated in reversal of depression-associated circuit abnormalities, notably in the prefrontal cortex (PFC).4,5 Another NMDAR antagonist, memantine, has demonstrated both cognitive effects and efficacy in improving bipolar depressive episodes.6 However, in contrast to ketamine, memantine monotherapy does not appear to reliably exhibit rapid antidepressant effects, perhaps due to its inability to promote neurotrophic factor expression. Interestingly, memantine does increase NMDAR levels in the PFC in rats.7 However, SSRI augmentation with memantine for TRD failed to show efficacy.8 This case uniquely proposes ketamine augmentation with pre-treatment memantine for a case of severe treatment resistant bipolar depression refractory to ECT. Case Presentation: A 62-year-old woman with treatment resistant bipolar depression with prior limited response to ECT, borderline personality disorder, and PTSD presented with SI, worsening bipolar depression, and pseudodementia likely secondary to MDD (MoCA 25/30). During hospital course, decision was made to forego further ECT after 15 unsuccessful sessions. In the setting of cognitive impairment and bipolar depression, memantine 5mg was added. Twelve days later, patient reported no improvement in depressive symptoms (HAM-D 33). Ketamine 0.5mg/kg PO was started, patient subsequently reporting immediate and marked improvement in depressive symptoms and suicidality (HAM-D 7). This 26-point reduction was greater than what has previously been reported with ketamine monotherapy.3 Conclusion: Pretreatment with memantine potentially augmented ketamine's antidepressive and antisuicidality effects, as evidenced by the 26-point robust difference between pretreatment and postreatment HAM-D scores. Our current theory is that priming therapy with memantine upregulated NMDAR in critical brain regions such as the PFC. Once initiating ketamine therapy, a greater number of NMDAR were available for ketamine to exert its therapeutic effects. Additional studies are needed to determine optimal memantine dose, timing, regimen, and duration of treatment response. While this patient had no hypomanic symptoms, further

follow-up and monitoring for precipitation of hypomanic or manic episodes is needed.

No. 83
WITHDRAWN

No. 84
WITHDRAWN

No. 85
WITHDRAWN

No. 86
Antipsychotic Medication Effectiveness in Post-TBI Related Agitation and Aggression: A Systematic Review
Poster Presenter: Steven Anthony Vayalumkal, M.D.
Co-Authors: Shahan Syed, M.D., Shahan Sibtain, M.D.

SUMMARY:
Traumatic brain injuries (TBI) in the United States (USA) are responsible for significant cognitive, psychosocial, and physical disruptions in patients' livelihoods. Challenges experienced by victims of TBI include memory loss, disinhibition, distractibility, and the inability to acquire or store new information. TBIs account for various neuropsychiatric symptoms requiring various therapeutic modalities and management strategies. These symptomatologies vary based on the complex interplay between psychological, social, and biological factors. The prevalence of agitation and aggression can be as high as 70% in TBI victims. Various classes of medications have been used to manage these symptoms including antipsychotics, anxiolytics, and antiepileptic. Many TBI patients receive typical and atypical antipsychotic medications (APDs) to manage these maladaptive behaviors despite minimal evidence supporting their long-term use. Specifically, the effects of APDs, during and after cessation of therapy, on the fragile homeostasis of the recovering brain after a traumatic event. Findings from past studies have yielded conflicting evidence about the role of antipsychotics in TBI patients; more recent literature has suggested that antipsychotics can actually hinder recovery. Antipsychotics can increase posttraumatic amnesia (PTA) intervals, decrease cognitive ability, and exacerbate motor deficits in these patients. Nonpharmacologic options should be considered prior to antipsychotic medication administration. TBI's have the potential to cause persistent and multifaceted consequences therefore an individualized rehabilitation plan should be emphasized for each patient.

No. 87
Antipsychotic Use as Adjunctive Therapy in Treatment Resistant Depressio
Poster Presenter: Syed Naveed Kamal, M.D.
Co-Authors: Rene Compean, M.D., Sameerah Akhtar, Ghulam Sajjad Khan, M.D.

SUMMARY:
Major Depressive Disorder is a leading cause of disability in the US and is known to be a significant risk factor for suicide and ischemic heart disease. It accounted for 16 million of the disability-adjusted life years associated with suicide and 4 million of the disability-adjusted life years associated with ischemic heart disease. Research has shown that untreated depression has both a functional and neuroanatomical effect on the patient. Given the disease burden and link to suicidality as well as increased mortality with other comorbid conditions, MDD is a serious and life-threatening condition that is a leading cause of disability in the world. Selective serotonin reuptake inhibitors and serotonin-norepinephrine reuptake inhibitors currently represent the first line of treatment of depression in the US. Unfortunately, a large number of patients do not experience therapeutic benefit from these first-line agents. Lack of sufficient response to adequate treatment remains a critical problem in the management of patients with MDD. Up to two thirds of patients treated with first-line antidepressant monotherapy do not reach full remission, and as many as a third become treatment resistant. Not achieving remission has been shown to be predictive of poorer psychosocial functioning, higher rates of relapse, and higher rates of suicide. The results of the STAR*D study suggest that with successive failures of treatment, patients are less and less likely to respond to subsequent treatment, and those who do respond are more likely to relapse. Present strategies available to treat patients

who do not respond to first-line antidepressant monotherapy include switching of antidepressant (either within or between classes); combination therapy in which multiple antidepressants are used simultaneously; augmentation of ongoing antidepressant monotherapy with adjunctive use of drugs such as mood stabilizers or atypical antipsychotics; and the use of nonpharmacologic treatments including psychotherapy and phototherapy, vagus nerve stimulation, transcranial magnetic stimulation, and electroconvulsive therapy. The drugs currently approved for use as adjunctive therapy to antidepressants for the treatment of MDD—namely, the atypical antipsychotics—are aripiprazole, quetiapine fumarate, and brexpiprazole. Olanzapine in combination with fluoxetine has also been shown to be effective in the treatment of treatment resistant depression. There have been several proposed treatment algorithms to define the most appropriate use of antipsychotics for patients with treatment-resistant depression. Of some debate is which antipsychotics may be considered "first line" adjunctive therapy in the management of treatment resistant depression. We explore and summarize this emerging area of research for the benefit of the prescribing psychiatric clinician

No. 88

Antipsychotic-Induced Urinary Retention Secondary to Haloperidol in a Female With Paranoid Schizophrenia

Poster Presenter: Seyed Alireza Hosseini, M.D.
Co-Authors: Sara Abdijadid, D.O., Rama Yasaei, M.D.

SUMMARY:

A 46-year-old female with a past psychiatric history of schizophrenia, paranoid type, was placed on an involuntary hold and admitted to the inpatient psychiatric unit secondary to acute agitation, aggressive behavior, and persecutory, grandiose and somatic delusions. The patient had a history of multiple psychiatric hospitalizations and a poor outpatient and medication Adherence. She was initially started on aripiprazole which was later changed to risperidone without any noticeable improvement. The patient reported a previous good response to haloperidol during a later interview and the psychiatric team elected to initiate haloperidol at dose of 5 mg twice daily, which was titrated up to 10 mg three times daily, within two weeks. Although the patient was less paranoid during this transition, she continued to refuse her daily meals and oral medications in many occasions, asserting that her food is being poisoned, and her kidneys are being affected by medications. Therefore, she frequently required intramuscular administration of 5 mg short-acting haloperidol as an alternative. Approximately two weeks after the initiation of haloperidol, the patient reported voiding difficulties, stating that "my urine is going back inside" and "my bladder is going backward." Subsequently, physical examination revealed palpable bladder and tenderness on deep suprapubic palpation. Urinary catheterization was performed with a straight catheter and approximately 1500 ml of clear urine was evacuated. Due to the proximity of haloperidol treatment to the onset of urinary retention, the inpatient team discontinued haloperidol immediately. Urologic and gynecologic examinations, urinalysis, urine toxicology, and blood tests including creatinine were normal. Retroperitoneal and pelvic ultrasonography did not reveal any organic pathology which might have contributed to the onset of urinary retention. Although the patient required another catheterization, she was able to pass urine without difficulty and with a normal output in 24 hours and no longer complained of urinary symptoms for the rest of her hospitalization. Urinary retention is a rare but well-documented adverse effect of antipsychotic medications that can be reversible on cessation or dose reduction of the contributing medication. Considering that AUR is a urological emergency, it is important for healthcare providers to remain mindful that urinary retention can be triggered by antipsychotic drug use. Moreover, potential misattribution of physical symptoms to mental illnesses, particularly in patients with somatic delusions, can pose a further diagnostic challenge for psychiatrists. In this poster, we discuss the diagnostic challenges and importance of antipsychotic-induced urinary retention in patients with mental illnesses.

No. 89

Aripiprazole-Induced Tardive Dyskinesia: An Underrecognized Threat?

Poster Presenter: Paul Brindley
Co-Authors: Elizabeth Mays, Leyla Choobineh, M.D., Leah Kolar, M.D.

SUMMARY:

Introduction: Tardive dyskinesia (TD) is an involuntary movement disorder that results after exposure to dopamine antagonists. TD classically manifests as involuntary oro-bucco-lingual and facial dyskinesia, as well as limb, trunk, and respiratory involvement (1). Atypical antipsychotics (AA) are presumed to confer lower risk of TD compared to typical antipsychotics (TA) (2). Among the AA, aripiprazole (ARI) is shown to have the lowest risk of TD (2). ARI is a second-generation antipsychotic widely prescribed for psychotic and mood disorders due to its efficacy and perceived minimal side-effect profile. Blockade of 5HT2A receptors is hypothesized to protect striatal dopaminergic neurons and is responsible for its lower incidence of TD (3). However, we propose ARI may be underrecognized as a cause of TD at low doses, after short treatment durations, and after treatment discontinuation. The occurrence of ARI-induced TD may be greater than currently considered. **Case Series**: 1: A 79-year-old female with bipolar II disorder treated with ARI 2 mg daily for 15-months developed oropharyngeal and truncal TD within 3-weeks of discontinuing ARI due to tremor. Despite attempts with multiple pharmacological interventions, the TD did not resolve. Within six-weeks, the patient's tongue was abraded from dyskinetic movements and her ability to swallow was markedly limited. Ultimately, she died of dehydration and starvation after declining feeding tube placement. 2: A 60-year-old female with major depressive disorder (MDD) treated with ARI 10 mg daily for two years developed orofacial TD. After discontinuation of ARI, symptoms persisted. 3: A 49-year-old male with MDD treated with ARI 2 mg daily for 4 months developed orofacial TD shortly after discontinuing ARI due to remission of depression. TD symptoms persisted. **Literature Review**: The following is a summary of these 3 cases plus 21 cases identified via literature review of ARI-induced TD (4-20). •14/22 (64%) of cases occurred with low dose ARI (≤ 10 mg daily) •19/22 (86%) were treated with ARI 24 months or less, of those 7/22 (32%) were treated with ARI 4 months or less •5/22 (23%) developed TD after discontinuation of ARI **Conclusion**: This review of 24 cases suggests that ARI may be underrecognized as a cause of TD at low doses (≤ 10 mg daily) and after short treatment durations (≤ 24 months). Additionally, ARI-induced TD can be unmasked after discontinuation of ARI. The accumulating reports of ARI-induced TD should serve as a warning that TD may be an increased risk with ARI. Particularly, when treating patients with MDD, we urge clinicians to carefully consider the possible increased risk of ARI-induced TD.

No. 90

Atypical NMS in an Atypical World: Hyperthermia and Psychotropics in the Setting of the COVID Pandemic

Poster Presenter: Samantha L. Conde, M.D.
Co-Authors: Aatif Mansoor, M.D., Veena Bhanot, M.D.

SUMMARY:

In this case, we discuss the way COVID-19 has transformed our approach towards patients on antipsychotic medications presenting with fever. The patient is a 31-year old Caucasian male with a past psychiatric history of schizophrenia and past medical history of carcinoid tumor of the appendix, status-post resection, admitted to inpatient psychiatry for psychosis, paranoia, and delusions in the setting of medication non-compliance. He was initially started on olanzapine, and this was switched to clozapine due to non-response. The patient initially tolerated clozapine with normal absolute neutrophil counts and the dose was titrated up to 100 mg. After being on clozapine for a week, the patient continued to be psychotic, paranoid, and delusional. Nursing staff reported that he may have been "cheeking" his medications; his clozapine was then changed to the oral dissolving tablet formulation. Approximately six days later, the patient unexpectedly developed a fever of 100.4F and reported generally feeling unwell. On examination, the patient was vitally stable aside from his fever, and neuromuscular exam revealed no lead-pipe rigidity or muscle stiffness. Emergent labs were drawn, with results including a normal creatinine kinase level, but revealed elevated

high-sensitivity troponin. His electrocardiogram was normal, without any new ischemic changes. The patient was transferred to the medical floor for concerns of clozapine-induced myocarditis, but his differential included other infectious processes including COVID-19, as well as atypical neuroleptic malignant syndrome. Blood cultures, urinalysis and culture, chest x-ray, viral respiratory panel (including SARS-CoV-2 RT-PCR) were all negative. Further medical work up revealed eosinophilia without leukocytosis and elevated C-reactive protein and brain natriuretic peptide- all suggestive of clozapine-induced myocarditis. Of note, his transthoracic echocardiogram was normal with ejection fraction of 50-55% and no regional wall motion abnormalities, and a cardiac MRI was normal. The diagnosis of atypical neuroleptic malignant syndrome was considered, as it can present with 2 of the 4 cardinal symptoms of NMS (fever, rigidity, mental status changes, and autonomic instability) in the setting of an offending agent. However, it is challenging to distinguish atypical NMS from side effects of the medications themselves, given the distinct overlap in symptoms1. Not all patients with clozapine-induced myocarditis develop resultant cardiomyopathy2, and it was concluded that our patient's clinical picture and eventual workup was most suggestive of this scenario. This case illustrates the impact of COVID-19 on the differential diagnosis of fever in the high-risk, inpatient psychiatric setting, and demonstrates the challenges in, and importance of, accurately diagnosing side effects from antipsychotic medications such as clozapine.

No. 91
Benzodiazepine Withdrawal Manifesting as Delirium

Poster Presenter: Yvonne Lu
Co-Author: Leigh Goodrich

SUMMARY:

INTRO: In the healthcare setting, handover refers to the transfer of information, care and responsibility for patients from one professional to another. It is used in multiple medical contexts, but it is of particular importance in the emergency room where shift changes happen two to three times a day. A poor transfer of information during handover between physicians may lead to more medical errors and lawsuits. Despite the negative consequences of poor handovers, only a few high-quality studies have been conducted to identify best practices. The I-PASS model was developed in order to standardize the handover process. I-PASS is a mnemonic tool which stands for Illness severity; Patient summary; Action list; Situation awareness and contingency planning; Synthesis by receiver. Psychiatrists, nurses and residents at the Montreal Jewish General Hospital (JGH) psychiatric emergency were trained and the I-PASS handover model was then implemented. METHOD: 31 psychiatrists, nurses and residents working at the JGH psychiatric emergency participated in a training session. A pre-training questionnaire was first filled by participants to examine the current status of handovers at the JGH psychiatric emergency. After the training, a second questionnaire was sent to measure the perceived quality of the handover training session, as well as benefits and challenges of the I-PASS handover model prior to its implementation. Finally, following the implementation, 2 focus groups were held to collect feedback from participants. Content analysis was performed to classify all statements into different categories and themes. RESULTS: Pre-implementation: 95% of participants reported that handover occurred at every shift change but 75% said that the information was incomplete. After the training, the most significant anticipated obstacle for implementation was the lack of time to properly fill out the form, especially when it is busy in the emergency. Training was overall much appreciated and 77% of participants were able to correctly identify all 5 steps of the I-PASS protocol following the training. During the focus groups, post-implementation, participants unanimously acknowledged an improvement in the handover process. Handovers were faster and more direct and provided all key information about patients. It was also noted that the quality of the information was better. It was suggested to adapt the form to remove unnecessary details and include specific key information. The use of a typed format instead of written notes was also recommended. CONCLUSION: Overall, the implementation of the I-PASS handover model at the JGH psychiatric emergency was much appreciated by psychiatrists, nurses and residents. It has resulted in more comprehensive handovers as

well as an assurance of key information being transferred.

No. 92

Breakthrough Manic Symptoms Upon Changing Injection Site of a Long-Acting Injectable Antipsychotic: A Case Study

Poster Presenter: Saeed Hashem, M.D., M.Sc.
Co-Author: Mohamed Wagdy Mohamed Elsayed, M.D.

SUMMARY:
The use of the long-acting injectable (LAI) form of antipsychotics has long been approved for the maintenance treatment of both chronic mood and psychotic disorders[4]. One significant benefit of switching to LAI form usage is the alleviation of treatment non-adherence, given their infrequent - and convenient- intramuscular administration (once or twice monthly)[3]. Most of the LAIs can be administered either in the deltoid or the gluteal regions. Aripiprazole has been approved by the Food and Drug Administration (FDA) for the maintenance treatment of bipolar I disorder in adults[2]. Abilify Aristada (aripiprazole lauroxil), on the other hand, has been used off label for the same indication [5]. Recommendations provided by the manufacturer for Aristada outline that the 441mg prefilled syringe can be given in either the deltoid or the gluteal region, with the assumption that Aristada's pharmacokinetics are similar for both deltoid and gluteal intramuscular injections[1]. In contrast, only gluteal injection is recommended for the 662mg, 882mg, and 1064mg prefilled syringes, with no reports on differing pharmacokinetics for the deltoid region. Within this context, we report a case of a patient with bipolar I disorder who experienced breakthrough manic symptoms upon changing her usual site of administration of Aristada (aripiprazole lauroxil). Ms. A is a 33-year-old woman with a diagnosis of bipolar I disorder with psychotic features. She had a history of multiple inpatient psychiatric hospitalizations for manic episodes (presenting with clinically significant symptoms of insomnia, irritability, pressured and loud speech, somatic preoccupation, and sexual and social disinhibition, along with paranoid and somatic delusions). She was then stabilized on a combination of oral Depakote 750mg daily and IM monthly Abilify Aristada 882mg (gluteal) for four months. On her fifth monthly visit, she received her injection in the deltoid region instead. Two weeks later, she developed insomnia, irritability, racing thoughts, pressured speech, and increased somatic preoccupation, which lasted for three days and were partially controlled by adding oral Benadryl. When her dose was given in the gluteal region in the following month, her symptoms resolved. Such a presentation could warrant studying the difference in pharmacokinetics between the gluteal and deltoid injections of the Aristada 882mg.

No. 93

Bupropion Induced Manic Episode With Psychosis: A Case Report

Poster Presenter: Raheel A. Chaudhry, M.D.

SUMMARY:
Introduction: Bupropion is an FDA-approved antidepressant used to treat major depressive disorder, seasonal affective disorder, and nicotine addiction. Bupropion is a norepinephrine dopamine reuptake inhibitor (NDRI) and considered to carry a much lower risk of inducing mania or hypomania compared with other antidepressants so sometimes it is prescribed as an off-label treatment in bipolar depressive episode. We present a case report of a patient who experienced a manic episode with psychotic features after increasing the dose of bupropion in the treatment of major depressive episode and discuss the risk of this adverse outcome in clinical practice. Case Report: Mr. M is a 43-year-old male, who was diagnosed with Bipolar depressive episode / Major depressive episode and received bupropion 150 mg a day. The dose of bupropion was recently increased to 300 mg a day due to inadequate response to his depressive symptoms. A week later, he exhibited expansive mood, irritability, hyper-talkative, hyperactivity, marked delusions and grandiosity. The manic symptoms were subsided after discontinuation of bupropion and after prescribing olanzapine and divalproex sodium. The risk factors for his manic episode included increasing the dosage of his bupropion. So we performed a thorough literature review of common databases including: Cochrane,

PubMed, Embase, Google Scholar, Elsevier Science, Clinical Key, Medline, Web of Science. Search Terms: Bupropion-induced mania, bupropion induced hypomania, bupropion and bipolar disorder, association of bipolar disorder with bupropion, bupropion-induced mood shift, bupropion and bipolar depression, bupropion and 1st manic episode. Conclusion: Antidepressant drug use in bipolar disorder has a potential risk of switching patients into manic or hypomanic episode, even though bupropion is believed to be associated with a decreased risk compared with other antidepressant but its potential risk of shifting people into mania/hypomania is dose dependent. Through this case discussion and review of current literature, we highlight and present information on the possible mechanism by which higher dose of bupropion can lead to manic or hypomanic episode. The literature supports a strong positive correlation between dose dependent response of bupropion causing mania or hypomania. We alert clinicians to be aware of bupropion use in higher doses in patients with bipolar depression since it can induce a manic episode and alert clinicians to provide appropriate treatment recommendations to avoid such potential situations.

No. 94
Cannabis Use in Delusional Infestation With Folie à Deux

Poster Presenter: Jason S. Lee, M.D.
Co-Authors: Erin Dean, M.D., Xavier Jimenez, M.D.

SUMMARY:
Delusional infestation (DI) is a rare psychiatric condition which occurs when individuals falsely believe that their skin or body is infested with insects, parasites, or other pathogens. Previous studies have shown that substance use is common in individuals with DI, but few have investigated which drugs are most often associated with the development of DI. One person's delusions may also be transmitted to other individuals through a syndrome known as folie à deux. Here we present two related cases of DI informed by substance use. The first patient is a 65-year-old male with a history of major depressive disorder and 42 years of near-daily recreational cannabis use who was admitted medically for progressive weakness and abdominal pain. Psychiatry was consulted after the patient voiced concern that his presenting symptoms were an adverse reaction to holistic remedies that he and his wife used to self-treat their parasite infections. Both endorsed mites invading and exiting their bodies for several months. Concurrently, the patient's wife, a 71-year-old female with a history of daily medical cannabis use, depression, and anxiety presented to the emergency department portraying a similar story to her husband. A chart review revealed recent outpatient dermatologic evaluation that ruled out dermatopathology. While the male patient was discharged home, the female patient was involuntarily hospitalized for overt psychosis. Risperidone proved beneficial in treating her somatic complaints and improving her overall functioning. While previous studies have linked substance use to DI, these cases further substantiate the likely role of chronic cannabis use in the development of DI. This clinical association, however, is at odds with imaging studies which show decreased dopamine release and dopamine active transporter availability in the striatum of chronic cannabis users. With increased dopamine transmission implicated in the etiology of psychosis, it is unclear how chronic cannabis use may trigger DI. Although DI usually occurs in isolation, this illness is occasionally shared with others through folie à deux. While the rate of folie à deux amongst patients presenting to a psychiatric hospital for a general complaint is reported to be 1.7% to 2.6%, studies show that 5% to 15% of DI cases have a folie à deux component. Although the exact prevalence of folie à deux is unclear, this condition is likely overlooked in clinical practice. These two related cases of DI suggest a likely novel mechanism by which long-term cannabis use triggers psychosis, including DI. More detailed examination of the neurobiological effects of chronic cannabis use may elucidate more targeted therapies for psychotic illnesses. From a clinical perspective, these cases highlight the importance of screening for substance use and folie à deux, especially in the setting of DI.

No. 95
Case Report: Valbenazine as Potential Contributor to Worsening Depression

Poster Presenter: Andrew T. Chen, M.D.

Co-Author: Adeeb Yacoub, M.D.

SUMMARY:
Introduction: Tardive dyskinesia (TD) is a side effect associated mainly with first generation antipsychotic use characterized by involuntary repetitive movements, generally of the mouth and lower extremities. Valbenazine was approved in 2017 by the FDA for treatment of tardive dyskinesia. We discuss a case report where Valbenazine may have exacerbated a patient's depression. **Method**: We present a case report as well as a review using an extensive PubMed search of the literature over the last 50 years published in the English language. **Case Report**: A 65-year-old female with a history of depression, no prior suicide attempts or hospitalizations, presented with severe depression. She had been stable on antidepressant medications for years until she had been started on Valbenazine by her neurologist for possible tardive dyskinesia. In the months following, her depression gradually worsened despite appropriate trials of different medications. Eventually, her condition worsened to the point that she was barely eating and functioning, requiring inpatient admission. On admission, she was noted to have severe depression and catatonic signs such as mutism, stupor, and withdrawal. Valbenazine was discontinued and she began treatment with ECT. In a few weeks, the patient's catatonia resolved and her depression improved significantly. She was discharged with outpatient management. **Conclusion**: To our knowledge, this is one of the first case reports that suggest a potential link between Valbenazine and worsening depression. Valbenazine is a Vesicular Monoamine Transporter 2 (VMAT2) inhibitors and acts to inhibit the transport of monoamines such as dopamine, serotonin, and norepinephrine from the synaptic cleft to the vesicles of neurons. This depletion of dopamine addresses D2 receptor hypersensitivity in the nigrostriatal pathway, theorized as the possible etiology of TD. However, other neurotransmitters including serotonin and norepinephrine would also be depleted. Considering that the mainstays of treatments for depression are medications that increase the amount of monoamines in the brain, it is reasonable to consider that VMAT2 inhibition may lead to or exacerbate depression. Tetrabenazine, another VMAT2 inhibitor with which Valbenazine shares a common metabolite, has been linked to worsening depression and suicide. Flinders sensitive line (FSL) rats, which exhibit clinical signs of depression such as anhedonia and psychomotor retardation, have also been found to have decreased VMAT2 expression. As Valbenazine use becomes more prevalent, further studies of Valbenazine and its effects on depression are needed.

No. 96
WITHDRAWN

No. 97
Clinically Significant Difference in Response to High Potency Conventional Antipsychotics
Poster Presenter: Noreen Mohsin
Co-Authors: Stephanie Bonafoux, D.O., Mousa Botros, M.D.

SUMMARY:
Introduction: Genetic polymorphisms in the dopaminergic and serotonergic receptors involved in psychiatric disorders present a significant predictor of therapeutic outcome. Multiple studies suggest no significant difference between atypical and typical antipsychotics for discontinuation rates, or effect of symptoms. About a third of patients with schizophrenia are treatment resistant. We are presenting a case of a 64-year-old female with schizophrenia whose psychotic symptoms had a clinically different response to high potency conventional antipsychotics. Case history: 64-year-old female with paranoid schizophrenia with multiple hospital admissions for psychosis, was stabilized on fluphenazine 37.5mg intramuscular injection every two weeks and quetiapine 200mg by mouth at bedtime. Upon discharge, fluphenazine was switched to haloperidol decanoate 150mg intramuscular injection for longer intervals between injections. Patient was not compliant with her oral medications but continued to receive monthly injections through home health care for 4 months. A week after her last haloperidol decanoate injection, she became psychotic and disorganized, and violent towards family members, leading to an involuntary hospitalization. Hospital course: On admission, haloperidol was restarted orally and the dose was titrated to 10mg by mouth twice daily. She was

noted to have an abnormal urinalysis and received a course of ceftriaxone 1gm intramuscular injection every day for one week after being non-compliant with oral antibiotics. She was started on clonazepam 0.5mg by mouth twice daily for anxiety. She was alert and oriented to time, place and person but remained grossly psychotic, responding to internal stimuli, loud, agitated, and violent towards patients and staff. Haloperidol was switched to fluphenazine and the dose was titrated to 5mg by mouth in the morning and 10mg by mouth at bedtime with a significant reduction in psychotic symptoms. Fluphenazine decanoate was restarted on day 12 at 37.5mg intramuscular injection to ensure compliance. Patient became calm, cooperative, compliant with oral medications and treatment plan. She was discharged on day 19 back home to the care of her family. Conclusion: We are noting a clinically significant difference to two high-potency conventional antipsychotics, despite a fair compliance using long acting injections. Treatment for schizophrenia should be tailored to an individual level, centered around the person's pharmacogenomics, clinical history, social and cultural perspectives, to best target psychotic symptoms.

No. 98
Clozapine Myocarditis in a Hospitalized Young Adult Male: A Case Report
Poster Presenter: Kimberly Alecia Curtis, M.D.
Co-Authors: Ihuoma O. Njoku, M.D., Pamila A. Herrington, M.D.

SUMMARY:
Clozapine is the original atypical antipsychotic. It has several different uses, including in the case of treatment-resistant schizophrenia, and suicidality in thought disorder, in bipolar disorder as a treatment for mania, and as an adjunct for treatment-resistant depression. One of its most known dangerous side effects is agranulocytosis, which is monitored through the clozapine REMS program. A rarer side effect, myocarditis, typically occurs in the first 6 weeks of treatment. However, in other countries clozapine myocarditis is diagnosed more frequently, possibly due to more rigorous monitoring leading to early and accurate detection. We present a case of clozapine myocarditis in a 21-year-old hospitalized male.

No. 99
Clozapine-Induced Diabetic Ketoacidosis: A Case Report
Poster Presenter: Zargham Abbass, M.D.
Co-Authors: Matthew A. Bond, M.D., Nikita Shah, M.D.

SUMMARY:
Clozapine is the medication with evident benefits in treatment-resistant schizophrenia. However, many eligible patients never receive it. In the United States, 20-30% of patients with schizophrenia can be classified as treatment resistant; however clozapine is only prescribed in less than 5% (1). Due to this under-prescription of clozapine, some have called it 'clozaphobia.' This is due to an extensive side effects profile leading to approximately 17% of patients eventually stop taking it (3). Clozapine side effects are divided into two categories: a) most common; and b) rare to very rare side effects. Here, we present a unique case of a 24 year old male who was started on clozapine and admitted to the medical floor one month later with signs and symptoms consistent with diabetic ketoacidosis (DKA). We will discuss his medical course including lab comparison before and after clozapine titration. Further, we will discuss the history of clozapine, epidemiology, mechanism of clozapine induced DKA, and treatment strategies after DKA.

No. 100
Diagnostic and Treatment Approach to an Active Duty Service Member With Schizoaffective Disorder and Persistent Bizarre Delusions
Poster Presenter: Tyler Price, M.D.
Co-Authors: Savannah Lee Woodward, M.D., Evan N. Caporaso, M.D.

SUMMARY:
This poster examines the case of a 29 year old active duty service member who presented with bizarre delusions of existing as an alien being contained within a human body, suicidality and profound affective disturbance occurring in the context of an overseas deployment. His management in the

Department of Defense's only first episode psychosis program was notable for multiple prolonged hospitalizations due symptom recalcitrance and intolerance of various pharmacotherapies. We will discuss the patient's extensive medical and psychological evaluation with particular attention paid to his unusually severe profile of adverse reactions to multiple psychotropic interventions, in light of later genetic testing (including a review of the prevalence of CYP polymorphisms which affect the metabolism of a number of our psychotropic medications). This case reflects the multiplicity of factors that shape the course of psychiatric illness and treatment.

No. 101
Difficulties in Management of Restless Leg Syndrome in a Patient With Bipolar I Disorder
Poster Presenter: Olivia Gawrych, M.D.
Co-Author: Virmarie Diaz Fernandez, M.D.

SUMMARY:
This is a case of a 65-year-old Caucasian female with a past psychiatric history of Bipolar Disorder Type 1 which had been well-controlled for years on valproic acid who presented to our behavioral health unit with a two-week history of worsening symptoms of mania and psychosis. Symptoms included elevated mood, irritability, decreased need for sleep, impulsivity, pressured speech and flight of ideas as well as persecutory delusions of people in her attic spying on her. The patient had also reported a significant history of Restless Leg Syndrome (RLS) which she noted was exacerbated by a number of prior trials of atypical antipsychotics. It was noted that the patient had been started on pramipexole by her primary care physician for treatment of RLS one week before onset of her psychiatric symptoms. Physical exam and laboratory results were unremarkable. Pramipexole was discontinued, the patient's home dose of valproic acid was resumed, and fluphenazine and clonazepam were started to further target the patient's mood and psychotic symptoms. Psychotic symptoms resolved within 48 hours, but manic symptoms including poor sleep remained, and the patient became focused on her RLS. A trial of ropinirole was started on her third night with mild reported benefit and no worsening of mania or return of psychotic symptoms. Her manic symptoms significantly improved over the course of her treatment and she was deemed stable for discharge on her twelfth day. While there is no definitive way of knowing the root cause of our patient's manic episode, both the time course and quick resolution of psychotic symptoms implicate the involvement of pramipexole. This case highlights the difficulties involved in treating a subset of patients who require both dopamine agonism for RLS as well as dopamine blockade for psychiatric symptoms. At this time, clear data does not exist on the potential neuropsychiatric adverse effects of dopamine agonist treatment of RLS in patients with comorbid psychiatric disorders. Future systematic studies are warranted to guide the optimum treatment of RLS in patients with psychiatric conditions.

No. 102
WITHDRAWN

No. 103
Dopamine-Agonist Induced Psychosis: A Case Report
Poster Presenter: Steven Anthony Vayalumkal, M.D.
Co-Authors: Aminder Gill, Shahan Sibtain, M.D.

SUMMARY:
Dopamine agonists are primarily administered to patients with Parkinson's Disease (PD). These medications are given to alleviate the motor symptoms of PD and delay the need of levodopa therapy. Unfortunately, dopamine agonists do have some serious adverse and side effects that present along with the benefits they provide. This paper will focus on the psychotic symptoms that present when a patient is placed on dopaminergic medication. The psychotic symptoms need to be recognized as a medication effect rather than a primary psychotic disorder. This is necessary before treating the patient with antipsychotic medication. If the patient is misdiagnosed with a primary psychotic disorder and is continued on the dopamine agonist, then the patient will continue to have the psychotic features without any meaningful outcome from the antipsychotic therapy. The diagnosis of dopamine agonist-induced psychosis can be challenging if the

patient's medications are overlooked. It is essential to continuously rule out medication side effects before making the diagnosis of a primary psychotic disorder. Dopamine agonists have proved to be efficacious in PD but that does not offset the fact that these medications can present with disturbing side effects as well as adverse effects. Some side effects that these medications exhibit are confusion, drowsiness, headache, dry mouth, and hypertension. Some of the most prominent side effects that require immediate medication attention are hallucinations, delusions, confusion, paranoia, agitation, and dyskinesia. The dopaminergic drug family can impose significant risks especially in patients who have a history of cardiovascular disease, psychosis, depression and older patients who have a history of renal or hepatic insufficiency. We present a patient with a history of Parkinson's Disease who is on pramipexole 1 mg daily. Later, the patient presented to the Emergency Department with hallucinations and delusions due to the side effects of the dopamine agonist he was prescribed for PD.

No. 104

Evaluation of Combination Treatment With Monoamine Oxidase Inhibitors and Stimulants

Poster Presenter: Alexander Y. Yang
Co-Authors: Alesia Cloutier, D.O., Agustin Yip, M.D.

SUMMARY:

Introduction: Treatment-resistant depression (TRD) is an all-too-common clinical occurrence for which monoamine oxidase inhibitors (MAO-I) have a place in stepwise pharmacotherapy, notwithstanding their significant and potentially life-threatening adverse effects from drug-drug and -food interactions. A complicating factor is that patients with TRD very often present with severe comorbidities necessitating the use of medications with which MAO-Is have a hypothetical interaction. Clinical Case: The patient is a 31 yo man with TRD and attention deficit-hyperactivity disorder (ADHD) who had failed numerous trials comprising multiple antidepressant classes (including ketamine) and somatic therapies (electroconvulsive therapy [ECT] and transcranial magnetic stimulation [TMS]). He presented with unremitting active suicidal ideation, having recently made a serious suicide attempt while admitted to an inpatient psychiatric unit. Here we report the patient's treatment course on transdermal selegiline in combination with mixed amphetamine salts (on which he had been maintained for some time). Methods: The Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) Guidelines were followed for the current systematic review; however, the protocol for this systematic review was not registered prior to conducting the review. MEDLINE/PubMed was searched for reviews, meta-analyses, and primary studies published in print between 1960 through August 2020 that evaluate outcomes of treatment with MAO-I antidepressants and stimulants in combination. Search terms included Boolean combinations of the following: MAO-I, amphetamine, and stimulant. Two rounds of screening were conducted. Due to the limited number of articles, there were no restrictions regarding type of article, quality of study, randomization, or use of a control group. Results: A Medline/Pubmed search yielded 3638 articles including duplicated, which were screened by title to obtain 63 associated articles including duplicates. Duplicates were removed 42 articles were further screened by title and abstract which resulted in 25 articles. The 25 full-text articles were further reviewed and met full criteria and were included in this review. We will present and results of our review detailing the clinical outcomes of MAO-I antidepressants combined with stimulants obtained from the literature. Discussion: Within the review 3638 articles were screened including duplicates from Pubmed/Medline and 25 research studies were found to be of relevance. Given the results of the review and the clinical case presented, the majority of cases reported support that the use of MAO-Is in combination with a stimulant is safe. This is not true for all cases, however. Therefore, we encourage clinicians to continue exercising caution with this combination until further studies are conducted to elucidate the drug-drug interaction within the clinical setting, and appropriate prescribing practices.

No. 105
Florid Psychosis in the Setting of Cannabis Cessation
Poster Presenter: Bharat Reddy Sampathi, M.D.
Co-Author: Samuel James Ridout, M.D., Ph.D.

SUMMARY:
Case Presentation: In this case report, we highlight a 21-year-old female who presented with florid psychosis on two separate occasions one week after the abrupt cessation of cannabis use. This finding of psychosis status-post cannabis cessation was confirmed with the patient upon the resolution of her symptoms and via collateral from her family. Background: Literature exploring the relationship between cannabis use and psychosis has become increasingly relevant as cannabis becomes more readily available in the U.S., use increases, and methods of delivery such as vaping make frequent use even easier and more concealed. While tetrahydrocannabinol (THC) has been identified as a component in cannabis that is highly associated with psychosis with a dose-response relationship existing between cannabis and schizophrenia, little research exists on the other main component of cannabis, cannabidiol (CBD), and its potential in mitigating psychosis [1]. Discussion: Researchers are interested in potential alternatives to antipsychotics that avoid extrapyramidal side effects. Some have focused on the use of non-toxic forms (no harmful effects on physiological parameters like heart rate, blood pressure, temperature, and psychomotor/psychological function) of cannabis like CBD for psychosis and there has been amassing evidence indicating that the endocannabinoid system plays a role in psychotic pathology [3]. While there is an abundance of research that has shown that cannabis can itself lead to psychosis, other authors have similarly speculated on potential psychosis mitigation with CBD. Crippa et. al stated in their paper that while THC has "anxiogenic, psychotomimetic and amnestic effects, CBD is non-intoxicating and has potential anxiolytic, antipsychotic and anticonvulsant properties... [4]." It acts as an inverse agonist or antagonist, weakening psychosis [5]. Conclusion: This presentation highlights the possibility that cannabis' influence on psychotic symptoms may not be as simple as often conceptualized and that the CBD/THC ratio may be related to such symptoms. It also serves to reinforce the value of future studies to ultimately identify new treatment modalities in addition to first- and second- generation antipsychotics for primary psychosis.

No. 106
Giving Ethanol Instead of BZD to Prevent Alcohol Withdrawal in a Hospitalized Pt With Alcohol Use Disorder Undergoing EEG to Detect Seizure Activity
Poster Presenter: Kanika Ravi Ramchandani, M.D.
Co-Authors: Eric Kramer, Ramaswamy Viswanathan, M.D., D.Sc., Mohamed Wagdy Mohamed Elsayed, M.D.

SUMMARY:
Benzodiazepines (BZDs) have been approved by the United States Food and Drug Administration (FDA) for treatment of alcohol withdrawal in patients with Alcohol use disorder (AUD) [1]. Although their use has been associated with better patient's outcome, they can mask any EEG-related seizure activity in patient suspected to have a comorbid underlying seizure disorder. Using BZDs has been shown to alter EEG beta, theta, and alpha, with significant reductions in alpha and increases in beta. As an alternative to BZDs in treatment of alcohol withdrawal, ethanol has been used by many medical centers throughout the country for prevention of withdrawal symptoms, but most lack official protocols for administering alcohol to patients [3]. We here present a case of patient who received ethanol instead of BZDs during her in-hospital stay for EEG recording. Ms. X is a 41-year-old Female, with history of alcohol use disorder and chronic cigarette and cannabis use, and a past medical history of seizure who was referred for long-term electroencephalography (EEG). She has one-year history of seizures, which happens infrequently in a generalized tonic-clonic form. The seizures typically occur when the patient has not consumed alcohol for more than 24 hours and she was partially adherent to her prescribed seizure regimen; Levitiracetaram 500 mg and Lamotrigine. As for her drinking history, she drinks 1-2 pints of vodka and 2-4 24-oz cans of beer daily. During her 18 hour EEG monitoring, she stopped her antiepileptics and was unable to receive BZDs for fear of masking

her seizure activity (especially after two previous normal EEG results and high suspicion of a latent seizure activity). To overcome the masking effect of antiepileptics, we allowed patient to have 100 mL of vodka q6 and held all AEDs during EEG monitoring. On the last day of recording, during sleep, several low amplitudes generalized epileptiform discharges emerged, both as isolated spike or polyspike and wave discharges, as well as brief bursts of 2-3 repetitive spike/wave discharges which was indicative of a potential underlying Genetic Generalized Epilepsy syndrome on top of her seizures secondary to alcohol withdrawal. In our poster, we illustrate how allowing patients to use alcohol while recording EEG might help unravel their underlying epileptic disorder.

No. 107

Have We Forgotten About Lithium Induced EPS?

Poster Presenter: Jacob R. Weiss, M.D.
Co-Author: William Dubin, M.D.

SUMMARY:

Patient is a 21-year-old female with past psychiatric history of unspecified bipolar and related disorder who was admitted to the inpatient psychiatric unit involuntarily for agitation, pressured speech, flight of ideas, and paranoid delusions. Due to her psychosis and history of non-adherence, she was started on risperidone for bipolar I disorder, current episode manic with psychotic features, and transitioned to paliperidone long acting injectable (Invega Sustenna). She received an initial loading dose of intramuscular Invega 234 mg, but experienced a dystonic reaction four days after it was administered. She subsequently complained of galactorrhea, and was found to have hyperprolactinemia, so the second dose of paliperidone was not given. To target to her sustained manic symptoms, lithium carbonate extended-release was initiated. Six days after starting lithium, she became impoverished and minimally spontaneous with bilateral hand tremor, stooped posture, bradykinesia, grimacing, drooling, and severe cogwheel rigidity. She was tachycardic and mildly hypertensive, but all other vital signs were within normal limits. The differential diagnosis included neuroleptic malignant syndrome (NMS), parkinsonian extrapyramidal symptoms (EPS), and catatonia. All medications were discontinued, and a workup for NMS was negative. The patient was admitted to the Internal Medicine service for observation of refractory tachycardia, which improved with intravenous fluids. The patient's parkinsonian symptoms persisted despite multiple doses of diphenhydramine, benztropine, lorazepam, and amantadine. A regimen of lorazepam and benztropine was initiated, and after lithium was discontinued, her severe EPS significantly improved, though her hyperprolactinemia persisted. At the time of discharge, her EPS had resolved. She was euthymic and coherent without evidence of psychosis or mania. The patient's severe parkinsonian symptoms occurred eighteen days after Invega Sustenna was administered, when paliperidone would have been near peak plasma concentration, and six days after lithium was initiated, after lithium had reached a therapeutic steady state plasma level. It is therefore likely that the EPS was either induced or exacerbated by lithium. There is scant literature on this topic since the 1980s, and this is the only known case of severe parkinsonian EPS secondary to concomitant lithium and a long acting injectable neuroleptic. It is critical to have an understanding of the pharmacokinetics of long acting injectable medications. Mood stabilizers and neuroleptics are often used in combination to treat acutely decompensated patients with affective disorders. Therefore, it is also important to appreciate that lithium alone can induce EPS, and when added to an antipsychotic, can precipitate EPS.

No. 108

Initiating Psychotropic Treatment in a Patient With Alpha-Gal Allergy

Poster Presenter: Matthew R. Narlesky, D.O.
Co-Authors: Angelica Palting, Suporn Sukpraprut-Braaten, Ph.D., Robert Wooten, M.D., Andrew J. Powell, M.D.

SUMMARY:

Introduction Alpha-gal allergy, which is typically acquired by a tick bite, is an IgE-mediated immune response to galatose-alpha-1,3-galactose (alpha-gal), an oligosaccharide present in most mammalian tissue [1]. Patients with alpha-gal allergy typically

experience symptoms, such as rash, nausea, or difficulty breathing, three to six hours after exposure to alpha-gal [2-6]. Alpha-gal allergy is diagnosed by clinical history, food challenges, and immunoassay [5, 6]. Alpha-gal allergy is treated by avoiding mammalian products and taking supplements, such as iron and vitamin B12, to prevent deficiencies [6]. Treatment of co-morbid conditions in patients with alpha-gal allergy is complicated by the common use of mammalian derivatives as inactive ingredients in medications. Research on the global prevalence of alpha-gal allergy is lacking; however, there has been some research on smaller populations, including a study of forest service employees that revealed a prevalence of 35 percent [7]. Case Description Ms. H., a 29-year-old Caucasian female with a past psychiatric history of bipolar disorder, borderline personality disorder, and post-traumatic stress disorder, presented to the inpatient psychiatric unit after an intentional overdose. The patient's presenting symptoms included suicidal ideation, hopelessness, excessive guilt, nightmares, and flashbacks. Because of the patient's comorbidity of alpha-gal allergy, the team evaluated psychotropic treatment options that did not contain mammalian derivatives. The patient was started on generic sertraline, which was titrated to 100 mg daily. Throughout her six-day stay, the patient tolerated her medication, participated in group therapy, family sessions, and treatment team meetings. At time of discharge, the patient denied suicidal ideation and reported improvement in her symptoms. Currently, the patient is following up as an outpatient and is doing well. Discussion This case illustrates the importance of identifying patients with alpha-gal allergies prior to initiating psychotropic treatment. Additionally, the case highlights the need for further understanding of medication options for patients with alpha-gal allergy.

Poster Session 4

No. 1
WITHDRAWN

No. 2
WITHDRAWN

No. 3
Is Trazodone Always a Safe Option in Elderly? A Case of Trazodone-Induced Hyperactive Delirium Requiring ICU Care and Literature Review
Poster Presenter: Harsimar Kaur
Co-Authors: Jatinder Singh, Nirmal Singh

SUMMARY:
Introduction: Trazodone is a triazolopyridine derivative, FDA approved antidepressant of the serotonin antagonist and reuptake inhibitors) SARI (1) class. Trazodone is commonly used for antidepressant, anxiolytic and sedative effects. The full spectrum of trazodone's mechanism of action is not fully understood, which could explain its off-label uses. At doses of 25-150 mg is used commonly to help with sleep initiation and maintenance (2). It is being widely used as an alternative to benzodiazepines as it is perceived to be a relatively safer option. Methodology: We present a case of trazodone-induced hyperactive delirium in a 51-year-old female with a history of IDDM, Hypertension, CKD, Bipolar II disorder on lithium, quetiapine, mirtazapine and trazodone. Results: The patient was found to be naked, walking aimlessly in her neighborhood and attempting to enter neighbors' houses when EMS was called. This presentation was secondary to taking one time 450 mg of trazodone instead of the prescribed 150 mg at night to help alleviate insomnia. In the ER, the patient was disoriented and unable to engage in a meaningful manner and was noted to be hyperventilating and diaphoretic. Initial clinical workup was insignificant except for prolongation of QTc (525 ms). Toxicology was consulted and due to the concern for overdose v/s polypharmacy, she was admitted to the ICU for close monitoring for development of torsades or seizures. In the ICU, the patient was uncooperative, could not be redirected, and attempted to leave the bed multiple times due to which she required up to 13 mg of Midazolam and 260 mg of phenobarbital. Her psychotropic medications were held while she was delirious. She was started on intravenous magnesium sulfate with QTc trending down to 461 ms. Neurology was consulted and EEG was performed that showed diffuse slowing consistent with encephalopathy. Patient's mentation improved after 2 days of admission in the setting of stopping trazodone and

returned to baseline by Day 3. Conclusion: Trazodone is considered a benign medication and is widely used to treat insomnia. There have been few reported cases of delirium in patients on trazadone potentially secondary to the effect of meta-chlorophenyl piperazine which is a metabolite of trazodone with specific 5-HT agonist properties (3). Further studies with higher power are required to determine efficacy and monitor for adverse effects especially in elderly. Our case has implications for careful consideration, risk assessment and patient education about potential serious adverse drug reactions of trazodone more so in vulnerable populations and specifically elderly.

No. 4

Low-Dose Escitalopram-Associated Syndrome of Inappropriate Antidiuretic Hormone Secretion in a Patient With Partially Empty Sella

Poster Presenter: Jacob Rosewater, B.S.
Co-Author: Krystal Nicht, M.D.

SUMMARY:

An 84-year-old man with no past psychiatric history was referred to the geriatric psychiatry clinic for symptoms of anxiety, anhedonia, insomnia, anorexia and distractibility after he was disappointed in the results of recent cataract surgery. He was diagnosed with adjustment disorder with anxiety and was started on 2.5 mg of escitalopram daily. On the 13th day of taking the medication, he presented to the ER for complaints of generalized weakness and syncope. Work-up revealed subacute hyponatremia with serum sodium of 127 mmol/L and patient was admitted to the general medical floor. Syndrome of Inappropriate Antidiuretic Hormone secretion (SIADH) was presumed as a side effect of escitalopram. Extensive work-up including chest x-ray, cortisol levels, ACTH stimulation test, and CT Head w/o contrast was completed to rule out any apparent organic cause of SIADH. There was an incidental finding of "partially empty sella" with unclear clinical significance. Patient's cognition was assessed using the Montreal Cognitive Assessment (MOCA) and found to be within normal limits. He reported compliance with prescribed dose of escitalopram. Escitalopram was discontinued upon admission to medical floor and fluid intake was restricted. After three days of inpatient care, sodium levels rose to 135 mmol/L, the patient felt better, and he was discharged. In this report, we present an unusual case of presumed low-dose SSRI-induced SIADH resulting in symptomatic hyponatremia. We then discuss the risk of inducing SIADH in patients with neuroendocrine abnormalities following administration of an anti-depressant and how this case demonstrates the necessity of initiating psychopharmacologic treatment at low doses in the geriatric population.

No. 5

Loxapine in Treatment-Resistant Schizophrenia Spectrum Disorders With Predominant Mood Symptoms

Poster Presenter: Michelle Cross, D.O.
Co-Author: Damaso Oliva

SUMMARY:

Ms. K, Ms. V, and Mr. M, all presented to the inpatient psychiatric service with treatment resistant schizophrenia spectrum disorders and prominent mood symptoms. Additionally, they each had several trials of different antipsychotics and mood stabilizers, with little success in controlling their psychosis or mood symptoms. Loxapine, a first generation antipsychotic which antagonizes 5HT2A and is metabolized to the tricyclic antidepressant amoxapine, was given to all three patients. This resulted in improvement in the positive symptoms of psychosis, negative symptoms of psychosis, and mood symptoms. In this poster, we review the unique psychophamacology of loxapine and how this might allow it to be used as an effective treatment in treatment resistant schizophrenia and schizoaffective disorder with predominant mood symptoms.

No. 6

Modafinil Induced Mania in a Bipolar Patient on Mood Stabilizers

Poster Presenter: Amna Siddique, D.O.
Co-Author: Magdoline Daas, M.D.

SUMMARY:

Modafinil Induced Mania in a Bipolar Patient on Mood Stabilizers Introduction: Modafinil is a

wakefulness promoting agent that is FDA-approved for use in narcolepsy, excessive daytime sleepiness, and shift work sleep disorder. It also has numerous off label psychiatric uses to help with fatigue, cognitive improvement, and bipolar depression. It's mechanism of action involves stimulation of histamine, norepinephrine, dopamine, and orexin systems in the brain to heighten arousal. Although the most common side effects of Modafinil involve the GI system, there are several reports (18 case reports on PubMed) of modafinil inducing mania in patients with a history of psychiatric and neurologic disorders. Case Presentation: The patient is a 25-year-old male with a history of bipolar disorder and anxiety that was controlled on Lamotrigine and Paliperidone. He was later started on Modafinil to improve energy, concentration, and sedation secondary to bipolar disorder and psychotropic medications. This induced a manic episode and crisis event that then improved after cessation of Modafinil. It was later thought that the patient may also have been abusing Modafinil due to its euphoric effects. Thus, it is unknown if the patient's manic episode was caused by the use or the abuse of modafinil. Discussion: To our knowledge, this case is the first concerning the risk of using modafinil in a previously controlled bipolar patient on mood stabilizers. Although modafinil can be a useful medication in treating fatigue, sleepiness, and cognitive slowing in patients on psychotropic medications, it is important for clinicians to be aware of all the effects of Modafinil, including potentially inducing mania in previously stable patients. It is also important to be aware of the abuse potential of this medication and for clinicians to factor this in when prescribing it to their patients. Disciullo, A. A., English, C. D., & Horn, W. T. (2018). Modafinil Induced Psychosis in a Patient with Bipolar 1 Depression. Case Reports in Psychiatry, 2018, 1–3. doi: 10.1155/2018/3732958 Francois, D., & Chelidze, K. (2018). Modafinil-Induced Mania in an Elderly Man. The Primary Care Companion For CNS Disorders, 20(3). doi: 10.4088/pcc.17l02187 Shelton, R. C., & Reddy, R. (2008). Adjunctive use of modafinil in bipolar patients: just another stimulant or not? Current Psychiatry Reports, 10(6), 520–524. doi: 10.1007/s11920-008-0082-6 Crosby, M. I., Bradshaw, D. A., & Mclay, R. N. (2011). Severe Mania Complicating Treatment of Narcolepsy with Cataplexy. Journal of Clinical Sleep Medicine, 07(02), 214–216. doi: 10.5664/jcsm.28112 Vorspan, F., Warot, D., Consoli, A., Cohen, D., & Mazet, P. (2005). Mania in a Boy Treated With Modafinil for Narcolepsy. American Journal of Psychiatry, 162(4). doi: 10.1176/appi.ajp.162.4.813-a

No. 7

Neuroleptic-Induced Deficit Syndrome by Haloperidol in a Patient With Bipolar I Disorder, Most Recent Episode Manic, Severe With Psychotic Features

Poster Presenter: Ivan Pagan Colon, M.D.
Co-Authors: Caridad Benavides Martinez, M.D., Richard Callahan, M.D.

SUMMARY:

We present a 31 year old female admitted due to paranoid delusions. Patient exhibited labile and irritable behavior, poor boundaries, disorganized thought process, loud and tangential speech, as well as paranoid delusions towards family members. Haloperidol 5mg and valproic acid 250 mg were started both twice a day. Full work up for first psychotic episode was done inpatient, including Brain CT. All results were normal. Haloperidol was uptitrated, but patient progressively showed blunted affect, apathy, alogia, became withdrawn, guarded, exhibited thought blocking, and psychomotor retardation. All antipsychotic medication was stopped for 24 hours. Medications were switched to Quetiapine 25 mg BID with marked improvement of psychiatric symptoms, as well as cognitive and psychomotor function. This case highlights that failure to recognize NIDS can lead to misdiagnosis, suboptimal treatment leading to a decline of patients' cognitive function and overall mental health therefore prompt recognition can lead to favorable outcomes.

No. 8

On the Edge of a Knife: Balancing Clozaril Toxicity With Therapeutic Effect

Poster Presenter: Clare Gallego Bajamundi, D.O.

SUMMARY:
Clozaril (Clozapine) is a medication typically used for treatment resistant psychosis. Routine assessment of absolute neutrophil counts is a well-known monitoring guideline for Clozaril but not much study has been done about the utility of monitoring Clozaril levels. Only recently has there been more study done regarding individuation of Clozaril dosing based on level (1, 2). There has also been more study as to how systmic inflamatory conditions and infections affect Clozaril level (3,4).This case report will demonstrate how we can use Clozaril levels to not only monitor for toxicity but also to titrate medication to therapeutic effect for patients. Ms. X is a 20 y/o female with mild intellectual delay treated for Intermittent Explosive Disorder and Bipolar Disorder. After an extended hospitalization the patient was discharged from our state hospital on Clozaril, Depakote, Topamax and Buspar to a group home. However within two months of her discharge the patient was admitted to a local hospital for altered mental status. Depakote and Clozaril levels were found to be elevated at 86.5 (free level) and 1001 respectively. These medications were held during her 4-day hospitalization. The patient gradually returned to baseline mental status. She was discharged from our local hospital and had a scheduled follow up with her psychiatrist 11 days later. Clozaril level at hospital discharge was 610. Three days after discharge the patient's outpatient psychiatrist started titrating up Clozaril back to 100 mg at bedtime over four days. At follow-up appointment, dosage increase to 150 mg at bedtime was recommended and Depakote was restarted. However before the dose was increased the patient assaulted her roommate and was brought back to our state hospital for further psychiatric stabilization four days after this outpatient visit. As she had been off Clozaril for several days due to med refusals and confusion regarding her med regimen at admission we restarted Clozaril at 50 mg at bedtime. Levels were tracked during her hospitalization. The patient was psychiatrically stabilized at a dose of 200 mg at bedtime. Level was in the 300 range and remained at this level aside from two incidents where the patient had acute inflammation due to gout. This patient's case shows the utility of routine monitoring of Clozaril levels not only to monitor for toxicity but also to titrate to therapeutic effect.

No. 9
WITHDRAWN

No. 10
Risperidone Induced Sinus Tachycardia: A Case Report Illustrating Isolated Sinus Tachycardia Related to Risperidone Reinitiation

Poster Presenter: Rajesh Gaddam, M.D.
Co-Authors: Tania Sultana, M.D., Raju Kakarlapudi, Prathila Nair, M.D.

SUMMARY:
Risperidone is an FDA approved atypical antipsychotic medication used to treat Schizophrenia, Bipolar disorder, and irritability associated with autism. Risperidone has a wide range of side effects and most significantly include extrapyramidal symptoms, hyperprolactinemia, and sexual dysfunction. Difficulty concentrating, fatigue, somnolence, restlessness are the most commonly reported. Side effects are one of the primary reasons for discontinuation of treatment. The second-generation antipsychotics (eg. Risperidone, Olanzapine, Clozapine, Quetiapine) are also associated with an increased risk of weight gain, obesity, impaired glucose tolerance and new-onset diabetes, hyperlipidemia, and cardiovascular side effects, all together known as cardiometabolic disorder. Several antipsychotics are associated with cardiac side effects such as QTc prolongation which leads to Ventricular Tachycardia and sudden cardiac death(SCD). However, there have been few reports of autonomic adverse effects such as sinus tachycardia associated with risperidone use. In this report, we are presenting a case of a 28 year old Caucasian female with a past psychiatric history of bipolar disorder with mood congruent psychotic features and cannabis use disorder, with no known past medical(including cardiac) history, who developed isolated sinus tachycardia after reinitiation of previously well-tolerated risperidone. The heart rate ranged between 101-137 bpm, was temporally related to administration of Risperidone, and subsided after discontinuing the medication. This report includes a literature review of risperidone side effects emphasizing the cardiac side effects as well as limited evidence of autonomic

adverse effects. Autonomic instability from prior risperidone treatment is possibly responsible for developing sinus tachycardia after the reinitiation of risperidone. To our knowledge, this is the third case report of isolated sinus tachycardia related to risperidone reinitiation in a well-tolerated patient.

No. 11

Seizure Induced by Sertraline Overdose in an Adolescent: A Case Report

Poster Presenter: Nungshitombi Chongtham, M.B.B.S.
Lead Author: Nungshitombi Chongtham, M.B.B.S.
Co-Authors: Tazeen Azfar, M.D., Sagarika Ray, M.D.

SUMMARY:
Selective Serotonin Reuptake Inhibitors (SSRIs) are among the most frequently prescribed antidepressants in adolescents .3. Sertraline (Brand name : Zoloft) is one of the most common SSRI implicated in suspected suicide attempts in adolescents (ages 10–19). 1. It is FDA-approved for the treatment of obsessive-compulsive disorder in the adolescent age group but is used off label for other pediatric mental health disorders including MDD, panic disorder, social anxiety disorder, post-traumatic stress disorder (PTSD) etc. While SSRI overdoses in general are reported to be uniformly less severe and more likely to be non-fatal as compared to other classes of antidepressants, current available information on important adverse events following overdose relates mostly to the adult population. There is very limited data on the adverse events following Sertraline overdose in adolescents. Seizure which is one of the adverse events is rarely reported and even if reported is confounded by the ingestion of another drug or illicit substance. We report the case of a healthy adolescent female with no prior history of seizures, presenting with seizures during inpatient hospitalization after an intentional Sertraline overdose. The case highlights the need for close monitoring of such patients despite the lack of data in current literature.

No. 12

Suspected Clitoral Priapism and Persistent Sexual Arousal in a Female Psychiatric Inpatient With Recent Dose Increase of Quetiapine: A Case Report

Poster Presenter: Alexander K. Rahimi, M.D., M.S.
Co-Author: Russ S. Muramatsu, M.D.

SUMMARY:
I:Sexual dysfunction is common in patients with mood or psychotic disorders, with prevalence of 80% in females.Antidepressants, antipsychotics, and other psychotropics have long been known to cause adverse sexual effects.In females, this may include changes in libido, arousal, orgasm, ejaculation and menstrual cycle regularity.It is more rare in females, and defined as persistent, painful, clitoral erection lasting >6 hrs unassociated with sexual arousal.Persistent sexual arousal and Persistent Genital Arousal Disorder) are 2 newer terms that have recently gained traction in the literature.PGAD, is characterized by physical sxs of sex.arousal in the absence of sexually arousing behavior.Neither are in the DSM-5. C: A 28 yo F with MDD,unspec anxiety & borderline PD presented to the ED for worsening SI in the context of topiramate-associated numbing.She was engaging in high-risk behaviors to break through this emotional stagnation.She was admitted to the Inpt unit with goals of ensuring safety and evaluation of med regimen.Meds included topiramate at 75 mg QD escitalopram 30mg QD bupropion XL 150mg QD quetiapine 75mg TID hydroxyzine 50mg q6 hours prn anxiety pindolol 10mg BID eszopiclone 3mg prn HS and neurontin 300mg QID.Other than topiramate all meds were chronic and granted some stability.All were re-initiated upon admission except topiramate.Interview,chart review &collateral revealed a hx most consistent with bipolar disorder.On HD2, cross-taper began with inc. in quetiapine and concomitant dec. in escitalopram.By HD6 pt was off escitalopram and improving while engaging in the milieu.On HD9, she reported a 2-day hx of heightened sexual sensation, “swollen clitoris” and “constantly feeling close to orgasm”.The sensation was unwanted and distressing.Quetiapine,now at 200mg BID, was d/c’d. OBGYN was consulted and reported a normal gyn exam.Persistent arousal and feeling on the verge of orgasm gradually declined with immed.resolution of

"swollen clitoris."By HD11, pt reported cessation of sexual sxs.By HD12 plan for ECT and ongoing care was solidified and pt was d/c'd at her request with all her chronic meds but quetiapine and topiramate.D:This case encapsulates elements of all 3 syndromes described above, with presumed etiology of uptitration of quetiapine.Her sxs gradually resolved upon discontinuation of this agent.Clitoral priapism in pts on antipsychotics has been linked to effects on a1 and a2 adrenergic, H1, and dopaminergic receptors.Quetiapine is of low to intermed. strength as an a1 blocker amongst commonly used antipsychotics.Quetiapine also is an antagonist at D2 and 5-HT2 Rs.It blocks 5HT1A, 5-HT2, D1, D2, H1, A1 and A2 Rs.Polypharm.is also predisposing to adverse effects of any kind.Human sexuality is contingent upon many biological, psychological, social, and cultural factors.It is nec that members of the care team are aware of the potential for adverse sexual effects and create a safe space where pts can report all concerns.

No. 13

Swallowing Impulses Controlled by Ketamine in a Patient With Borderline Personality Disorder

Poster Presenter: Omar Shah, M.D.
Co-Author: Gerard Gallucci, M.D.

SUMMARY:

Introduction: Increased impulsivity is associated with patients with Borderline Personality Disorder. Treatments are limited. Ketamine has been studied for several psychiatric conditions and has shown some promise. However, there is scarce literature on Ketamine for the use of decreasing impulsivity. The limited literature so far shows ketamine use worsening impulsivity in individuals. In the case presented, contrary to previous findings, ketamine had a beneficial effect on the patient's impulsivity. Case Presentation: A patient with the sole psychiatric diagnosis of Borderline Personality Disorder was psychiatrically hospitalized for impulsive swallowing of inedible objects. She would swallow objects on at least a weekly basis and had to be sent to the ER on multiple occasions for extraction of the objects. Several medications and therapy modalities were attempted on her for more than a year during her inpatient stay at a psychiatric state hospital. A trial of ketamine was attempted to help with her impulsive swallowing. After 3 weeks of ketamine infusions, the patient was able to control her impulses. Only after she had not swallowed inedible objects for more than a month, was she finally discharged home. Conclusion:This case shows that although Ketamine has been found to worsen impulsivity in many studies; it shows promise for impulse control in certain cases. Larger studies are needed for more conclusive results.

No. 14

WITHDRAWN

No. 15

Treatment of Acute Mania in a Patient With Hemochromatosis

Poster Presenter: Kristin Nicole Budd, M.D.
Co-Authors: Stephanie Ding, M.D., Tyler Kimm, M.D., Robert Manuel Polo, M.D.

SUMMARY:

Background: Hemochromatosis is caused by a mutation in the HFE gene and leads to increased iron absorption and deposition in various organs. Up to 75% of individuals have hepatic iron deposition that causes liver function abnormalities. Rarely, it has been reported to cause neuropsychiatric symptoms of Bipolar Disorder, MDD, and Psychosis. **Case Report**: A 31-year-old white male with a self-reported past psychiatric history of schizoaffective disorder, bipolar disorder, ADHD, and PTSD presented to an inpatient psychiatric facility due to acute psychosis with bizarre delusions and manic symptoms including agitation, insomnia, and mood lability. Notably, the patient had a significant past medical history of hemochromatosis and hepatitis C. Routine laboratory tests included CBC, TSH, CMP, lipid panel, and UDS. Results of the CBC, TSH, lipid panel, and UDS were unremarkable. The patient's CMP was significant for an elevated AST of 91 (normal 0-40 IU/L) and an elevated ALT of 191 (0-44 IU/L). Hepatitis C antibody testing was positive and an anemia panel showed a serum ferritin of 1365 (111-343 ng/mL) with an iron saturation of >93 (15-55%), consistent with a history of hemochromatosis. Initially, the patient was started on risperidone 4 mg/day for psychosis and mood stabilization.

However, a repeated blood draw on day 4 showed increasingly elevated LFT's and the patient was transitioned to paliperidone 6 mg/day. Due to continued insomnia, temazepam 15 mg/day was added to the patient's regimen. The patient continued to have somatic delusions of having a shrinking pea-sized brain tumor and bizarre delusions of being a dragon. Paliperidone was continued and gradually titrated to 12 mg/day, lithium was added and gradually titrated to 1200 mg/day, and temazepam was discontinued and replaced with lorazepam 4 mg/day. By day 14, the patient was calmer and had a more organized thought process. Although he continued to have some residual mood lability and delusional thoughts, his psychotic symptoms improved from admission. At discharge, the patient agreed to continue his medication regimen and follow up with the VA.
Discussion: This patient's presentation was consistent with acute psychosis and initially treated with risperidone, a second generation antipsychotic metabolized by the liver. However, concern for worsening hepatic function as evidenced by elevated LFT's in the context of hemochromatosis and hepatitis C led to the discontinuation of this medication. Paliperidone is an active metabolite of risperidone and was selected as an alternative because of its less significant utilization of hepatic metabolism. Lithium and lorazepam were utilized for the same purpose. This solution of relatively bypassing hepatic metabolism by using select agents may be considered in future instances of psychosis with decreased or worsening hepatic function.

No. 16

Trying to Get Down: A Case of Aripiprazole-Induced Priapism

Poster Presenter: Cody Alan Bryant, M.D.
Co-Authors: Matt Bojanowski, M.D., Fred Jones-Rosa, M.D., Vanessa L. Padilla, M.D., Lujain Alhajji

SUMMARY:

Background: One of the less-often discussed, yet most emergent side effects of antipsychotic medications is priapism, which has the potential to cause significant morbidity. Priapism is a persistent and often-painful penile/clitoral erection in the absence of sexual stimulation (Hsu 2011). Even when treated appropriately, long-term dysfunction is likely, with 40-50% of patients becoming impotent secondary to ischemia and fibrosis of the corpora cavernosa (Compton 2001). Despite previously being considered free of this side effect, newer atypical antipsychotics, such as aripiprazole, may cause priapism. History of medication-induced priapism is a risk factor for recurrence of priapism (Torun 2011). Case: A 38-year-old gentleman with a history of schizophrenia presented to a trauma center with recurrent bilateral upper-extremity weakness (C4-C5 distribution) and inability to walk after multiple falls. Symptoms had occurred for over a year and were previously deemed to be secondary to psychiatric illness. Imaging confirmed spinal stenosis with cord compression, consistent with his neurologic deficits, prompting neurosurgical admission. He was continued on his home regimen of aripiprazole 10mg daily, which had been initiated one month prior. On his second day of hospitalization, a nurse noted penile erection while exchanging his foley catheter. The erection persisted hours later. Urology and psychiatry were consulted with concern for priapism. Due to his neurologic deficits, he had limited sensation and denied any pain. A penile ultrasound confirmed high-flow priapism with patent vasculature. Urology administered lidocaine, irrigated the corpora, and injected 500mcg of phenylephrine 5 times over the course of 30 minutes, with good response. On psychiatric examination, he exhibited grandiose and paranoid delusions, chronic disorganized thought process, and no hallucinations. He endorsed a history of trazodone-induced priapism 2 months prior, but did not seek treatment and it self-resolved. Due to severe psychotic disorder and need of antipsychotic use, there was concern for priapism recurrence. It was recommended to discontinue aripiprazole as the most likely culprit of medication-induced priapism, and to start haloperidol to avoid α1 adrenoceptor affinity. Discussion: Antipsychotic-induced priapism is believed to be due to blockade of α1 adrenergic receptors. Among atypical antipsychotics, clozapine, quetiapine, and risperidone have the highest affinity for α1, but almost all antipsychotics have been reported to rarely cause priapism (Trivedi 2016). Interestingly, aripiprazole carries the lowest affinity for α1, but several cases of aripiprazole-induced priapism have been published. For patients with a

history of medication-induced priapism, the risk for future episodes of priapism should be considered when making treatment recommendations.

No. 17

Valproate-Induced Normal Pressure Hydrocephalus: A Rare Side-Effect in an Atypical Patient

Poster Presenter: Eleanor Lastrapes, M.D.
Co-Author: Phebe Mary Tucker, M.D.

SUMMARY:
Background: Valproate-induced normal pressure hydrocephalus (NPH) is a rare condition characterized by urinary incontinence, confusion, and gait instability in the presence of the offending agent. Usually seen in patients who have mitochondrial DNA anomalies, valproate-induced NPH in patients without previous history of genetic abnormalities is rare. Objective: The objective of this clinical case report is to highlight an unusual side-effect caused by valproic acid as well as explore genetic causes that predispose patients to this side-effect. Case: We herein report a rare presentation of valproate-induced NPH in a 67-year-old man with history of bipolar II disorder, idiopathic neuropathy, ankylosing spondylitis, rheumatoid arthritis, Sjogren''s syndrome, and urinary incontinence for 1 year who suffered from multiple falls from a sitting position due to stiffness. MRI brain with and without contrast revealed moderate dilatation of the lateral ventricles out of proportion to the degree of brain parenchymal volume loss. The patient underwent a lumbar puncture, but there was no dramatic improvement in gait following the lumbar puncture. However, following a one month trial off valproate, the patient's gait and stiffness improved dramatically. This case demonstrates a severe complication from a common mood stabilizer used to treat bipolar disorder. Conclusions: Recognition of this clinical presentation in the presence of valproic ccid is essential to prevent delayed cessation of the offending agent.

No. 18

Vocal Tardive Dyskinesia as a Side Effect of Aripiprazole and Bupropion

Poster Presenter: Mary-Anne Hennen, M.D.
Co-Authors: Najeeb U. Hussain, M.D., Mia D. Kunitomo, M.D.

SUMMARY:
Introduction: Tardive dyskinesia (TD) is an iatrogenic disorder caused by chronic neuroleptic use characterized by involuntary movements that can involve the entire body, most notably of the oro-buccal-lingual region.[i] Vocal TD is a phenomenon yet to be reported in current literature that involves an involuntary, intermittent humming sound with or without other TD symptoms. Here, we present a patient who developed vocal TD after two years on aripiprazole and bupropion. Case Report: Mr. B is a 58-year-old man with a 4-year history of type I bipolar disorder, for which he'd been on various medication trials. When he presented as an outpatient, his regimen included risperidone 2mg twice daily, clonazepam 1mg twice daily, and lamotrigine 200mg once daily. He reported manic symptoms and bupropion 150mg daily was added to his regimen. After 4 months of minimal mood improvement, aripiprazole 10mg daily was added. After 1 month, he came to the office with depressive symptoms, so bupropion was titrated to 300mg daily, and risperidone and clonazepam were discontinued. Over the next 6 months, he had some mood improvement, and aripiprazole was titrated to 30mg daily and bupropion to 300mg daily. He was on this regimen for 2.5 years and his mood symptoms improved; however, he began exhibiting choreoathetoid movements, tingling and numbness in his lower extremities, as well as a humming noise and involuntary movements of his lips and tongue. He was diagnosed with TD and aripiprazole was discontinued; bupropion 300mg daily was continued. Initially, the humming worsened, increased in frequency and volume, but after 1 year, his TD improved but the humming noises returned during times of stress. Discussion: Ours is the first reported case of vocal TD resulting from aripiprazole and bupropion use. Aripiprazole is unique from other antipsychotics, as it mainly acts as a partial dopamine agonist, and not a dopamine antagonist[ii]. It has been reported to have a low TD risk, and there are few case reports ascribing the development of TD to aripiprazole.[iv] In fact, switching from another antipsychotic to aripiprazole frequently improves TD.[iii] Abrupt cessation of

aripiprazole has been reported to induce/exacerbate TD[v] as it may mimic anti-dopaminergic symptoms. In our case, this may have been exacerbated by the concurrent use of bupropion, a norepinephrine and dopamine reuptake inhibitor.[vi] Although classically TD is described as abnormal oro-lingual-buccal movements, laryngeal dyskinesia has been reported, and includes symptoms such as laryngeal spasms and dyspnea.[vii][viii] Currently, there is no literature about the humming noise seen in our patient. Vocal TD is a rare but possible side effect of aripiprazole and our report adds to the limited but growing literature on the development of vocal TD in the setting of chronic neuroleptic use. As a majority of TD cases are irreversible, physicians should be alert to the different possible presentations of TD.

No. 19

Weight Gain Associated With a Long-Acting Injectable Form of Aripiprazole: A Case Report

Poster Presenter: Mohamed Wagdy Mohamed Elsayed, M.D.

Co-Authors: Amanda Eloma, Scot G. McAfee, M.D.

SUMMARY:

Long-acting injectable (LAI) forms of antipsychotics have been approved by the United States Food and Drug Administration (FDA) for the maintenance treatment of chronic mood and psychotic disorders[4]. One obvious benefit of using an LAI over the oral forms of the same medication is the lessening of treatment non-adherence given their infrequent and convenient intramuscular administration (e.g., biweekly, monthly))[3]. The FDA has approved the use of the oral and long-acting form of aripiprazole (Abilify Maintena) for the maintenance treatment of schizophrenia and bipolar l disorder[2][5]. Aripiprazole is associated with lower metabolic side effects profile, including a lower prevalence of clinically relevant weight gain (defined as 7% proportion of weight gain) even when patients were followed more than 38 weeks after starting the medication [1]. We here report a case of a patient treated for bipolar I disorder, who has developed considerable weight gain while using Abilify Maintena for maintenance treatment. Ms. A is a 30-year-old woman with five year's history of bipolar I disorder (with auditory hallucinations in the first manic episode) who has had multiple inpatient hospitalizations for manic and mixed episodes occurring in the context of medication non-adherence. She also had a history of cannabis and alcohol use disorder. During her last inpatient hospitalization for symptoms of a mixed episode (presenting as being talkative, decreased need for sleep, depressed mood, sensitivity to rejection, and verbal aggression), she was started on aripiprazole 15 mg daily, which proved to be partially effective in controlling her mood symptoms. She was transitioned from oral aripiprazole to Abilify Maintena 400 mg, given her previous history of medication non-adherence. She was started on lamotrigine 50 mg QD during her outpatient visits to optimize the control of her mood symptoms. This combination of medication has been effective as maintenance therapy for her bipolar I disorder, and the patient was able to return to near-optimal daily functioning, including her work. She was also prescribed propranolol 10 mg TID PRN for Abilify-induced akathisia with good effect. During the first five months of this treatment regimen, she developed a significant weight gain of 37 lbs. (from 183 to 220 lbs.). To check for possible poor CYP2D6 metabolism in her case, we performed pharmacogenomic testing for Cytochrome P450 2D6 and obtained serum levels for aripiprazole/dehydro-aripiprazole, which yielded one abnormal allele of CYP2D6 enzyme, yet normal total aripiprazole with metabolite level. This case demonstrates that clinicians should exercise caution when prescribing LAI aripiprazole, an agent typically viewed as "weight neutral."

No. 20

When Treatment Worsens Disease: A Case Report of Quetiapine Exacerbating Mania

Poster Presenter: Zachary W. Orlins, D.O.

SUMMARY:

Mr. M, a 48 year-old male with past psychiatric history of anxiety presented for admission to the psychiatric hospital due to concern for mania. The patient displayed many out-of-character behaviors including making bold claims about being very intelligent, displaying elevated mood, having decreased need for sleep, making inappropriate

sexual advances, and displaying circumlocutory speech. He also displayed religious, paranoid, and bizarre delusions. History indicated that the patient had a period of mood disorder in the absence of psychosis, so the working diagnosis was Bipolar 1 Disorder, Most Recent Episode Manic, Severe, with Psychotic Features. He had a recent inpatient psychiatric admission for similar concerns, and was started on quetiapine at that time, which was titrated to 200 mg QHS. During this hospital stay, quetiapine was uptitrated to 200 mg QD and 400 mg QHS, but the patient's manic symptoms only worsened. The patient was eventually started on risperidone 2 mg BID, and quetiapine was discontinued. He showed gradual improvement and was discharged 3 days later. In this poster, I present the unique mechanism of quetiapine, as well as its metabolite norquetiapine, and discuss why this mechanism predisposes to exacerbation or induction of mania, particularly at low doses.

No. 21
WITHDRAWN

No. 22
Psychiatric Management of Associated Symptoms in CLN3 Disease, Juvenile Onset: A Case Study
Poster Presenter: Harika M. Reddy, M.D.
Co-Authors: Ijeoma Ijeaku, M.D., M.P.H., Niusha Bavadian

SUMMARY:
Introduction: Neuronal Ceroid Lipofuscinoses (NCLs) or Batten's Disease are a group of rare, autosomal-recessively inherited neurodegenerative disorders caused by mutations in the CLN gene as well as other novel genes. The juvenile NCL is caused by mutations in the CLN3 gene. Limited information exists in offering possible guidance to psychiatric management of symptoms. This report is an attempt to describe our experience in caring for this 16 year old patient CLN3 and polymorphic clinical presentation as well as the clinical pearls we have learnt along the way, in the hope that it may help improve the quality of life of others the way it has improved our patient's quality of life. **Case Description:** GC is a I6 year old Caucasian female with Batten's Disease. At the time of initial presentation, she was almost 16, had a BMI of 33.9 and presented with bizarre delusions, visual and auditory hallucinations of imaginary peers, poor sleep, pressured speech, aggression, and agitation. Patient initially was on a main medication regimen of quetiapine 400 mg PO BID and sertraline 50 mg PO daily with limited benefits. Through the course of her clinical care, multiple medication adjustments were made based on treatment response, side effects including weight gain in this obese patient, and collaboration with neurology due to ongoing seizure activity and use of antiepileptics to address both mood and seizures. Ultimately, sertraline was optimized at 100 mg PO daily and patient's symptoms were markedly improved on lithium 600mg PO QAM and 300mg PO QHS while on lamotrigine 100mg PO BID and zonisamide per neurology. However, an ongoing challenge due to the COVID-19 pandemic persisted with many of the interdisciplinary team resources unable to be utilized to the same extent. **Discussion:** Currently, there is no specific treatment to reverse the symptoms of Batten's disease. Despite the absence of a direct treatment, associated symptoms such as seizures, anxiety, depression, and spasticity can be managed with pharmacotherapy. There is no existing literature on the role of lithium among this patient population. However, it appears that in this patient, lithium was useful as an adjunct to sertraline to address symptoms of mood, agitation, aggression, and impulsivity. In addition to medication management of symptoms of CLN-3, it is important to keep in mind quality of life for these patients and their caregivers and implement a supportive interdisciplinary team and support groups.

No. 23
The "Grim Reaper": A Case Report and Discussion of Prosopometamorphopisa
Poster Presenter: Shailaja Emani, M.D.

SUMMARY:
Prosopometamorphopsia is not seen often because of the complexity of the facial recognition process. Faces are commonly reported as frightening, disfigured, with specifically prominent eyes and displaced features. There are varied thoughts on the causes of this symptom including migraines,

epilepsy, stroke, and eye pathology. The patient is a 53 year old female with past psychiatric history of bipolar disorder and PTSD and past medical history of OSA, previous TIA's (4), and hypothyroidism who presented to the hospital for altered mental status and admitted after initial stroke workup negative. Subsequent hospitalization showed no significant acute imaging or lab findings (including NMDA Ab, HSV, T4/TSH) and negative LP results. C-EEG showed CS-generalized waves indicative of encephalopathy, as seen in toxic-metabolic derangements and medication effects. On day 4 of hospitalization patient became catatonic (mild stupor, mutism, staring) at which time psychiatry was consulted. She then improved significantly after two lorazepam challenges, after which a loading dose of valproate 1000mg with 300mg TID was initiated for seizure prophylaxis. By day 6 of hospitalization patient had returned back to baseline. On exam that day, patient mentioned she was no longer seeing "funny" faces the last two days. She described that everyone she had interacted with had "grim reaper-like" faces, including hollowed-out, dark eyes and asymmetric facial drooping (with half of the face "melted") above the neck only. This occurred with familiar and unfamiliar faces (husband, doctors, nurses), whether sitting still or moving. Throughout this time, she was still able to recognize the people in her room and was able to carry on a conversation with some of them normally. She stated she felt "frozen and terrified" when trying to express this novel symptom itself and therefore had only told her nurse, who confirmed her story. She denied other visual or auditory hallucinations. Patient continued to improve and discharged soon after. This case highlights one of many treatment options and also allows for discussion of several causes of this fascinating patient presentation.

No. 24

There's a Demagorgon in the Woods: Case Presentation and Literature Review of Nonpsychotic Hallucinations in Children

Poster Presenter: Henry St. George Teaford III, M.D.

SUMMARY:

Hallucinations are defined as sensory experiences in the absence of actual external stimuli.1,3 In certain psychiatric and general medical conditions, they occur as part of a constellation of symptoms (e.g., delusional thoughts, disorganized speech) called psychosis.2 The onset of primary psychotic disorders often occurs in late adolescence to early adulthood.3 Although rare (i.e., worldwide prevalence of 0.05%), first psychotic episodes have been documented in children (i.e., 13 years or younger). In contrast, hallucinations in the absence of other psychotic symptoms are endorsed by roughly 10 percent of children in the general population.4 Some common psychiatric conditions where nonpsychotic hallucinations may occur in children include anxiety and disruptive behavior disorders.5 To illustrate how hallucinations may appear in some of these more commonly seen child psychiatric conditions, this poster contains the following case presentation. The case involves a 10 year old boy with a history of attention deficit hyperactivity disorder, generalized anxiety disorder, and major depressive disorder who was being treated in an outpatient psychiatric clinic. During his initial evaluation, he reported that since the death of his grandfather several months prior, much of his time had been spent worrying about "something bad happening to my family," such as his parents and two sisters contracting a deadly illness or being killed in a car accident. During this appointment, he reported a five year history of episodes, every few months, where monsters would appear in the woods near his home and school playground, that he says had red eyes, eight legs, and a body resembling a "demagorgon [a character from the hit Netflix show, Stranger Things]." He said the creature would approach him each time and yell, "you can run, but you can't hide!" He denied history of any other psychotic symptoms. His previously prescribed fluoxetine was titrated from 10mg to 20mg daily at this appointment. Two weeks late, he reported no change in the above symptoms, and said he had seen the monster in his family barn and his bedroom closet. Fearing he may be harmed, he refused to enter the barn to feed their livestock or sleep alone in his room. One month later, he reported reduction in the severity of his anxiety symptoms, and complete remission of his hallucinations. Over the next year, the patient's fluoxetine was titrated further for treatment of recurring mood and anxiety symptoms, although, he denied any recurrence of hallucinations. For child

patients and their families, these types of symptoms maybe alarming, given their widely known occurrence in schizophrenia. This case serves as a reference and reminder for clinicians to discuss the range of conditions and relative common occurrence of these symptoms in children and adolescents, even if not suffering from a primary psychotic disorder.

No. 25
2C-B Psychedelia
Poster Presenter: Omotola Kehinde Ajibade, M.D.
Co-Authors: Nitin Pothen, M.D., Arunesh Mishra, M.D.

SUMMARY:
Learning Objectives: 1) Recognize the effects and presentation of someone possibly intoxicated with the drug 2C-B(2,5-Dimethoxy-4-bromophenethylamine). 2) Raise awareness about the drug and acknowledge the importance of taking into consideration the various differential diagnosis with a similar constellation of symptoms. 3) Stress the importance of a patient's travel history even in cases of substance induced psychosis as various illicit drugs are not available readily in the US. Case Summary: A 37year old male who presented to the emergency department with suicidal ideation and psychosis. Upon arrival the patient presented with tactile, auditory, visual and olfactory hallucinations. CMP, CBC, BAL, TSH, RPR, UDS and CT scan done in the emergency dept revealed no abnormalities. UDS did not show positive results for any illicit drugs. Upon further interview with the patient and collateral it was concluded that patient had recent travel history to Columbia and consumed extra dose of psychedelic drug 2C-B. Due to ongoing psychotic features, suicidal ideations and inability to function patient was admitted to inpatient psychiatric unit. Patient was initially started on Seroquel 50 twice daily and 100 mg nightly. Further in to his treatment plan valproic acid 500was added due to his behavioral disturbance apart from psychotic features. Patient continued to have delusions and hallucinations for the next 2 days and on the 3rd the symptoms began to alleviate, and patient denied auditory or visual hallucination. Patient was stabilized over the course of the hospital stay and discharged on hospital day 5 with Depakote 750 mg every 12 hours, Seroquel 50 twice daily and 100 mg nightly. Conclusion: 2C-B induced psychosis can present in a similar manner to psychosis from other entactogens. It doesn't come up on a urine drug screen. The drug is tightly regulated and restricted here in the US. However, partakers can have other means of acquiring the drug. This case underscores the importance of asking about a patient's travel history in cases where there is suspicion for substance induced psychosis

No. 26
WITHDRAWN

No. 27
A Case of Mirror Image Agnosia and Mirrored Self-Misidentification Syndrome in Schizophrenia Without Dementia or Structural Abnormalities
Poster Presenter: Carola Rong, M.D.
Co-Authors: Aaron Issac, Elif Sena Alkan, Karen Ding, M.D., Salih Selek, M.D.

SUMMARY:
Delusional misidentification syndrome (DMS) is an umbrella term encompassing a variety of disorders. In all forms of the syndrome, the patient recognizes the physical form of people or objects but fails to recognize their identity. One rare form of DMS is the delusional misidentification of one's own reflection, known as "mirrored self-misidentification syndrome". DMS has been described in various contexts, such as in primary psychiatric diagnoses or secondary to organic disorders, especially neurodegenerative diseases. According to several studies, this syndrome is most often seen in dementia patients related with right hemisphere dysfunction. Some estimate as many as 30% of people with Alzheimer's disease experience DMS. It is also a known phenomenon in Parkinson's disease, and has also been described in cases of traumatic brain injury or focal lesions. In "mirror image agnosia", the ability to identify the image of self and/or others in the mirror is lost, while the ability to identify the mirror itself is preserved. There have been very few reported cases of mirror image agnosia. Previously published cases are generally correlated with dementing illnesses with structural abnormalities on brain imaging. Furthermore, mirror

image agnosia has not been described in a patient with schizophrenia. Herein we present a unique patient - a woman with schizophrenia having both mirrored self-misidentification and mirror image agnosia with no reported structural abnormalities nor dementia.

No. 28

A Case Report on Dronabinol for Appetite Stimulation in Paranoid Schizophrenia

Poster Presenter: Xizhao Chen
Co-Authors: Kareem Seoudy, M.D., Mudhasir Bashir, M.B.B.S.

SUMMARY:
Background: Dronabinol is a synthetic d9-tetrahydrocannabinol (THC) that has been approved by FDA to treat nausea and vomiting in cancer patients on chemotherapy. It is also used for anorexia and cachexia in patients with AIDS. Schizophrenia is a primary psychotic disorder with both positive symptoms negative symptoms. Low food intake related to decreased appetite is also reported during psychiatric decompensation of schizophrenia. No case of treating anorexia in schizophrenic patients with dronabinol has been reported. In this case, we reported dronabinol as an effective and safe orexigenic agent used to treat anorexia in a patient with decompensated paranoid schizophrenia in conjunction with mirtazapine. Case Presentation: A 35-year-old Caucasian male with a long history of schizophrenia was admitted for decompensated schizophrenia because of auditory hallucination, severe psychosis, severely impaired insight and judgement, and inability to self-care. At the time of admission, he had not taken medications for a month and he was unable to perform activities of daily living, including eating for weeks. Appropriate antipsychotics were initiated and his positive symptoms and hostility started to improve. However, he still refused to eat, attributed to decreased appetite. To treat his anorexia, Mirtazapine was initiated to help with appetite stimulation with limited success. A trial of dronabinol of a low starting dose was then initiated. As the dose was gradually titrated up, the patient began to become more receptive to protein oral intake and gained 9 lbs. Conclusion: Change of appetite and eating habits can be challenging to manage in patients with schizophrenia. As dronabinol has long been used as an orexigenic agent in cancer and HIV cases, it was also shown to be effective and safe for appetite stimulation in a patient with schizophrenia in our case. Larger scale randomized controlled trials are warranted to further investigate potential wide clinical application of dronabinol to appetite stimulation in schizophrenia.

No. 29

A Case Study: Implicit Bias and Racial Disparities in the Treatment of African-Americans

Poster Presenter: Richard Eboka
Co-Authors: Robert P. Bright, M.D., Terry Schneekloth, M.D.

SUMMARY:
Background: African-American (AA) patients are disproportionately diagnosed with a primary psychotic disorder such as schizophrenia or schizoaffective disorder when compared with white patients. Moreover, they are significantly more likely to receive first-generation antipsychotics (FGAs) than white patients. These disparities in diagnosis and treatment may stem from implicit assumptions and bias. **Methods**: This case study from an Arizona general psychiatry outpatient group practice raises issues pertinent to potential racial health disparities. Pubmed Central and SCOPUS literature searches were completed to evaluate the current data available regarding disparities in antipsychotic prescriptions and incidence of tardive dyskinesia in AA patients. Limitations on the search included articles published in English. Key words of “tardive dyskinesia”, “racial disparities”, and “antipsychotics” were used to narrow the search, which resulted in 17 articles. Results were further narrowed by relevance, leaving five articles for review. **Case**: The patient was a 70 year-old AA female initially referred to neurology to rule out Parkinson’s disease. The neurologist referred her to psychiatry after diagnosing medication-induced parkinsonism, cognitive disorder, and bipolar disorder. Her psychiatric history is notable for hospitalization in 1972 for post-partum-onset of psychotic symptoms. She was diagnosed with a primary psychotic illness,

schizoaffective disorder, bipolar type, and she was prescribed Thorazine (chlorpromazine hydrochloride), a first-generation antipsychotic agent. She has remained on it for 48 years. She and her son reported several subsequent psychotic episodes, associated with bipolar mood fluctuations, and repeated psychiatric hospitalizations over 5 decades. She previously received trials of second-generation antipsychotics (SGAs) including clozapine, aripiprazole, quetiapine, risperidone, olanzapine and ziprasidone, though all were terminated for unclear reasons. The patient never fully transitioned off chlorpromazine to another agent. Her current regimen includes chlorpromazine 100 mg at bedtime, divalproex sodium 1000 mg daily in divided doses. **Discussion and Conclusions**: Long-term sequelae of chlorpromazine and other FGAs include orthostatic hypotension, prolongation of QTc, and tardive dyskinesia (TD). This patient's motor symptoms may represent antipsychotic-induced TD given her 48 years of chlorpromazine usage. Patients chronically dosed with SGAs are less likely to develop TD and also exhibit higher levels of medication adherence. Switching from a FGA to a SGA may result in higher medication adherence and lower risk of adverse drug effects. Psychiatrists must be vigilant regarding their implicit assumptions in diagnosis and associated drug prescriptions, particularly in chronically mentally ill AA patients.

No. 30
WITHDRAWN

No. 31
An Almost Missed Case of Schizoaffective Disorder: Substance Use as a Continual Challenge for Timely Accurate Psychiatric Diagnoses

Poster Presenter: Connor James Burnside, D.O.
Co-Authors: Kelvin Tran, M.D., Tessy Korah, M.D.

SUMMARY:

It is often a challenge to differentiate primary psychiatric disorders from substance-induced psychiatric disorders for patients with substance use, specifically psychoactive substances like methamphetamine in this case, at time of presentation. According to a 2012 national survey on drug abuse, approximately 1.2 million people reported past-year methamphetamine use (1). Substance-induced psychosis has been reported in 8-46% of regular users of amphetamines (2). Psychosis related to substance use has a faster recovery influenced by abstinence. Additionally, up to 25% of patients originally diagnosed with substance-induced psychosis were later found to have a primary psychotic disorder (2). It is also noted that patients with a primary psychotic disorder have much higher rates of substance use compared to general population (3). Consequently, taking appropriate measures to make an accurate diagnosis in this patient population sooner can improve quality of care. Our case is about a 43-year-old male with multiple inpatient psychiatric admissions, including Psychosis Unit, Med/Psych Unit, and Mood Disorder Unit. It was not until his latest admission when he was diagnosed with Schizoaffective Disorder. Marked improvement in his psychiatric status was observed with appropriate subsequent psychotropics. He consistently presented with command auditory hallucination with voices telling him to harm himself with suicidal ideation, depression, and anxiety. He also consistently presented as hyperverbal with pressured speech and tangential thinking. He only had one urine drug screen that was positive for Cannabinoid, Benzodiazepine, Oxycodone, and Opiate on his second admission. After a length of stay of about 3.5 months, diagnostic clarification for Schizoaffective Disorder, Bipolar Type, was reached after careful consideration of his abstinence from methamphetamine and extensive gathering of collateral information including significant family history. Evidently, it is a challenge to make timely accurate psychiatric diagnoses in patients with comorbid substance use. This challenge delays the timely delivery of appropriate treatments and, consequently, the timeliness of psychiatric stabilization and prevention of disease progression. Regarding our case, it was not until the addition of appropriate mood stabilizers were added to the patient's psychotropics regimen after diagnostic clarification was achieved did the patient improve. However, limitations of note include high turnover rate at crisis stabilization units and lack of timely collaterals. This topic of discussion is important because it presents an opportunity to reflect on and propose quality improvement structures, protocols

for timely collection of family history and longer length of admission for patients with comorbid substance use. Making an accurate diagnosis sooner can result in overall decreased hospital utilization and improved therapeutic effect from appropriate medication management.

No. 32

Auditory Hallucinations Versus Intrusive Thoughts: The Challenges of Recognizing Obsessive-Compulsive Symptoms in Patients With Schizophrenia

Poster Presenter: Caroline W. McCool, M.D.
Co-Author: Omar Pinjari, M.D.

SUMMARY:

Introduction: Patients with comorbid Schizophrenia and Obsessive-Compulsive Disorder (OCD) present additional diagnostic and therapeutic challenges when compared to patients with a single diagnosis. The following case discusses the hospital course of a patient with both Schizophrenia and obsessive-compulsive symptoms and delves into important considerations when treating patients with these comorbidities. Case Description: A 30-year-old man with a past psychiatric history of schizophrenia was admitted to an inpatient psychiatric facility for psychosis and depressed mood. Patient reported a several-year history of auditory hallucinations worsening over the past three weeks. He described hearing the devil telling him to hurt his mother as well as the voice of a nurse staff member previously involved in his treatment. Additionally, patient reported intrusive judgmental thoughts. For example, if someone's speech was grammatically incorrect, he would perseverate over it and feel the need to correct them. He recognized these thoughts as his own voice and was able to distinguish them from the AH. However, the hallucinations would often comment on his obsessive thoughts, saying "you think that you are superior." Mental status was notable for disheveled appearance, internal preoccupation, and self-talk. He reported current home medication of Zoloft and endorsed a prior trial of Effexor which had worsened the AH. On admission, Zoloft was switched to Celexa for treatment of OCD symptoms, and Abilify was added for psychosis. After a few days, Abilify was switched to Seroquel because of akathisia. Medications were titrated to Celexa 20 mg and Seroquel 200 mg daily, and patient endorsed resolution of AH and improvement in obsessive thoughts. Discussion: Studies suggest that the prevalence of OCD in patients with Schizophrenia is much higher than the prevalence of OCD in the general population with a range from ten to thirty percent comorbidity, leading some to suggest the existence of a separate diagnostic category ("schizo-obsessive disorder"). Differentiating between symptoms of Schizophrenia and OCD can be very challenging, particularly in those patients with both AH and intrusive thoughts. In patients with poor insight, these two entities can be conflated as "voices," and both the egodystonic obsessions and the AH can be distressing to patients. Literature on the subject is limited, but some reports suggest response to monotherapy with atypical antipsychotics. However, an SSRI in combination with an antipsychotic appears to be the most effective strategy. CBT should also be considered for patients who are able to meaningfully participate. When treating with both an antipsychotic and SSRI, it is important to consider the risk of pharmacologic interactions and side effects. In addition, some patients show worsening of psychosis on antidepressants. Thus, the choice of medications should be made carefully, and patients should be monitored closely for response.

No. 33

Cannabis, Schizophrenia Risk and Genetics: A Case Report of a Patient With Homozygous Valine Catechol-O-Methyltransferase Polymorphism

Poster Presenter: Katelyn Grechuk, M.D.

SUMMARY:

The risk of schizophrenia in patients using cannabis continues to be a subject of research interest. There has been increasing focus on identifying potential genetic factors that may predispose patients using cannabis to developing schizophrenia. While potential genes have been identified, the studies have limitations in identifying the timing of schizophrenia onset in relation to cannabis use and in identifying the presence of other risk factors for schizophrenia. We present the case of a 24-year old female who presented with psychotic symptoms and

was diagnosed with schizophrenia. She has a history of cannabis use and a homozygous valine COMT polymorphism, a genetic variant thought to be associated with a predisposition for schizophrenia with concomitant cannabis use. No significant family history of schizophrenia was noted and her psychosis emerged after continuous cannabis use. We explore the relationship between cannabis use and the development of schizophrenia in genetically predisposed individuals.

No. 34

Case Reports of Impaired Cognitive Function in Schizophrenic Patients With Severe Cannabis Use

Poster Presenter: Gina Caitlin Jamal, M.D.
Co-Authors: Hunter Hinman, M.D., Hanjing Wu, M.D.

SUMMARY:
BACKGROUND: Cannabis is the most widely used illicit substance in patients with psychosis. In patients with Schizophrenia, psychotic symptoms are exacerbated by the psychoactive components of cannabis, specifically delta-9-THC and its synthetic derivatives. However, the impact of cannabis use on cognitive function in patients with Schizophrenia is not as clear. This relationship is controversial as some studies have demonstrated an association between cannabis use and enhanced cognitive performance while others have shown an association between cannabis use and reduced cognitive performance. Our study aims to report cases of cannabis use and cognition in patient with Schizophrenia in an inpatient setting. **METHODS**: We investigated the relationship between cannabis use (duration and frequency) and cognitive function as measured by a cognitive screener exam in patients with Schizophrenia in one psychiatric unit with monthly admission numbers of around 30-50 from a large inpatient psychiatric hospital. Patients included are above the age of 18 with a diagnosis of Schizophrenia and concurrent Cannabis Use Disorder (based on DSM-V criteria) admitted from March 1st, 2019 to March 31st, 2019. Data for cognitive impairment was measured by the MoCA test, the severity of cannabis use was categorized as mild, moderate, or severe by the Cannabis Abuse Screening Test (CAST) questionnaire, and the lifetime consumption of cannabis use was measured by the Kreek-McHugh-Schluger-Kellogg (KMSK) Scale once the patient was psychiatrically stable and met the criteria for discharge. Other patient demographics were recorded, including gender, ethnicity, level of education, medical comorbidities, medications, length of hospitalization, and number of readmissions. This study was approved by UT Health IRB Committee. **RESULTS**: Six patients admitted from March 1st, 2019 to March 31st, 2019 were found to meet the inclusion criteria (Table 1). All six patients had severe cannabis use according to the CAST and KMSK Scale. We found four of six (67%) patients had impaired cognitive function despite being psychiatrically stable and ready for discharge. **DISCUSSION**: Previous studies have demonstrated conflicting findings, with some studies showing cannabis use to be associated with enhanced cognitive performance while others show an association with reduced cognitive performance. Our case reports showed impaired cognitive functioning in four of six patients with severe cannabis use. However, two patients did not have diminished cognition despite their severe cannabis use. A shortcoming of this study is the limited number of subjects demonstrating the impact of cannabis use on cognitive performance. Therefore, further studies examining cannabis use and cognitive function are warranted to better clarify this relationship as well as evaluate for other mitigating and exacerbating factors.

No. 35

Clozapine-Induced Resolution of Pseudocyesis/Delusions of Pregnancy in a 67-Year-Old Woman With Schizoaffective Disorder

Poster Presenter: Nikita Bodoukhin, M.D.
Co-Authors: Kelly Conley, Luminita Luca

SUMMARY:
Introduction Delusions of pregnancy, or pseudocyesis, are rare in the modern world, particularly in postmenopausal women (1). There is no standard pharmacological treatment for such delusions although individual case reports describe success using a variety of antipsychotics (2). Here we report successfully treating delusions of pregnancy with clozapine. Case Presentation We present a case of a 67 year old female with schizoaffective disorder

bipolar type, coronary artery disease, hypertension, irritable bowel syndrome, gastroesophageal reflux, and osteoarthritis who presented involuntarily to the inpatient psychiatric unit due to psychosis and aggression toward family. On admission, the patient verbalized that she had been pregnant for about 1 week, also endorsing that she had not seen her estranged partner in months. The clinical course was complicated with frequent episodes of agitation stemming from paranoid persecutory delusions against the treatment team. The patient offered somatic delusions, describing the baby "kicking" her. Trials of fluphenazine, olanzapine, quetiapine, and risperidone yielded no significant clinical improvement. Divalproex was moderately effective in controlling mood symptoms. During the several month-long admission, the patient developed abdominal pain and one episode of coffee-ground emesis which was worked up with abdominal CT and upper endoscopy. After the procedure, the persecutory delusions had changed, as the patient started accusing the team of taking the newborn baby away from her. She expressed her intent to leave the hospital in search of the baby. The patient was soon started and uptitrated on clozapine to a final dose of 50mg daily and 100mg at bedtime. Corresponding clozapine level was 215 mcg/L. The patient showed gradual improvement including decrease of psychosis, irritability, and was able to better describe the sources of her abdominal and musculoskeletal discomfort -allowing for these symptoms to be better controlled. Delusions of pregnancy and subsequent delivery of a child during hospitalization started to fade after several weeks on clozapine. The patient was less adamant that she had been pregnant. With supportive psychotherapy on the inpatient unit, the patient gained insight into her condition, admitting that her mental illness was the cause of her false beliefs. After 6- months, the patient was able to be discharged back to her apartment with close outpatient follow up. Discussion Clozapine was effective in controlling delusions of pregnancy, while prior trials of antipsychotics were not. Typical antipsychotics induce hyperprolactinemia , which can stimulate symptoms typically associated with pregnancy and contribute to a patient's delusion (3), whereas clozapine does not increase prolactin level (4) . We posit that clozapine may be further used to target such delusions, possibly due to clozapine's low impact on prolactin level.

No. 36

Composition of Psychosis: Limbic Encephalitis Presenting as Treatment Resistant Schizoaffective Disorder

Poster Presenter: Brandi Karnes, M.D.
Co-Authors: Robert E. Jackson, M.D., Mehmet Camkurt, M.D.

SUMMARY:
It is estimated that one-third of patients with schizophrenia are treatment resistant. An important factor to consider in treatment resistance is if the patient has "pseudo-resistance" due to an incorrect diagnosis. In this case, we will discuss a 23 year old male with a past psychiatric history of pervasive developmental disorder not otherwise specified and no significant past medical history. From 23-26 he was diagnosed with schizoaffective disorder. He had several psychiatric admissions for hyper religious delusions, ideas of reference, auditory hallucination, suicidal and homicidal ideation, intrusive thoughts and OCD features, tics, and self-harming of head banging. At one point, he acted on the psychotic beliefs and required an inpatient medical admission secondary to sustained trauma. He was tried on several antipsychotics, high and low potency, first and second generation, with a poor response. In fact, his mother reported the patient had worsening symptoms on antipsychotics. At 26 years old he presented to a medical hospital where he received a more extensive workup to rule out underlying medical causes contributing to his atypical presentation and treatment resistance. His lumbar puncture, paraneoplastic panel, and MRI were all unremarkable. However, EEG showed diffuse and focal abnormalities in the absence of seizure activity and PET scan was consistent with limbic encephalitis. He was admitted and received steroids, plasmapheresis, and IVIG treatments. Currently, he is progressing in recovery and has not required admission in 1 year, the longest stretch since first becoming ill. Curiously, the patient was a musician who composed music during his active phase of limbic encephalitis and while on treatment with striking variations. There is scarce research about

music, poetry, and creativity with neurological findings such as epilepsy, but even fewer with psychosis or encephalitis. This poster presentation will not only highlight the importance of thorough evaluation in atypical and treatment-resistant psychosis, it will also include an interactive feature of pieces of music made by the patient during various phases of illness and treatment to bring curiosity to the mind-body connection. This unique case draws into question what we know about treatment resistant psychotic disorders, opening up a possibility of effective treatment given the pursuit of a broader diagnosis.

No. 37
WITHDRAWN

No. 38
Correlation or Causality: A Case of Psychosis and Hyperbilirubinemia
Poster Presenter: Glennie Leshen, M.D.
Co-Authors: Laura Francesca Marrone, M.D., Adam Padilla

SUMMARY:
Metabolites such as bilirubin have known neurotoxic, deleterious effects on neurons, glia cells, and astrocytes in cases of elevated bilirubin secondary to sever liver dysfunction. Case reports have described patients diagnosed with schizophrenia who have presented with worsening psychosis in the context of mildly elevated unconjugated bilirubin, which suggests a possible correlation between unconjugated hyperbilirubinemia and psychosis. Here we present the case of a 39 year old, high-functioning Caucasian male active duty service member who has had two brief psychotic episodes in the setting of unconjugated hyperbilirubinemia, which was ultimately diagnosed as Gilbert's Syndrome. These episodes were similar in both onset and duration of symptoms and occurred four years apart without preceding prodromal symptoms. During both episodes of psychosis, clinicians noted significant behavior disorganization and symptoms of catatonia, including stupor, posturing, and echolalia. The patient's psychosis and hyperbilirubinemia resolved once the patient returned to an asymptomatic psychiatric baseline without antipsychotic medication management. This poster will examine the relationship between unconjugated hyperbilirubinemia and presentations of psychoses through this patient's formal evaluation and work-up and discuss his diagnosis, disposition, and prognosis with respect to both his underlying diagnosis of Gilbert's Syndrome and psychotic episodes. The final assessment includes consideration of hyperbilirubinemia as a factor that may contribute to precipitation and manifestation of psychotic disorders or could warrant future investigation as a potential objective, measurable biomarker and harbinger of diagnoses characterized by psychosis.

No. 39
De-Novo Delusional Disorder After SARS-CoV-2 Infection
Poster Presenter: George Rainieri
Co-Authors: Laura M. Rodriguez-Roman, M.D., Robert N. Averbuch, M.D., Uma Suryadevara, M.D., Richard Holbert, M.D.

SUMMARY:
Since initial reports of SARS-CoV-2, the virus that causesCOVID-19, in Wuhan, China to its growth into a pandemic, concerns have been mounting about its potential for neuropsychiatric complications. Such sequelae can arise as a direct manifestation of CNS infection or indirectly from the body's immunological response to the disease. Some of the more common symptoms of COVID-19 include fever, dry cough, muscle aches, difficulty breathing, anosmia and dysgeusia. Delirium and altered mental status are also common during the acute stages of illness. Less is known about psychiatric manifestations of the infection in the post-acute phase, which includes reports of encephalitis and cerebrovascular disease. Here, we report a case of de-novo delusional disorder following SARS-CoV-2 infection. A 63-year-old female with no past psychiatric history presented to the inpatient psychiatric unit with paranoid delusions. She had been diagnosed with COVID-19 two months earlier and hospitalized briefly for shortness of breath and chest pain. Prior to her psychiatric admission, the patient reported a one-month history of worsening restlessness and distress secondary to recurring

perceptions of men entering her bedroom window to harm her. As her symptoms progressed, the patient would increasingly inspect doors locks, and windows, eventually soliciting family to make safety checks. Episodes became so frequent the family decided to seek medical care. At the time of evaluation, the patient was fully alert and oriented, with no observable deficits in cognition. She denied any symptoms of depression, mania, nor any associated psychotic features, beyond the presenting complaint. Other than her recent COVID-19 diagnosis, no other medical conditions or acute stressors were identified as possible contributors. Throughout hospitalization, the patient refused to sleep in her room, spending her time primarily in the dayroom. Quetiapine was initiated and titrated with some benefit. While previous coronavirus outbreaks have been associated with significant neuropsychiatric sequelae in both the acute and post-illness stages, the data is preliminary and/or unpublished. It is yet to be determined if these complications are explicitly related to brain injury versus other factors that could be connected to viral infection. Further studies are needed to better establish the role COVID-19 plays in such psychiatric manifestations of illness.

No. 40
WITHDRAWN

No. 41
First Episode Psychosis in the Setting of Military Recruit Training and Concurrent Covid-19 Infection
Poster Presenter: Anthony J. Becker, M.D.
Co-Authors: Savannah Woodward, Laura Francesca Marrone, M.D.

SUMMARY:
The association between psychotic disorders and infectious disease both endemic and pandemic has been well-documented. This is historically demonstrated across the identification of Treponema pallidum as the causative agent of "general paralysis of the insane" in the mid-19th century, the 1918 Spanish Influenza pandemic, and as recently as the 2009 H1N1 (swine flu) pandemic. Reports of psychosis associated with the ongoing COVID-19 pandemic are emerging, one of several neurological complications observed even in mild cases of infection, e.g. anosmia. In this presentation, we discuss the case of an 18-year-old recruit to the United States Marine Corps (USMC) with no prior psychiatric or medical history who was known to be COVID-19 negative upon reporting to training. He presented to psychiatric care in the course of training with symptoms of psychosis including paranoia, gross disorganization and questionable hallucinations in the context of physical and psychosocial stressors. He was incidentally found to have a positive COVID-19 PCR and subsequently reported mild upper respiratory complaints. His symptoms of psychosis responded rapidly over the course of days with low doses of risperidone and gradual recovery from his mildly symptomatic COVID-19 infection. When considered in the context of concurrent physiologic and psychologic stressors of COVID-19 infection and the rigors of military recruit training, the brevity and full resolution of his symptoms complicates the diagnostic evaluation and interpretation of this psychotic episode. Treatment and evaluation are ongoing in this case, and interim observations gathered will be presented and discussed in this case including outcome of a probable trial of antipsychotic discontinuation. Additionally, consideration of his status as a second-generation immigrant and member of an ethnic minority in the United States highlights the importance of accounting for both the risk of psychiatric crises associated with COVID-19 infection given the disparate impact of COVID-19. Lastly, the patient's case demonstrates how the disproportionate representation of racial and ethnic minorities in the USMC and the additional risk of early attrition among recruits observed in these populations presents military psychiatry as a unique and important venue to pursue health equity.

No. 42
If It Walks Like a Duck and Talks Like a Duck, Is It Schizophrenia? A Multifactorial Approach to a Diagnostically Complex Patient
Poster Presenter: Suzan Dion, D.O.
Co-Author: Laura Francesca Marrone, M.D.

SUMMARY:
When a patient initially interfaces with mental health, the differential diagnosis may remain broad in the absence of extensive past psychiatric history or treatment. Complex and atypical presentations often require a multifaceted approach to include self-reported history, collateral, observation, medical work up and diagnostic assessments to arrive at a comprehensive and accurate biopsychosocial formulation and safe, effective, evidence-based treatment plan. This poster describes the case of a 26 year old Filipino male active duty service member with no previous psychiatric history that initially presented with suicidal and homicidal ideations, bizarre behavior, disorganized thinking, inappropriate interpersonal interactions, and notable occupational impairment while underway aboard an aircraft carrier. He was started on antipsychotics, removed from the ship, and hospitalized with concerns for both a primary affective disorder or schizophrenia spectrum disorder. During his 23 day long hospitalization, he underwent a battery of tests included in the workup for first break psychosis and was discharged with a diagnosis of Schizophreniform Disorder. On further assessment as an outpatient, along with vital collateral from his family and previously withheld historical elements, his symptoms were found to be more consistent with a very suggestible young man dealing with substance abuse, low distress tolerance, and a history of poor decision making, which worsened in the highly stressful and occupationally demanding military ship environment lending to a complex presentation of Adjustment Disorder. This poster will present his formal evaluation and work up in the Psychiatric Transition Program (PTP) at Naval Medical Center San Diego, the Department of Defense's only First Episode Psychosis program, and discuss his final assessment, disposition, and prognosis. Detailed social history, collateral, psychological assessment, and thorough medical exam remain invaluable aspects of the work up for First Episode Psychosis especially in the evaluation of diagnostically complex cases.

No. 43
Loxapine as an Alternative to Clozapine
Poster Presenter: Shristi Shrestha, M.D.
Co-Authors: Raafae Agha, M.D., Zershana Khan, M.D., Kaushal Shah, M.D., M.P.H.

SUMMARY:
Background: According to the 2018 National Survey on Drug Use and Health (NSDUH) report, about 47.6 million people above 18 years of age had any mental illness (AMI) in the past year, corresponding to 19.1 percent of adults in the United States (US). Its estimate includes 11.4 million adults who have a serious mental illness (SMI) [1]. This case series highlights the importance of Loxapine in psychiatric disorders when clozapine is unable to control agitation and psychotic symptoms due to medication noncompliance, or intolerable side effects or even insufficient clinical outcomes. Loxapine is classified as a first-generation typical antipsychotic but boasts a lot of atypical antipsychotic-like characteristics and is structurally very similar to clozapine [2-6]. However, the role of Loxapine has been understudied, and its use has been limited in modern psychiatric practice. Discussion: In this case series, we reported two patients (35-year-old Hispanic Male and 45-year-old African American Female) with psychotic symptoms and agitation. The long-term psychiatric ailments were inadequately controlled by Clozapine, and patient''s noncompliance with it did not aide in their treatment. Whereas medication compliance, psychotic symptoms, and agitation were managed very well on oral Loxapine, patients responded well due to the elimination of the side-effects such as sialorrhea, and the need for regular lab work for CBC monitoring. The side effect profile of Loxapine is comparable to the first-generation antipsychotics in high doses (>50 mg per day) [9]. However, when used in lower doses, its effect is similar to that of a second-generation antipsychotic [7,9]. Although Loxapine is identical in structure and comparable in efficacy to Clozapine, it also has many significant differences, such as Loxapine not requiring frequent blood monitoring for agranulocytosis due to differences in oxidation by human neutrophils as seen in Clozapine [6]. For the treatment of schizophrenia, the recommended starting dose for oral Loxapine is 10 mg twice a day (BID) with a maximum dose of 250 mg per day. Intramuscular dosing ranges from 12.5 mg to 50 mg every 4 to 6 hours. For acute treatment of agitation associated

with schizophrenia and bipolar disorder, the dosing is 10 mg once daily by inhalation [9]. Conclusion: Several recent studies suggested Loxapine a drug of choice because of similarity with Clozapine in efficacy, more routes of administration, cost-effectiveness, and with better side-effect profile. It has superiority for immediate use as it provides a convenient route of administration through the inhalation route. Since psychiatric agitation and uncontrolled psychotic symptoms are major challenges in a psychiatric setting, psychiatrists and healthcare workers would find benefit from this unique option. Further well-designed comparative studies should be conducted on Loxapine and other antipsychotics to identify and uncover its optimal use.

No. 44

Management of a Delusional Patient When the Secret Service Is Involved

Poster Presenter: Jawad Manzoor, M.D.
Co-Authors: Hannah Troyer, Raj Addepalli, Kathleen Sered

SUMMARY:
KT is a 40-year-old single, African American man, who was brought to our emergency department by EMS for complaints of "hearing voices through the sunlight". Patient reported that earlier today he had contacted the local electrical utility to turn off the "machine that would eventually turn off his neurotransmitter". He was told it would be turned off in an hour or two. Patient stated that he started to cry in joy; and as a result, his next-door neighbor who heard him called emergency services. Patient reported being monitored by numerous individuals through "remote neural monitoring" for the last 10 years. He stated his mother and Oprah Winfrey were involved as well. He also had made numerous threats to President Obama in the past and was being actively monitored by the Secret Service. Patient had a history of multiple emergency department visits, many past psychiatric hospitalizations, previous diagnosis of schizoaffective disorder, habitual use of multiple substances, non-adherence with treatment, past arrests for verbal altercations, and history of homicidal ideations toward Presidents Obama, Bush, Trump and Oprah Winfrey. He was subsequently admitted to the inpatient unit and stabilized on haloperidol 5 mg twice daily and benztropine 1 mg twice daily. The patient also received haloperidol decanoate 300 mg intramuscular prior to discharge. His delusions decreased in intensity prior to discharge. Some of the treatment challenges included heightened administrative scrutiny in view of the high-profile nature. Clinical issues which arose include a constant need to balance the duty to act in the best interest of the patient, violation of confidentiality, stigma of federal prosecution faced by the patient and clinical responsibility of informing patient of risks of the same and ongoing Secret Service surveillance. Treatment issues which were employed to mitigate risk include educating the patient that threats against the President are a Federal crime, and offering the patient LAI considering history of medication noncompliance and diagnosis of schizophrenia. Additional mitigating strategies pursued for this patient included linkage with assertive community treatment team and an active assisted outpatient program court order. Assessment tools which can be referenced in management of these unique subset of patients include the Clarke classification and the Secret service exceptional case study project (ESCP). Our case highlights the unique challenges in treatment of patients who make threats to high profile individuals.

No. 45

Management of Pseudocyesis in a Severely Mentally Ill Transgender Female

Poster Presenter: Jacob P. Mulinix, D.O.
Co-Authors: Jennifer Kate Obrzydowski, M.D., Taimur Khalid Mian, M.D.

SUMMARY:
Pseudocyesis is a somatic syndrome which mimics gestation without objective evidence of pregnancy; one firmly believes they are pregnant when they are in fact not. Though similar to delusional pregnancy, a major difference is the experience of physical symptoms in pseudocyesis which reinforce the perception of pregnancy. Our case is of a 28 year old transgender female with a history of schizoaffective disorder bipolar disorder type (multiple episodes)

and pseudocyesis, who presented in an acute episode, with symptoms of mania and psychotic behavior centered on the belief that she was pregnant with twins. The treatment team, was able to stabilize the patient's mania and symptoms of acute psychosis with antipsychotic medication treatment. However, the patient's pseudocyesis was resistant to medication management and multiple psychotherapeutic strategies. Literature on how to manage pseudocyesis in cis-females and cis-males was available, and utilized in our management of the patient. The literature however did not address the challenges of treating pseudocyesis in the trans-gender population. This case presents a unique situation where it can be challenging for the clinician to treat a false fixed belief which is intrinsic to the patient's gender identity, but not compatible with their sex assigned at birth. We advocate that the importance of refraining in this situation from the urge to confront such beliefs with a biological argument, and taking a more reassuring and empathic approach.

No. 46

Managing Psychosis in a Patient on Adderall With a History of Major Depressive Disorder and Methamphetamine Abuse

Poster Presenter: Cooper Henderson, M.S.
Lead Author: Mathew Scott Lemberger, M.D.
Co-Author: Dewey Murphy, M.D.

SUMMARY:
Mr B. is a 46-year-old Caucasian male with past psychiatric history of Major Depressive Disorder and methamphetamine abuse who was admitted to the psychiatric hospital following a mental hygiene for psychosis and suicidal ideation with attempt to overdose on prescription medications. Per certificate of licensed examinee, the patient had taken 26 Adderall, 45 Ativan and 12 Neurontin after becoming upset with his wife. Prior to his overdose attempt, he had also made superficial cuts to his neck and attempted to stab himself in the abdomen. Several days prior to admission, the patient was reported to have appeared intoxicated and to have been complaining there were other people in the home when there were not. According to the mental hygiene, the patient had a history of abusing methamphetamine. While the patient categorically denied any recent substance use, his wife was concerned that he may have resumed abuse of methamphetamine. Upon initial presentation, the patient complained of auditory hallucinations and intermittent paranoia since being started on Adderall three months earlier for difficulty concentrating. During this period, he endorsed worsening auditory hallucinations in which he would hear what he thought were men sleeping with his wife. Additionally, he endorsed the paranoid delusion that his wife was tapping his phone. While acknowledging past history of methamphetamine abuse, he reiterated that he had not recently used any illicit substances. He denied SI/HI and committed to safety at time of interview, stating that he wanted to live and have his medication adjusted. In this poster, we discuss the treatment and outcome of a patient whose initial differential diagnosis included MDD with psychotic features versus methamphetamine psychosis or Adderall psychosis.

No. 47

Managing Schizophrenia and Severe Persistent Tardive Dyskinesia in a Psychiatry Outpatient Clinic: A Longitudinal Case Study

Poster Presenter: Marco Christian Michael, M.D.

SUMMARY:
Tardive dyskinesia is a serious movement disorder with a heterogenous presentation. According to the Schooler-Kane criteria, persistent tardive dyskinesia is defined as moderate dyskinetic movements in one area or mild dyskinetic movements in two body areas lasting for six months or more following at least three months cumulative exposure to neuroleptics in the absence of other etiologies for movement disorders. Tardive dyskinesia, in more severe forms affect the trunk, causing difficulty breathing. Risk factors for tardive dyskinesia include history of acute extrapyramidal symptoms, use of higher-potency antipsychotics, older age, duration of antipsychotic use, and drug-free intervals. Tardive dyskinesia can be disturbing to patients and cause a great deal of distress. Treatment for tardive dyskinesia involves a multipronged,
balancing approach, as care must be made to reduce tardive dyskinesia symptoms while preventing

resurgence in psychosis. We present a case of a 31-year-old Haitian patient who was diagnosed with schizophrenia in 2008. The patient initially was started with ziprasidone and lithium in the inpatient unit, but he suffered metabolic changes and had significant weight gain. His antipsychotic was changed to aripiprazole, which failed in treating his psychosis, and he was eventually stabilized on haloperidol. However, patient started developing tardive dyskinesia. His movement symptoms were very disturbing to the point where he had to quit his job, as well as one emergency room visit due to shortness of breath following severe diaphragmatic movements. After much discussion, patient agreed to start taking clozapine, and he has not had further psychiatric hospitalizations since. Neurology consult was requested, and patient started taking deutetrabenazine, monthly botulinum injection, and baclofen on top of clonazepam and trihexyphenidyl. This medication regimen was able to reduce his movement symptoms significantly, but his neurologist soon left practice. While patient was being referred to a different neurologist, the psychiatrist and patient agreed to switch deutetrabenazine to valbenazine, prescribed by the psychiatrist. With this new regimen, patient's tardive dyskinesia is well controlled.

No. 48

Neurosyphilis Presenting as New-Onset Psychosis: A Case Report and Literature Review

Poster Presenter: Kripa Balaram, M.D.
Co-Author: Parvathi Nanjundiah, M.D.

SUMMARY:

Background: Psychosis, characterized by delusions, hallucinations, and disorganized thought or behavior, can present due to a primary psychiatric illness or secondary to an underlying medical condition. Of the numerous conditions that can lead to neuropsychiatric disturbances, syphilis is often overlooked. Primary syphilis affects the genitourinary system but, if left untreated, can spread. Often referred to as "the great imitator," syphilis can present with a variety of signs and symptoms that can affect every organ system. According to the CDC, rates of incidence of primary and secondary syphilis have been increasing steadily since 2001. The risk of infection is also particularly great in psychiatric patients who, due to either limited insight or disinhibition, may engage in high-risk behavior. Neurosyphilis, a stage of advanced infection in which the bacteria has entered the central nervous system, is characterized by various neurological and psychiatric symptoms. Case Report: We present the case of newly-diagnosed tertiary syphilis infection. A 61 yo male with extensive alcohol use and no previous psychiatric history presented to the clinic with new-onset symptoms of psychosis. He reported auditory hallucinations and paranoia that had worsened over the past two years with progressive symptoms of ataxia, vision loss, cognitive impairment, and memory loss. An antipsychotic was started for symptomatic control. Workup for any underlying medical etiologies indicated a positive RPR screen with treponemal antibodies. He was quickly initiated on antibacterial therapy for his syphilis infection and linked with neurology for further follow-up. Literature Review: A search of the preexisting literature indicated that, of the millions of new syphilis infections diagnosed worldwide, up to 30% progress to tertiary syphilis if left untreated. Confirmatory diagnosis of neurosyphilis requires a positive treponemal serum screen and CSF studies. In adults, symptoms of neurosyphilis can include disinhibition, delusions, personality changes, or even psychosis. Other neurological signs, such as tremor, ataxia, dysarthria, pupillary changes, and blindness, may also be present. A literature review indicated previous case reports of patients presenting with vague, nonspecific neuropsychiatric symptoms who were ultimately diagnosed with syphilis. A systematic review indicated that penicillin therapy had inconclusive benefits and was inconsistent in producing symptomatic improvements. Conclusions: When a patient presents with new-onset psychiatric symptoms, a workup for any possible underlying medical conditions must be done. Due to the vast array of symptoms that can occur in syphilis, infections are often missed until irreversible neurologic damage occurs. This is especially pressing given the rising rates of infections worldwide. It is essential that providers screen all patients presenting with nonspecific neuropsychiatric symptoms for treponemal infection.

No. 49
WITHDRAWN

No. 50
Othello Syndrome: Delusional Disorder—Jealous Type and Violence
Poster Presenter: Elizabeth Soyeon Ahn, M.D.
Co-Author: Jacqueline A. Hobbs, M.D., Ph.D.

SUMMARY:
Background Othello syndrome, also known as morbid jealousy, pathological jealousy, and conjugal paranoia, is a rare delusional disorder related to a partner's infidelity. There are no large scale or comprehensive studies on delusional jealousy, and only few case reports and cases series that leave much of delusional disorder—jealous type (DDJT) in unknown. Herein, we report a case of DDJT, explore its possible etiology and describe its characteristics, comorbidities, and interventions. Case Description A 65-year-old married, retired, and disabled Caucasian male with a history of closed traumatic brain injury and chronic pain presented for outpatient care for paranoid delusions accompanied by his wife. Patient was a car racer when he sustained over 25% total body surface area burns after his motor vehicle crashed at the speed of 159 mph. Patient was in a coma for 9.5 weeks, coded 3 times, and was resuscitated each time. Per imaging, patient suffered subarachnoid hemorrhage to the right outer parietal and left front parietal lobes. Patient developed chronic pain from the extensive burns, and has been on opioids for many years until he gradually tapered himself off about 6 years ago. For the last couple of years, patient has experienced cognitive decline associated with disorientation and memory deficit. Patient has been perseverative and displaying delusions regarding wife's weekend trip 2 years ago during which patient believes that she had an affair with one of her old friends. Patient denies visual or auditory hallucinations, and continued to express his love and affection toward his wife. Although wife has continually provided reassurance, and multiple family members confirmed her faithfulness, patient had minimal insight into his delusion, and expressed disappointment in loss of sexual intimacy between him and his wife. Patient has been prescribed duloxetine 60mg and trazodone 150mg, and his mood, anxiety, and sleep have been stable. Patient has also started taking pimozide 1mg nightly since January 2020 with good effect. Discussion The DSM estimates the prevalence of DDJT to be less than 1%. At least a third of cases show neurological basis involving frontal lobe dysfunction associated with strokes, Parkinson's disease, brain trauma and tumors, neurodegenerative disorder, encephalitis, multiple sclerosis, and even normal pressure hydrocephalus. Association with alcohol, amphetamine, cocaine, and dopamine therapy (pergolide, ropinirole, levodopa, amantadine, and pramipexole) were reported. Finally, DDJT is known to be a risk factor of violent crimes including homicide. Treatment with pimozide shows the strongest evidence, and most show improvement with any antipsychotic medication along with CBT. Continued research and further clinical trials are warranted for DDJT considering positive response to interventions in the past, and because DDJT can become a dangerous condition in forensic situations.

No. 51
Palpitations, Panic and Psychosis: A Psychiatric Presentation of Thyrotoxicosis
Poster Presenter: Jessica Mikolowsky, M.D.
Co-Authors: Maite Castillo, M.D., Mousa Botros, M.D.

SUMMARY:
Introduction: Literature on psychosis in the setting of thyrotoxicosis is rare and very few case studies have been published. Patients with hyperthyroidism have an array of neuropsychiatric presentations that include irritability, anxiety, lack of concentration and memory loss1. Less frequently, they can present as a psychotic episode or even catatonia. We report a case of psychosis associated with thyrotoxicosis. Case presentation: Our patient is a 29-year-old African American male previously diagnosed with schizophrenia and cannabis use disorder and was admitted to a psychiatric unit for a psychotic episode. Initially, his heart rate was 109 bpm, and his physical exam was within normal limits. Initial labs included a complete blood count and comprehensive metabolic profile that were unremarkable and urine and serum toxicology screens that were negative for

illicit drugs. An Electrocardiogram revealed sinus tachycardia and a QTc interval of 437 milliseconds. The patient received intravenous haloperidol and lorazepam for agitation and was medically cleared for psychiatric admission. During hospitalization, he exhibited disorganized and tangential thought process with paranoid delusions, grandiosity and ideas of reference. He was started on haloperidol 5 mg orally twice daily. Oral lorazepam 1 mg was started twice daily for anxiety. He was switched to oral disintegrating risperidone 1mg twice daily for compliance. Behavior remained disorganized and thyroid function studies revealed TSH < 0.005 mcIU/mL and a free T4 > 7.77 ng/dL; subsequently Endocrinology service recommended oral Methimazole 60 mg daily and oral Propranolol 20 mg twice daily for hyperthyroidism which resolved the patient's tachycardia. Patient underwent further thyroid labs. TSH Immunoglobulin, TSH Receptor Antibody and TPO were elevated indicating an autoimmune thyroiditis. Ultrasound of the thyroid demonstrated an enlarged and hyperemic thyroid gland without nodules, consistent with thyroiditis, with Graves' disease. After successful treatment with Methimazole, patient's thought process improved, and behavior returned to baseline. Conclusion: It is imperative to differentiate between psychosis of Schizophrenia versus Thyrotoxicosis as this will drive the treatment, particularly as some case studies have shown that using Haldol to treat thyrotoxicosis-induced psychosis can result in malignant catatonia2. The authors conclude that patients presenting with acute psychosis should be screened with baseline TSH levels upon arrival to emergency department, especially if other risk factors for thyroid disease are present.

No. 52

Phantosmia Associated With Probable Peduncular Hallucinosis: A Case Report

Poster Presenter: Jason S. Lee, M.D.
Co-Author: Travis Stuart Krew, M.D.

SUMMARY:

Peduncular hallucinosis (PH) is a rare disorder with complex visual hallucinations, including animals, people, and grotesque faces. Usually occurring at night, patients have a clear sensorium with a disturbed sleep-wake cycle. Neuroanatomical origins of PH were originally confined to the cerebral peduncles and surrounding structures, but case reports have described other contributing regions, including thalamic connections to the brainstem. While auditory hallucinations have been reported in PH, olfactory hallucinations (phantosmia) have not been described in the literature. We present the case of a patient with new-onset visual hallucinations and phantosmia. A 62-year-old female with interstitial pulmonary fibrosis (on chronic hydroxychloroquine), hypothyroidism, and hypercholesterolemia presented to the emergency department (ED) with visual hallucinations, phantosmia, and insomnia for six weeks. She reported seeing a man who looked "as though he was aborted…[with] a gash on his forehead." The man used a "smoke machine" to create smoke, which she could smell. Symptoms intensified at night, resulting in severe insomnia. The patient agreed to voluntary psychiatric hospitalization and was later discharged on quetiapine 12.5 mg at bedtime. This reduced hallucinations to only non-distressing "smoke." However, she returned to the ED three weeks later with recurrent symptoms, and she was admitted to the medical floor for further workup. Head computerized tomography, routine blood work, lead level, Rapid Plasma Reagin, and vitamin B12 were unremarkable. Ophthalmologic exam revealed early cataract formation. Montreal Cognitive Assessment was 30/30. Psychiatry started and increased risperidone to 1 mg twice daily. Upon discharge, she reported non-distressing visual hallucinations of smoke, resolving fully within five months. The differential diagnoses included PH, hydroxychloroquine-induced psychosis, and Charles Bonnet syndrome (CBS). Due to her chronic use of hydroxychloroquine and unremarkable ophthalmologic exam, it was believed she was most likely suffering from PH. This report is the first known example of phantosmia in PH. It is possible the patient's phantosmia was distinct from PH, but it is likely her visual and olfactory hallucinations were linked due to clear temporal association. Neuroanatomical connections involved in PH include the reticular formation of the brainstem and its thalamic targets. Although olfactory sensory neurons do not project to the thalamus (unlike other sensory systems), there is evidence visual sensory fibers

converge on the olfactory tubercle. Literature suggests the olfactory tubercle has afferent and efferent connections with the raphe nuclei, a primary component of the reticular formation. These neuroanatomical associations support phantosmia being a possible, rare feature of PH. This report highlights the importance of diagnostic flexibility when encountering symptoms incongruent with the usual paradigm.

No. 53

Polydipsia as a Manifestation of Catatonia

Poster Presenter: Thomas Laux
Lead Author: Thomas Laux
Co-Authors: Yassir Osama Mahgoub, M.D., Andrew J. Francis, M.D., Jatinder Singh

SUMMARY:

Introduction: Psychogenic polydipsia, a diagnosis of exclusion, is prevalent among patients with psychiatric disorders. Polydipsia has been associated with catatonia without clear causation or directionality. We describe a case where polydipsia was a sign of catatonia in the form of stereotypy, represented by abnormally frequent motor behavior. Case Report: A 56-year-old male with a history of obsessive-compulsive disorder (OCD) on fluvoxamine 50 mg/day presented with paranoid delusions, agitation, poor sleep, and self-inflicted injury. He was pressured, irritable, and hyperactive, with notable perseveration. His toxicology screen was negative with hyponatremia of 133 mEq/L, related to polydipsia. He was diagnosed with bipolar I disorder and was given lorazepam 1 mg BID, clomipramine 50 mg/day, and risperidone 1 mg/day. Symptoms, including polydipsia, improved after one day. Notably, two months earlier he had been hospitalized for non-traumatic rhabdomyolysis with hyponatremia of 114 mEq/L. Polydipsia work-up was negative, suggesting psychogenic polydipsia. He was hospitalized two weeks later due to medication nonadherence and presented with agitation, paranoia, autonomic instability, and hyponatremia of 119 mEq/L. He described polydipsia, vomiting, and polyuria. Clomipramine and risperidone were discontinued as possible hyponatremia contributors and he was prescribed olanzapine 5 mg/day, valproate 500 mg BID, lorazepam 0.5 mg once, and fluid restriction. Psychiatric and metabolic symptoms improved. A third admission occurred two weeks later, again medication nonadherent with irritability, decreased sleep, pressured speech, and impulsivity. He had increased thirst, perseveration, and excessive pacing. Symptoms resolved quickly with risperidone 1 mg/day and lorazepam 1 mg BID. He was started on depot-risperidone 25 mg to address noncompliance. Lorazepam was reduced to 0.5 mg BID four days later resulting in reemergence of polydipsia, perseveration, and hyperactivity. Symptoms again resolved after increasing lorazepam to 1 mg BID and risperidone to 3 mg/day and sodium level was 139 mEq/L on discharge. Discussion: Our patient presented with episodic polydipsia concurrent with manic symptoms. His polydipsia, a repetitive motor behavior, likely represents a catatonic stereotypy. Polydipsia resolved with lorazepam increase, reemerged with lorazepam reduction, and this pattern followed alongside excitement, impulsivity, combativeness, and autonomic abnormality. Psychiatric, metabolic, and polydipsia symptoms followed a naturalistic ABABAB pattern with lorazepam use, and the lorazepam-polydipsia resolution relationship scores 9 on the Naranjo Scale indicating a "definite" probability of causality. His OCD symptoms did not include drinking; it is unlikely that short-term lorazepam would treat OCD, but it could treat catatonia. Conclusions: Psychogenic polydipsia can be a manifestation of catatonic stereotypy. Lorazepam can successfully treat polydipsia.

No. 54

Pseudocyesis in the Adult Inpatient Psychiatric Setting

Poster Presenter: Austin Goebel, D.O.
Co-Author: Robert Wooten, M.D.

SUMMARY:

Introduction: Pseudocyesis is a very rare condition where a patient believes that she is pregnant when she is not and has physiological symptoms as well. This case is unique not only because it is a rare condition, but because this is the second episode. This case also highlights the intricacies of working with the patient and the legal system congruently. I reviewed three similar cases;

however, they were all discussing the first episode of pseudocyesis. ?? Case Description: The patient is a 21-year-old female that presents with symptoms consistent with her second episode of pseudocyesis. She had recently been fired from her therapist for getting angry at her for telling her that she was not pregnant and had multiple negative pregnancy tests, including one in the emergency room. There were approximately two years between the two episodes, and she was very resistant to medications, which complicated her treatment. We reviewed records from her previous admission, where she had stated that she had been sexually abused; however, during her course of stay with us, she continuously denied this. Our initial differential included pseudocyesis and an unspecified delusional disorder. Since she was having weight gain and stated that she could feel the baby moving, we viewed these as somatic symptoms, which is why we felt that pseudocyesis was the appropriate diagnosis. We started the patient on oral Aripiprazole because we thought that it was unlikely that she would be compliant with medication, and we filed paperwork for a hold. Initially, we filed a petition for a seven-day hold, but she was still not improving, so then we later got a 45-day hold. With the 45-day hold we were legally allowed to give her a long-acting antipsychotic injection against her will. Despite this, we decided instead to work with the patient and agreed that if she would take her medication and was not readmitted to the psychiatric hospital, we would not give her a long-acting injection against her will. The patient responded well to the oral Aripiprazole and has not been readmitted since then and follows up at our outpatient clinic with another provider. She no longer has the delusion that she is pregnant. Discussion: The primary essential teaching points with this case are to highlight how to work within the legal system in terms of involuntary treatment and long-acting injections. It also illustrates how working with the patient instead of forcing treatment can potentially lead to better outcomes and improved compliance.

No. 55
WITHDRAWN

No. 56
Psychotic Presentation of a Rare Genetic Syndrome: A Case of Successful Treatment in Laurence-Moon-Biedl

Poster Presenter: Feier Liu, D.O.
Co-Authors: Shannon Mazur, Lawrence Peters

SUMMARY:
Introduction: Laurence-Moon-Biedl is a rare genetic syndrome. Laurence and Moon first described it as a syndrome consisting of optic atrophy, polydactylism, obesity, and genital hypoplasia. In 1922, Biedl added an emphasis on “mental deficiency" to the description. While intellectual disability is a notable feature of both syndromes, there has been limited literature regarding other psychiatric comorbidities. This patient case will further explore the comorbid occurrence of psychosis and Laurence-Moon-Biedl syndrome and successful treatment. Case Report: A 35-year-old female with past medical history of Laurence-Moon-Biedl syndrome causing complete blindness, diabetes insipidus, kidney disease post kidney transplant, and past psychiatric history of anxiety, psychosis, and depression presented with paranoid delusions that her parents were trying to murder her. She was frightened that her mother was being “pushy” about her medications which the patient perceived didn’t feel or smell the same. She attempted to run away from her parents; however, her mother was able to stop the patient and force her to come to the hospital. The patient had insight regarding having a psychotic disorder but did not believe that her paranoia at the time was due to psychosis. Prior to admission, the patient was on nortriptyline 50mg daily at bedtime, lorazepam 0.5mg daily, and risperidone 1mg daily at bedtime. Considering her psychotic presentation, risperidone was increased to 2mg daily on admission. Over the next few days, she started to question the validity of these delusions as she remembered how much her parents cared for her. The delusions were resolved within the week, and she was able to have a good visit with her parents on discharge. The patient remained on the discharge medications over the next year and did not have any relapse of symptoms. Discussion: Laurence-Moon-Biedl has been described a complex syndrome which includes intellectual disability, but there is limited literature regarding other psychiatric comorbidities. There are

a few case reports highlighting potential psychotic comorbidity to Laurence-Moon-Biedl Syndromes. One case report described two siblings with the syndrome and comorbid paranoid presentations, and successful treatment with trifluoperazine. It also suggested further investigation into the correlation of psychosis and Laurence-Moon-Biedl Syndrome. There are two other cases which described paranoid psychotic symptoms, however did not discuss treatment. They also proposed potential correlation between the syndrome and psychosis. This patient case adds to the limited evidence and raises awareness for potential psychotic comorbidity. Further, this demonstrates a case of successful treatment of psychotic symptoms with low dose risperidone in a patient with Laurence-Moon-Biedl Syndrome.

No. 57
WITHDRAWN

No. 58
The Role of Partial Dopamine Agonists in the Treatment of Psychosis and Catatonia
Poster Presenter: Nina K. Govalla

SUMMARY:
Ms. G is a 38yo female with a past medical history of bipolar disorder with psychotic features, schizophrenia, ADHD, and multiple psychiatric hospitalizations. She was brought in by EMS and later admitted to the acute inpatient psychiatric unit for management of acute psychosis. Patient was initially started on aripiprazole 15mg which was later increased to 20mg. During hospitalization, she was found to be catatonic and responded positively to the benzodiazepine challenge. Aripiprazole was discontinued and she was started on lorazepam 1mg TID, later increased to 2mg TID. She tolerated the increased dose and catatonia was resolving. However, she showed persistent disorganized speech and delusions, so aripiprazole 10mg PO was restarted. As time progressed, she showed more blunting and reduced food intake, consistent with increased catatonia, so lorazepam was increased to 3mg TID. This helped improve her catatonic state allowing leeway for aripiprazole to 30mg PO daily for persistent psychosis. Lorazepam was later tapered off as she continued to show improvement. After an adequate trial of aripiprazole at the max dose (30mg), she showed only modest signs of improvement. Aripiprazole was switched to cariprazine 3mg as it mostly targets D3 receptors and it is a partial D2 agonist. This allows cariprazine to better treat negative symptoms with a decreased risk of psychotropic induced catatonia. Patient continued to endorse negative symptoms but no longer appeared catatonic. In this poster, we hope to explore the treatment of psychosis in the setting of catatonia, with third generation antipsychotics that have partial D2 agonist activity, such as aripiprazole and cariprazine.

No. 59
Tsunami of Symptoms: A Case of Cycloid Psychosis
Poster Presenter: Raman Deep Krimpuri, M.D., M.B.A.
Co-Authors: Ewald Horwath, M.D., Tanu Thakur, Bryan Youngwoo Yoon, M.D., Ph.D., Ajitpaul Basra

SUMMARY:
Background: Cycloid psychosis (CS) is having cyclical psychosis with full and rapid recovery between episodes, not fitting into any psychosis diagnostic category [1]. We present a clinical history and evolution to illustrate the characteristics of CS. Presentation: 31-yo single, employed male, who lives with mother, has good network of friends with psychiatric history of major depressive disorder (MDD), 2 psychiatric hospitalizations for suicidal ideation (SI) and a suicide attempt (SA) brought to the ED after intentional overdose on 15 pills of Lithium, Lexapro, and Norvasc as a second high lethality suicide attempt. He had blurred vision, chest pain, nausea, palpitations, and headache. Lithium level was 1.77 and toxicology screen was pan negative. He reported having “spells” of SI for the past 7 months along with anhedonia, increased sleep, hopelessness, decreased energy level, and decreased appetite leading to weight loss of about 82 lbs. Subsequently, 1 month prior to admission, he was diagnosed with MDD and prescribed Lexapro 10 mg daily and Lithium ER 450 mg BID. With regards to SAs, the patient reported that he has "attacks" where he experiences a "roller coaster" of mixed emotions including anxiety, excitement, sadness all

alternating simultaneously. He described these episodes as overwhelming and lasting from a few minutes to over an hour. Denied any AH and VH, loss of consciousness or any involuntary body movements during the episodes. He denied physical symptoms such as increased heart rate, sweating, increased breathing, palpitations during these episodes. He stated that SI and SAs occur during these episodes only when his thoughts and feelings become devastating. He reported normal affective state and functionality in between the "attacks." He was unable to identify and clearly articulate his symptoms during these episodes. Many differentials were considered but his symptomology did not meet criteria for them. Subsequently, he was diagnosed with cycloid psychosis in the setting of having several episodes of acute hyperemotional and confusional state in which he is extremely distressed, felt severe emotional pain to the extent of not being able to bear living in this state. During hospitalization, he was stabilized with Lexapro 10 mg and Abilify 10 mg PO. At the time of discharge, his behavior was cooperative with full affect and no recurrence of the "episodes." Discussion: Unlike schizophrenia, CS has an acute onset, occurs at any age, symptoms consist of perplexity, confusion, mood swings and can have full remission with low potent antipsychotics. [1] Full recovery has been shown to be achieved in patients with CS, in contrast to schizophrenia. [2] A hypothesis is formulated that schizophrenia may be distinct from CS on their biochemical profile in terms of glutamatergic transmission. Conclusion: CS is a relatively less reported form of psychosis and, and providers need to be aware and more research needs to be done.

No. 60

Use of Social Media to Facilitate Diagnosis of Schizoaffective Disorder

Poster Presenter: Justin S. Coley, B.S.
Co-Authors: Kareem Seoudy, M.D., Mudhasir Bashir, M.B.B.S.

SUMMARY:

Mr. C presented to the ED with suicidal ideation and intent in the setting of a chronic persecutory delusion. Review of his records showed that he had been diagnosed with various diverse psychiatric conditions, and that he had also been considered for malingering. The patient remained on the inpatient psychiatric service for several days interacting minimally with staff and other patients. Preliminary diagnosis was delusional disorder. On the eighth day of his admission, he shared the URL for his page on Tumblr (a social media site allowing users to share blog posts) with the primary team. Review of this allowed the team to follow the patient's symptoms over a two-year period and allowed for identification of additional symptoms. A cyclical pattern in the volume of posts over time was also noted. Most of these findings were confirmed with the patient on subsequent interview. The primary diagnosis was then changed to schizoaffective disorder, bipolar type. Knowledge that the team had read the blog allowed the patient to recognize that the team was interested in his care and facilitated improved rapport and greater participation in therapy sessions. While there are several case reports of suicidal ideation being identified on social media, to our knowledge this is one of the first reported cases of a primary thought disorder diagnosis facilitated by such a medium. The growth of the internet and the ways in which individuals can share personal content has created novel notions of privacy, communication, and connectivity, blurring the boundary between professional and personal. Physicians are able to look into patient's "digital footprints" and gain a perspective on their personal lives, at times discovering information not yet revealed to the physician. In this poster, we present our patient's case, and discuss the utility of reviewing social media to facilitate care while addressing the associated ethical concerns to do so with respect to patients' autonomy and privacy.

No. 61

When Is Suboxone Inappropriate? Differentiating Opioid Use Disorder From Somatic Delusions of Pain in a Schizophrenic Patient

Poster Presenter: Hirsch K. Srivastava, M.D.
Co-Authors: Fei Cao, M.D., Ph.D., Valeriy Zvonarev, M.D., M.P.H., Muhammad Farhan

SUMMARY:

Here we present the case of Mr. O, a 30-year old Caucasian male who presented to the Emergency

Department for self-harming thoughts secondary to feelings of worthlessness. His statements on previous drug use were inconsistent during his entire stay. He reported using Suboxone the day prior, despite having a negative urine drug screen. After admission, he remained guarded and refused to share pertinent biographical details such as legal history, past motor vehicle accidents and repair surgeries, and prescriptions, which would have helped elucidate this patient's relationship with both chronic pain and controlled substances. Inpatient, he was fixated on chronic pain and insistent on restarting Suboxone. He denied opioid use disorder (OUD) symptoms and continued to refuse to give prescription history. Mental status exams showed impoverished speech, excessive guardedness, and poor eye contact. It was believed he was exhibiting responses to internal stimuli and paranoid. He declined to undergo neuropsychological testing. He began a Zyprexa trial on his last inpatient day. After discharge at his outpatient addiction clinic follow-up, his requests for Suboxone were denied as he could not provide convincing history. [1] He then released records which revealed three different interventional pain providers at three facilities in two states. He finally disclosed history such as first illegally obtaining and using oxycodone at age 17 with consistent and increasing opioid use escalating to IV heroin until a few months before presentation. As Mr. O's history became known over the ED visit, inpatient stay, and outpatient evaluation, the case became more convoluted given the patient's guardedness and inconsistent history, along with the mental status exam findings of paranoia, disorganized thoughts and behaviors (characterized by disorganization, confusion, and severe lack of goal direction), and negative symptoms such as flattened affect. Thus, a primary psychotic disorder, such as schizophrenia, was considered. [2] Moreover, the patient demonstrated delusional thoughts that persisted past the substance withdrawal effects. [3] He continued to complain of opioid withdrawal symptoms, such as arm and leg pain, fatigue, and brain fog, even though, by this time it had been more than two weeks since his last Suboxone use, and he had reported using Suboxone only once in the past three months. [4] This diagnosis was further confirmed when he reported that Zyprexa made his thoughts logical and made him feel calm. It is likely that Mr. O was suffering from somatic delusions rather than true withdrawal symptoms owing to his last use being more than two weeks ago and the atypical symptoms, such as arm and leg pain and brain fog. This case poster will discuss how OUD can be differentiated from somatic delusions when determining medication assisted treatment. [5]

No. 62

When Sharing Is Not Caring: A Case Report of Folie à Deux

Poster Presenter: Prashanth Moku

Co-Authors: Venkatesh Krishnamurthy, Sanjay Yadav, M.D.

SUMMARY:

Background: Shared psychotic disorder, or Folie à deux, is a rare phenomenon where the primary patient ("inducer") imposes their own delusions onto another person (1, 2). Folie à deux is often seen in individuals living in close proximity and most common risk factors include female gender, passivity, and long-term interpersonal relationships that are isolated from social environment (3-5). Case: 63-year-old female patient with history of paranoid delusions who was admitted to the hospital after drug-overdose. She denied this as a suicidal attempt and noted that she took more medications for pain relief. Patient described that her problems began 7 years ago following an altercation with her neighbors, after she had reported her neighbors for endangering animals. Following this episode, patient believed that her neighbors began pumping chemicals with tarry smell into her mobile home. She also complained of electrical-shock-like sensations in her legs during these episodes. Patient added that she and her partner moved to a new apartment to distance themselves from the neighbors, but then noticed her neighbor's children near her new building, and subsequently began experiencing physical symptoms associated with chemical exposure, very similar to those in her previous home. Patient moved back to her mobile home and continued to experience "repeated torture" from her neighbors. Patient has been cohabiting with her partner for 28 years, maintaining a limited social circle. Her partner confirmed occurrence of the events that patient had

previously described. The patient’s partner mentioned having joint pain and experiencing ‘burning grease smell from the chemicals [being] pumped’ into their home. Her partner added that she does not experience the electric shocks as much as the patient, in part due to the patient having multiple spinal surgeries with metal implants and noted that the patient’s “metal [implant] is why she feels more effects of the shocks.” They were in the process of relocating to a different area in order to move away from their neighbors. Patient was treated with risperidone and venlafaxine during medical hospitalization. A Partial hospitalization Program was initially sought for continuity of care but could not be located and patient was eventually discharged home with plan for close outpatient psychiatry follow up. Discussion: Major risk factors for Folie à deux include long-term relationships between couples who are isolated from others and female gender. This case report presents longstanding relationship in a partner, who shared the patient’s delusions about their neighbors’ tortures, and ultimately acted on these delusions by moving away from the location for symptomatic relief. Given the lack of strict guidelines and management of this condition, additional research is needed to analyze the underlying risk factors and treatment standards for both the “inducer” and the delusion-sharing partner in this condition.

No. 63

A Case of Disorganized Behavior in a Depressed Patient With Uncontrolled Obstructive Sleep Apnea

Poster Presenter: Rajesh Gaddam, M.D.
Co-Authors: Kaveer Greywal, Patrick Oczkos, M.D., Raju Kakarlapudi, Vandana Kethini, M.D.

SUMMARY:
The negative effects of poor sleep include not only cognitive difficulties and loss of functioning, but also mood changes, disorganized behavior, disjointed thinking, perceptual disturbances and worsening of delusional beliefs. Here, we the present a case of a 35 year old individual with a history of depression but no prior history of psychosis, who developed disorganized behavior and paranoia, after experiencing extremely poor sleep due to non-compliance with his CPAP machine. The patient experienced only one to two hours of restful sleep each night for a two month period, and had persecutory thoughts of “people being after him,” disorganized behavior, dissociation, and at one point, knocking on strangers' doors and asking them to pet his dog. After admission, the patient was non-compliant with antipsychotic medications, but experienced restful sleep using a CPAP machine in an inpatient unit, after which his psychotic symptoms subsided. Although the psychotic symptoms seem to resolve in these cases, more study is needed to better characterize the psychotic decompensation due to poor sleep and how we can predict the emergence of such symptoms.

No. 64

Diagnostic and Treatment Challenges in an Adolescent With Narcolepsy and Psychosis

Poster Presenter: Kelvin Tran, M.D.
Co-Author: Kishan Nallapula, M.D.

SUMMARY:
Narcolepsy and schizophrenia have overlapping symptomatology. The hypocretin system has an important role in both disorders, as it has a complex interplay with dopaminergic and serotonergic systems.1 Hypersomnia and disrupted sleep-wake cycle in narcolepsy can often lead to unusual behaviors similar to disorganized behaviors of schizophrenia.2 Moreover, daytime somnolence could be frequently manifested in schizophrenia due to disrupted sleep-wake cycle from disorganized thought process and behaviors.2 Up to 57% of narcoleptic patients suffer from depression, with overlapping symptoms like “disordered nocturnal sleep, social withdrawal, impaired attention.”3 It is also not uncommon for the hallucinations in narcoleptic patients to be “complex multi-sensory phenomena,” leading to difficulty in diagnosing narcolepsy versus schizophrenia. Comorbidity of these disorders has been reported, though rarely.3 Here, we report a case of a 13-year-old female who was admitted to psychiatry for worsening auditory hallucination, delusional thought of her parents’ being imposters, and verbal and physical aggression. She had two admissions in a span of one week for similar presentation. Her hallucinations started as hypnagogic and hypnopompic prior to presentation

during wakefulness, characterized as 20 different voices that are usually positive in nature. She was also noted as being withdrawn, "angry, irritable," and threatening towards others, contrasted to a baseline as "social, kind, sweet." Prior to this, there were concerns about hypersomnia, violence, and verbal aggression, for which she was evaluated and diagnosed with narcolepsy by medical specialists. Modafinil was started and noted as briefly helpful. Sodium oxybate was later added but then discontinued as was making symptoms worse. The patient was born full term with normal birth weight. Her developmental milestones were normal. Her substance use and family psychiatric histories were unremarkable. No history of abuse or neglect. During admission, olanzapine was started for psychosis, fluoxetine was started for mood, and modafinil was restarted for narcolepsy. Due to the overlapping symptomatology of these two disorders, appropriate timely diagnosis can be challenging. Also, treatments for narcolepsy have potential side effect of psychosis, and antipsychotics can potentially interfere with sleep patterns.4 Consequently, this makes the treatment of either condition extremely difficult. With the current case, it was not until further coordination with various medical providers with adjustment to antipsychotics and addition of ECT that the patient further improved. Barriers to treatment include hesitancy about earlier escalation of higher potency antipsychotics and more invasive treatments in adolescents, and parents' discomfort with such treatments. Making an accurate diagnosis sooner can result in earlier appropriate interventions, allowing for earlier improvements in functionality and quality of life.

No. 65

Concern for Symptom Amplification Disorders in Two Patients Reporting Mast Cell Activation Syndrome

Poster Presenter: Sarah Cousins, M.D., Ph.D.
Co-Authors: Jason C. Pickett, M.D., Gabriela Pachano, M.D.

SUMMARY:

INTRODUCTION: Psychiatric illness is highly comorbid with non-specific somatic symptoms, which raise concern for symptom amplification illnesses ranging from somatic symptom disorder to malingering, and which often lead to significant invasive medical workup and treatment, with accompanying risk of iatrogenesis. We present two cases of patients with episodic somatic symptoms resulting in marked functional and social impairment that were believed by the patient to be mast cell activation syndrome (MCAS), a rare syndrome presenting with hypotension, urticaria, and anaphylaxis. Although mast cell activation syndrome has a significant overlap with functional somatic syndromes including IBS, chronic fatigue, and fibromyalgia, it is less familiar to psychiatrists. CASE 1: 26-year-old female reported a history of PTSD, related to 15 years of sexual abuse by her father, and progressive development of spells, diagnosed as mast cell activation syndrome and managed with long-term TPN, left hemiplegia, and right lower extremity plegia. She had first been diagnosed with PNES, but, later, when the patient was working in the office of an allergist, these spells were re-diagnosed as anaphylaxis and then as MCAS, despite the absence of mast cell mediators on serum testing, and patient was applying for disability. She presented to the ED with right hand weakness and psychiatry was consulted for conversion. CASE 2: 50 y.o. female with a history of generalized anxiety disorder, MDD and IBS presented to the outpatient psychiatric clinic with multiple failed trials of psychiatric medications due to unusual adverse-drug reactions for follow up of anxiety. She reported episodic medically unexplained symptoms including throat swelling and hives. She reported only being able to take valium for anxiety due to her symptoms which she attributed to MCAS. DISCUSSION: MCAS is a mast cell disorder diagnosed on the basis of episodic symptoms, laboratory testing, and response to appropriate medications. Our patients only met the episodic symptom component of MCAS criteria, but one did not have response to mast cell inhibiting medications or laboratory evidence of tryptase release, and the other had not yet had laboratory testing. Psychiatric differential included symptom amplification disorders. Our first patient's illness followed a history of trauma, began with likely PNES, and most recently developed weakness, not compatible with a consistent neuroanatomic localization, meeting important criteria for conversion. Both patients had somatic symptoms,

including nausea, throat sensations, and rashes to which they devoted tremendous worry, time and energy, thus also meeting some criteria for somatic symptoms disorder. The potential for primary and secondary gain by our patients also raised concern for factitious disorder and conversion. Our poster will further address diagnosis of MCAS and the psychiatric differential diagnosis.

No. 66
WITHDRAWN

No. 67
WITHDRAWN

No. 68
Somatic Symptom Disorder in a Possible Schizophrenic Patient: A Case Report
Poster Presenter: Tanvi Gupta, D.O.

SUMMARY:
The diagnosis of Somatic Symptom Disorder was introduced in the 2013 DSM V. This diagnosis replaces the diagnosis of somatoform disorders, which include somatization disorder, undifferentiated somatoform disorder, hypochondriasis, and pain disorder. Somatic symptom disorder carries an estimated prevalence of 4% in the general population and 17% in the primary care patient. Risk factors include female sex, history of sexual abuse, childhood trauma, and psychiatric disorders. Here, we describe the case of a 25-year-old female patient who was brought into the acute adult inpatient unit for aggressive behavior. From her initial presentation, she expressed several somatic symptoms such as intense headaches, shortness of breath, numbness in two fingers, vision loss, and an inability to read. The patient was first hospitalized 4 months ago for a psychotic break with auditory hallucinations and persecutory delusions. Trials with Risperidone, Olanzapine, and Thorazine failed due to multiple reported side effects by the patient, including headaches and cognitive impairment. The patient has a fixed notion that Thorazine impaired her brain function and continues to cause the above symptoms, despite discontinuation. She fails to acknowledge the possible psychiatric source of her symptoms. Patient reports sad mood, anhedonia, lack of concentration, and anxiety regarding her somatic symptoms. The patient refuses further medical treatment. This paper will explore treatment challenges posed by such complicated patients. In addition, we discuss potential cultural influences and the economic burden that such patients place on the healthcare sector due to repeated emergency room visits, and extensive medical testing without significant findings. Keywords: Somatic symptom disorder, Thorazine

No. 69
Somatic Symptom Disorder With a Fixed Delusion of Arsenic Poisoning
Poster Presenter: Jessica Grey, M.D.
Co-Authors: Brandon Ilechukwu, Brian P. Blum, D.O., Samuel Neuhut, M.D.

SUMMARY:
Introduction: A delusional disorder can be the source of unrelenting stress for patients, which may lead to suicidal ideation.1 When patients have somatic symptom disorder in addition to other delusions, their steady focus on the medical evaluation and treatment of the symptoms that they are experiencing can interfere with care.2 We present the case of a patient with somatic symptom disorder who also has a fixed delusion on the perceived cause of her symptoms. Case Description: Ms. A is a 31 year old female with a history of unspecified psychosis who presented under a Baker Act for threatening to end her life. She reported feeling pain throughout her body that led to suicidal ideation. The patient believed that her total body pain was due to arsenic poisoning, and that her ex-husband had secretly given her arsenic during the process of their divorce so that she would be deemed unable to partake in any divorce proceedings. Throughout her admission, she remained fixated on the analysis of her previous medical records, which were unremarkable, and on receiving further testing for arsenic and heavy metals. Multiple trials of antipsychotic medications were initiated in the past, but the patient has had the best response to lurasidone thus far. Discussion: Somatic Symptom and Related Disorders are characterized as bodily symptoms that may be associated with a

preoccupation on sensations or thoughts that are discordant with reality.3 This case illustrates a unique interplay between somatic symptom disorders and delusional disorder; the patient maintained a steadfast belief that her somatic pain originated from a poisoning that had numerous negative medical workups.4,5 Her response to treatments and her persistent beliefs on the root causes of her symptoms will contribute to the existing knowledge on both delusional disorder and somatic symptom disorder.

No. 70

Challenges of Takotsubo Cardiomyopathy Following Electroconvulsive Therapy

Poster Presenter: Robert Matthias Scholl, D.O.
Lead Author: Robert Matthias Scholl, D.O.
Co-Authors: Laura M. Rodriguez-Roman, M.D., Brent R. Carr, M.D.

SUMMARY:

Takotsubo Cardiomyopathy (TC), also known as “stress cardiomyopathy” or “broken heart syndrome” is characterized by transient regional systolic dysfunction of the heart’s left ventricle (LV), mimicking myocardial infarction, but in the absence of angiographic evidence of obstructive coronary artery disease or acute plaque rupture. The term “takotsubo,” Japanese for octopus trap, describes a systolic apical ballooning appearance of the LV in this disorder. Although pathogenesis is not well understood, a postulated mechanism is catecholamine excess. Albeit rarely, the syndrome has occurred in the setting of electroconvulsive therapy (ECT): 19 cases of TC related to ECT applications have been published. Awareness of the phenomenon is crucial for ECT providers. We present the case of a 65-year-old female with a history of gastroparesis, coronary artery disease with stent placement on Plavix, hypertension and severe mixed, anxious depression requiring multiple hospitalizations and ECT after poor self-care and somatic delusions. The patient had previously undergone ketamine infusions and TMS treatments without good response. She had vast improvements in response to ECT in the past without residual symptoms or side effects. A decision was made for a treatment series. Shortly after receiving her third ECT treatment in the series, the patient began having substernal chest pain under her left breast and pain radiating down her left arm. Labs showed elevated troponins (2.49->4.19) and subtle electrocardiogram ischemic changes. The patient was transferred to the ER and was admitted to the cardiology service, which determined that she had experienced a non-ST-elevation myocardial infarction. A transthoracic echocardiogram showed apical ballooning and akinesis of the LV as well as moderate left ventricular systolic dysfunction with ejection fraction of 30%, confirming diagnosis of TC. The patient did not undergo further ECT treatments and was discharged after psychotropic medication changes. Six months after discharge, the patient was readmitted with similar psychiatric presentation, and ECT was reconsidered. Given a lifetime recurrence risk of approximately 2% per year, ECT clearance was obtained after a multidisciplinary conference discussing risk stratification. Follow up testing showed normalization of EF (65-70%) and electrocardiogram as well as no cardiac symptoms. Precautions were implemented to mitigate cardiac overload utilizing antihypertensive medications for ECT treatments, and she had 24 inpatient ECT treatments without complications. She tolerated ECT treatments, improved and was discharged with continuation of outpatient ECT. This case illustrates a complication of ECT and sheds light on a potentially life-threatening syndrome. Though rare, this syndrome should be reviewed by providers with a view to recognize consequences and risks of continued treatment. Furthermore, early recognition of symptoms can save lives.

No. 71

Deep TMS in Treatment-Resistant Depression With Previous ECT and Repetitive TMS Treatments

Poster Presenter: Anu Stephen, M.D.
Co-Author: Mina Hah, M.D.

SUMMARY:

The Substance Abuse and Mental Health Services Administration (SAMHSA) reports the prevalence of major depressive episode (MDD) among U.S. adults aged 18 or older in 2017 to be approximately 7.1% of the adult population or 17.3 million adults. Transcranial magnetic stimulation (TMS) is a non-

invasive form of brain stimulation that was developed in 1985 for use in the diagnostics of neuromuscular disorders, after which its use expanded to treatment-resistant MDD. Repetitive TMS (rTMS) and deep TMS (dTMS) were FDA approved in 2008 and 2013, respectively, for MDD. Deep TMS uses an H-shaped coil, which differs from traditional rTMS that uses a figure-8 coil. Hence, dTMS is able to cover a larger area of the brain and provide a stronger treatment that can access deeper parts of the brain. Secondary to these advances, dTMS has been demonstrated to be more effective than rTMS in a head to head trial. Here we present the case of a 58 y/o White female presenting for psychiatric consultation for deep TMS. She was diagnosed with MDD, severe as an adolescent which persisted throughout her life without remission until she received deep TMS treatments. In order to treat her symptoms, she underwent medication trials consisting of medications in the following classes: selective serotonin reuptake inhibitors, serotonin-norepinephrine reuptake inhibitors, tricyclic antidepressants, monoamine oxidase inhibitors, tetracyclic antidepressants, stimulants, antiepileptics, and antipsychotics. After the failure of medication trials, she received ECT and repetitive TMS treatments which led to minimal remission of symptoms. The patient only experienced full and longer-lasting remissions of her depressive symptoms in 2015, January 2017, and October 2017 after receiving deep TMS treatments. Our patient says “dTMS is central to my life, and it has allowed me to succeed.” She presented to the clinic for a deep TMS consult endorsing depressed mood, anhedonia, difficulty sleeping, decreased self-esteem, decreased concentration, decreased energy, and suicidal ideation. We add to the literature of deep TMS by demonstrating its efficacy and superiority for treatment-resistant depression as the data in individuals with depression resistant to medications, ECT, and repetitive TMS is limited. A recent study showed a subset of ECT nonresponder patients showing response to deep TMS, emphasizing the indication that there may be a subpopulation of treatment-resistant patients with depression who may respond better to deep TMS. We hope to add to this discussion with an interesting case given the degree of different treatment modalities that our patient had to trial. We discuss the implications of these findings to further elucidate the benefits of deep TMS which many patients, physicians, healthcare systems, and insurances may not fully accept as a treatment option.

No. 72

Electroconvulsive Therapy in a 68 Year Old Male With a Cardiac Resynchronization Therapy Device With Defibrillator

Poster Presenter: Frank Michael Copeli, M.D.
Co-Authors: Anderson Chen, M.D., Demin Ma, M.D., Fe Festin, M.D.

SUMMARY:

Background: Electroconvulsive therapy has been applied safely in patients with cardiac pacemakers and implantable cardiac devices, and reviewed in a number of case reports(1, 2). Cardiac Resynchronization Therapy Devices (CRT), available with and without defibrillation (CRT-P and CRT-D), benefit patients with Heart Failure with reduced ejection fraction (HFREF) by improving left ventricular function, optimizing ventricular filling, and confers benefits in quality of life and mortality (3). There are currently no case reports on the use of ECT in patients with cardiac resynchronization therapy devices. Methods: Patient is a 68-year-old male with a history of major depressive disorder, PTSD, cluster B personality traits who presented in December 2019 for suicidal ideation in the context of a major depressive episode. His medical history is notable for atrial fibrillation on warfarin, DM2 on insulin, non-ischemic cardiomyopathy with HFREF In 2015, patient’s ICD was replaced with CRT-D. He had a history of 4 previous suicide attempts. His suicidal ideation on this admission was notable for newly observed command auditory hallucinations, suggestive of a mood-congruent psychosis. Patient was started on low-dose risperidone. Other psychotropic medications included bupropion, venlafaxine, and gabapentin with multiple failed medication trials. Patient’s initial MADRS was 30 on admission scoring highly for suicidal ideation. After initiation of Risperidone, patient’s MADRS lowered to 16 prior to first ECT session. Prior to ECT, Anesthesia, Cardiology, and Electrophysiology (EP) services were consulted. Patient’s CRT-D device was

interrogated and determined to be functioning and medically optimized for ECT. His ejection fraction was 30% approximately 6 months earlier. Results: Prior to first session, Electrophysiology reprogrammed device and patient had defibrillator pads placed. A brief seizure was achieved. EP recommended placement of magnet on CRT-D for subsequent sessions. For the following 3 sessions, adequate seizures were obtained. Patient reported robust response with MADRS of 6 reported prior to his second session. During ECT therapy, patient underwent echocardiogram which indicated ejection fraction of 20-25%. Cardiology was again consulted and felt patient could continue with ECT if euvolemic and asymptomatic. After 4th session, a collaborative decision was made with patient to forego further ECT given patient's improvement in mood. Prior to discontinuation, MADRS score was 0. Conclusion: This case indicates ECT can be provided safely to patients with a CRT-D device; placing device in electrocautery mode with defibrillator pads as well as disabling defibrillator function with a magnet both proved effective methods to provide ECT safely. Further study of ECT in patients with CRT devices is warranted to observe patients who complete a course of 6-12 sessions. ECT in patients with CRT-P devices have not been studied.

No. 73

Hanging in Limbo: Institutional Transfer and Interstate Variability of ECT Laws Delaying Care for a Catatonic Patient

Poster Presenter: Jia Pamela Guo, B.S.
Lead Author: Margaret A. Cinderella, M.D.

SUMMARY:

Introduction- Electroconvulsive therapy (ECT) is a life-saving procedure for patients who have failed multiple other treatment approaches. Patients requiring emergent ECT are often unable to provide informed consent to the procedure due to their condition. The legality of administering ECT to these individuals differ drastically from state to state, ranging from a lack of state statutes governing involuntary ECT to a ban on the procedure in incompetent patients. Case- We will present a case of a 53 year old male with catatonia who was transferred across state lines to our hospital's neurology service, after which psychiatry was consulted regarding ECT. In North Carolina, ECT requires written and informed consent, which was impossible to procure in this case. State law dictates that in order to proceed under these circumstances "legal guardianship procedures shall be initiated", which can take weeks to months in our jurisdiction. He was instead treated with a variety of medications for catatonia including lorazepam, amantadine and zolpidem with minimal response. He was ultimately transferred to a facility in Virginia (his home state) after more than 20 days of delay at our hospital where ECT can be obtained for incapacitated patients by court order rather than guardianship hearing. Discussion- Because ECT is not offered at every hospital, some patients requiring ECT must be transferred to hospitals with ECT capability, sometimes across state lines. Psychiatrists may not be directly involved in transfers if they are not an admitting service. It is important to have an understanding of the interstate variability in ECT laws as they may have profound implications in treatment of patients where early intervention is critical. Based on our experience caring for this patient and initial literature review, this information can be difficult to find. More recent data does not focus on incapacitated patients. Conclusions: We shall present a comprehensive state-by-state breakdown of current laws and practice relating to ECT administration in incapacitated patients. We will contact physicians in states where there is ambiguity in the legal code as there may be significant state-to-state differences in clinical practice in states that have similar laws. We will also create a checklist of important questions to consider prior to accepting a patient from another facility to receive ECT, which can be an invaluable resource to both admitting services and psychiatrists caring for these ill patients.

No. 74

Prolonged Electroconvulsive Therapy Delirium and Baseline Cognitive Impairment: A Treatment Dilemma

Poster Presenter: Jason Yan, M.D.
Co-Author: Sahil Munjal, M.D.

SUMMARY:
Background: Delirium is a common side effect of electroconvulsive therapy (ECT), occurring in 12% of patients (Fink 1993). In a minority of patients, it can be severe and warrant hospitalization. We present the first reported case of prolonged ECT-associated delirium in a patient with underlying cognitive impairment. Case report: Mrs. X is a 65-year old Caucasian woman with a 9-year history of severe major depressive disorder, with gradual cognitive decline and difficulty performing activities of daily living. After developing psychotic symptoms refractory to medication management, she was referred for ECT where she scored a 5/30 on the Montreal Cognitive Assessment. While the first three ECT treatments improved her depressive symptoms moderately, the following three resulted in periods of altered mental status beginning 24 hours following the procedure. These periods became greater in length and severity until she presented to the emergency department for an acute change in cognition and behavior. She was hospitalized for delirium, which was confirmed by an electroencephalogram (EEG). ECT was discontinued and she was treated with supportive care and quetiapine as needed for agitation. Her cognition and behavior improved to baseline over the next five days. Discussion: There are three types of ECT delirium characterized in literature: 1) Acute postictal delirium lasting 1-2 hours after ECT, 2) Agitated delirium after emergence from anesthesia, 3) Interictal delirium with prolonged periods of disorientation, which may occur de novo, separate from the initial postictal disorientation (Selvaraj 2012). The case discussed is an example of the third and rarest subtype of ECT delirium. Moreover, our case is unique due to the patient's significant baseline cognitive impairment. Depression may contribute to worsening cognition, as is the case in pseudodementia, a condition in which ECT is indicated. On the other hand, major neurocognitive disorders are risk factors for ECT delirium (Lisanby 2007). It is therefore important to weigh the risks and benefits of ECT in this patient population. Mitigation of ECT delirium is crucial to maintaining continuity of treatment. We present several treatment strategies, most notably the use of acetylcholinesterase inhibitors (Logan 2007). Implications: Consult-liaison psychiatrists are tasked with determining appropriateness for ECT in cognitively impaired patients, as well as management of ECT delirium. Our case describes an individual with cognitive impairment, who developed prolonged delirium lasting 5 days after six treatments of ECT. We will discuss the risk factors, mitigation strategies, and treatment of ECT delirium.

No. 75
Treatment of Functional Neurological Symptoms With Transcranial Magnetic Stimulation

Poster Presenter: Marshall Steele, M.D.
Co-Authors: Steven Galati, Alan Mayfield

SUMMARY:
Transcranial magnetic stimulation (TMS) is a noninvasive procedure that utilizes direct magnetic pulses to stimulate electrical currents in neurons of the brain. TMS is currently FDA approved to treat major depressive disorder, but there is also strong evidence to suggest efficacy in treatment of posttraumatic stress disorder (PTSD), neuropathic pain, post-stroke motor recovery, spasticity in multiple sclerosis, and Parkinson's disease. Few studies have investigated the use of TMS for functional neurological disorders, however. The case presented here describes the first known case in the literature of TMS applied to the right dorsolateral prefrontal cortex (DLPFC) being effective for treatment of functional neurological disorder (FND). This 49 year-old male, active duty Navy sailor was referred for TMS due to persistent PTSD from multiple combat deployments. After initiation of psychotherapy, he began to describe nonspecific neurologic symptoms on his left side, to include resting tremor, episodic "tightening stiffness", arm weakness, and radiating numbness. He underwent three neurology evaluations, without significant findings on EEG, MRI, PET-CT, and laboratory work-up. He was ultimately diagnosed with a FND, or conversion disorder. He was started on a protocol of low-frequency TMS directed at the right DLPFC, occurring five days a week for a total of 30 sessions. By session #5 he reported near remission of his neurologic symptoms, well before the limited improvement in PTSD and mood symptoms that he started to notice by session #20. His dystonic reactions remained greatly improved

and minimally bothersome at four month follow-up. FND is often difficult to manage, with general recommendations for psychotherapy as a first-line recommendation and antidepressants as second-line. There are few previous studies using TMS to treat FND, and all appear to have delivered magnetic pulses to the motor cortex (as has been shown to be effective for neuropathic pain and movement disorders). However, this case report demonstrates the possible utility of TMS directed at the DLPFC, as is used in treatment of depression and PTSD. While this indicates that the primary benefit may be through reduction of anxiety and mood symptoms, in this case the FND improved quicker and more robustly than the primary mental health concerns. Future research goals include investigation of this treatment protocol in a larger sample size of patients with FND.

No. 76

"Just Let Me Breathe": Overdose as a Cry for Help in a Patient With Gender Dysphoria and Tourette's Syndrome

Poster Presenter: Nicholas Jose Dumlao, M.D.
Co-Authors: Mihir Ashok Upadhyaya, M.D., Ph.D., M.P.H., Panagiota Korenis, M.D.

SUMMARY:

Introduction: Helicopter Parenting is a term used to describe a style of parenting characterized by over involvement and focus on a child's experiences, successes and problems. While generally intended to provide happiness and success for one's child, it often produces the opposite result. Studies have shown children brought up by this parenting style have higher rates of depression and anxiety, and tend to have lower levels of academic achievement compared to their peers. Children subjected to helicopter type of parenting may also experience a more difficult transition to adulthood and independence, and can have an altered ability to fully express autonomy, information seeking and psychological control. Case Summary: We present a case of a 19-year-old transgender female to male with Tourette's Syndrome, Gender Dysphoria and Attention Deficit Hyperactivity Disorder (ADHD) who attempted suicide by overdose with pills. She identified her mother's controlling parenting style and her underlying gender dysphoria as reasons which influenced her attempt. She also mentions physical limitations from her Tourette's syndrome as a contributing factor. She stated that inadequate control of her symptoms, her fear of revealing her gender identity and excessive parental control led to this attempt. This excessive control was evidenced throughout her hospitalization when she would only agree to proposed treatments with her mother's approval, despite often wanting otherwise. Her treatment plan included management with low dose Risperidone to optimize her Tourette's and dysphoria, and psychotherapy to enable her to have improved coping skills, improved mood and an ability to make independent decisions. A safe discharge plan was established that included a meeting with her outpatient therapist and psychiatrist prior to her discharge in order to ease her transition to the outpatient setting. Discussion and Conclusion: There is research (Peterson et al, 1992) which hypothesized an altered androgen-dependent process of sexual differentiation of the brain can lead to tic related disorders. Additionally, studies examining gender responses in patients with Tourette's have shown a greater likelihood of biological females with Tourette's having maladaptive typical responses including increased gender dysphoria. An integrated patient-centered approach including family involvement was found to have a significant impact on the dysphoria symptoms experienced by the patient as well as in her ability and desire to make independent and autonomous decisions. A multidisciplinary and collaborative model including psychoeducation, psychopharmacology and family involvement is necessary to review and address the complex social and psychological issues experienced by patients with similar circumstances.

No. 77

A Light in the Dark: Use of PO Ketamine for Rapid Remission of Acute Suicidality

Poster Presenter: Brigette T. Torrise
Co-Authors: Peyton H. Terry, Kareem Seoudy, M.D., Mudhasir Bashir, M.B.B.S.

SUMMARY:
Acute suicidality burdens patients and their communities with significant health and economic consequences. The latest data from the Centers for Disease Control and Prevention show that in 2018 there were an estimated 1.4 million suicide attempts.3 Recent data on the use of ketamine in patients with depressive symptoms has shown great promise for rapid and sustained antidepressant effects, including remission of suicidal ideation.2 Ketamine is an N-methyl-D- aspartate antagonist with antidepressive effects, and the success of intravenous, intranasal, and intramuscular ketamine treatments is anticipated by increasingly well documented reports.1 Less understood is the utilization of oral ketamine in these circumstances.1 An oral formulation comes with substantially reduced financial burden and ease of administration and, as in the case of the 65-year-old woman presented in this report, near comparable result. In this particular case report, we examine a 65-year-old woman with a past medical history of post-traumatic stress disorder, bipolar I disorder, and borderline personality disorder who was admitted to the inpatient psychiatric unit with worsening symptoms of depression and acute suicidality. Her depressive symptoms had been unresponsive to antipsychotic trials and ECT, and she had presented to the emergency department with a similar presentation five times in the preceding twelve months. She was actively suicidal on the unit and attempted to harm herself by cutting her wrists. Two days after that event, she was given an oral formulation of ketamine, dosed at 0.5 mg/kg to an ideal body weight, resulting in resolution of acute suicidality within 30 minutes of a single administration. She smiled and laughed, and stated that she felt "hopeful, I haven't felt that in years." The patient is currently anticipated to require weekly re-administration, which will ideally occur in the outpatient setting as this patient did not dissociate and tolerated the medication with no side effects. This patient suffers from significant chronic stressors—this is not the last or even the first step in her recovery, but it has shown her that there is a path to recovery, and she's on it. Acute suicidality is a limiting factor in addressing any contributory stressors or underlying disorders. Contemporary solutions like IV ketamine may offer a novel approach, but that offer is limited to those with the financial resources to access it. As an increasing pool of data suggests that ketamine may be utilized not only to rapidly treat depressive symptoms, but also to halt suicidal thoughts in these individuals, PO ketamine should be considered as an affordable option for use in both emergency department and psychiatric inpatient settings. PO ketamine could provide an accessible option to a wide range of vulnerable patients experiencing acute suicidality and it should not be left out as we expand our research on the antidepressive effects of ketamine.

No. 78
WITHDRAWN

No. 79
Perpetuating Trauma? How Movement Within the Legal System Affects Mental Health Patients
Poster Presenter: Isabelle Samantha Seto, M.D.
Co-Author: Marissa A. Flaherty, M.D.

SUMMARY:
We examined the case of a 28 year old Caucasian female with a reported psychiatric history of depression, post-traumatic stress disorder and alcohol use disorder, severe, who presented to a state psychiatric facility after a suicide attempt in jail via hanging. During her arrest she sustained injuries to her left ankle, and it was gathered that the patient used her ace wrap bandage along with a blanket during her suicide attempt. On initial presentation the patient was very guarded and constricted during her interactions with the health care team, and there were concerns that she was minimizing the severity of both her suicide attempt and prior alcohol use. She did, however, voice that she had been very distressed due to the constant and excessive noises around her in jail that made her feel confused and overwhelmed; she thought the staff was going to rape her which led to her suicide attempt. Due to her history of paranoid delusions along with a reported history of past abuse, the initial working diagnosis for the patient was unspecified trauma related disorder, and unspecified schizophrenia related disorder versus MDD with psychosis. The patient was kept on a continuous 1:1 sitter in the context of wearing a boot for her broken

ankle but did not have any further suicidal ideations or attempts while hospitalized. Over the course of her hospital stay the patient worked with her health care team to address her mood and anxiety, as well as her alcohol use. However, the patient often had to be transported to other facilities such as an outside hospital for orthopedic surgery and court (multiple times) and was once transported back to jail for a period of 3 days rather than being returned to the psychiatric hospital for further care. Upon return from each of these trips, it was noted that she sustained regressions in her treatment progress. This specifically was observed with dips in her mood and an increased anxiety level. The patient was noted to have a flatter affect during her interactions with the health care team, similar to how she first presented after her suicide attempt. She was also observed to be taking more PRN medications. Taking into account that interactions with the legal system can be difficult for any individual, patients with psychiatric illnesses and histories of trauma can be especially vulnerable to the stressful changes they experience when moving both within and between legal and health care systems. Using this case review, we will explore the impact this stressor has on psychiatric patients, focusing on the interactions between court, jail, psychiatric hospitalizations, and medical hospitalizations. We will discuss current literature on the traumatic effects this movement has on patients' previous diagnosed psychiatric illnesses and examine any additional sustained trauma. We will conclude by hypothesizing potential strategies to help minimize these effects.

No. 80

Resolution of Suicidal Ideation With Lithium Treatment Following Near-Completion Suicide Attempt: A Case Report

Poster Presenter: Jessica Grey, M.D.
Lead Author: Caridad Benavides Martinez, M.D.
Co-Authors: Samuel Neuhut, M.D., Brandon Ilechukwu

SUMMARY:
Introduction: Psychotic disorders confer a significant risk of suicide attempt and completion.1,2 Lithium is one of the two medications that have demonstrated anti-suicidal benefits.3 We present a case of a patient with psychosis status post severe suicide attempt treated with Lithium, showing significant improvement of symptoms and complete resolution of suicidal ideation. Case Description: Mr S. is a 33 year old male, recently homeless with PMH of unspecified psychosis and HIV, who attempted suicide by jumping in front of a vehicle, "because a green alien was telling him to kill himself." Upon arrival, a CT cervical spine showed left occipital condyle fracture. Patient was placed under a Baker Act, admitted to the ICU, and psychiatry was consulted. Once medically cleared, patient was admitted to inpatient psychiatry. Upon psychiatric evaluation, the patient appeared disheveled, depressed, and exhibited psychomotor retardation. He reported command auditory hallucinations and paranoid delusions along with intermittent cannabis and nicotine use. Patient was started on Lithium 300 mg TID and haloperidol 5 mg BID. Over the course of hospitalization, patient showed progressive and marked improvement of mood and decreased auditory hallucinations. Prior to discharge, patient reported complete resolution of suicidal ideation. Discussion: Studies indicate that Lithium has anti-suicide properties in mood disorders. 4,5 This case presents Lithium as an optimal treatment for suicide prevention in a high-risk patient with psychosis and mood symptoms. This case highlights the need for longitudinal studies investigating the use of Lithium for suicide prevention in other psychiatric populations.

No. 81

Video Games in the Modern Era: An Analysis of Impact on Mental Health

Poster Presenter: Samuel John Fesenmeier, D.O.

SUMMARY:
Introduction: Since the golden era of the video game arcades in the 1970's and 80's, electronic gaming has played a significant role in modern culture. With advent of home consults like Nintendo Entertainment Systems, and now mobile and "virtual reality" gaming, the embedding of video games in the modern world has amassed significantly. A large impact is on teenagers, whom spend on average 17 hours weekly playing video games (John, 2019). These hours are much more likely to increase during

the current pandemic. This poster will explore the various impacts of video games on mental health through literature review. Methods: Online databases, primarily PubMed, were searched for gaming and effects on mental health, with a primary focus on systematic reviews and meta-analysis studies. Results were compiled to include most recent and relevant studies. Results: Both positive and negative outcomes were found throughout the literature. There were several trends regarding excess use that showed an increase various developmental and behavioral issues, such as higher BMI and mild increase in problematic behavior (John, 2019). It has also been determined that gaming, particularly internet gambling, causes similar functional brain changes as seen in substance use disorders (King, 2014). Other studies have shown positive effects, such as increased memory and problem solving as analyzed by fMRI studies (Denilson, 2019). Discussion: Due to the vast impact and time that video games have on many people's lives, it is important to be aware of potential impacts on mental health. From this review, it is evident that there is no clear cut answer to where video games are "good" or "bad." However, being more aware of potential impacts may further help guide patient care. This will especially be essential in current times due to increased isolation. Information regarding video game use may also be helpful in further guidance for military readiness.

No. 82

ECT as Treatment for Trauma-Related Nightmares

Poster Presenter: Pauline Chen, M.D.
Co-Authors: Joel Fernandes, M.D., Tessy Korah, M.D.

SUMMARY:
Trauma-related nightmares (TRN) are disturbing symptoms of Post-Traumatic Stress Disorder (PTSD) that can be treated with psychotherapy and/or medications. However, many patients with PTSD continue to suffer from TRN, a risk factor for suicide ideation (SI) and attempted/completed suicides, despite undergoing these interventions (1). Additionally, about half of the people with PTSD also suffer from Major Depressive Disorder (MDD) (2). Currently, there are limited treatment options for people who suffer from treatment-refractory PTSD. In this study, we present a case of a 39-year-old male with a history of MDD, PTSD, alcohol use disorder in remission, obstructive sleep apnea (OSA), and a history of Traumatic Brain Injury (TBI) who presented to the VA for worsening depression, severe combat-related PTSD, and SI. The patient had been tried on several medications prior to admission including over 20mg of prazosin for TRN without relief from his symptoms. He reported SI daily and woke up screaming from nightmares nightly, which severely impacted his quality of life. His medication regimen was adjusted to include Effexor 225mg daily, Abilify 5mg daily, Trazodone 200mg nightly, Remeron 15mg nightly, and cyproheptadine 8mg nightly. However, he did not show much improvement. Cyproheptadine was switched to clonidine 0.1mg with minimal effect. The patient was also seen regularly for therapy. Due to the severity of his depressive symptoms, the patient was treated with right unilateral electroconvulsive therapy (ECT). The patient started showing improvements in depression and PTSD after ECT session 3. The patient was then discharged after ECT session 6 without SI, improved depression as measured by the PHQ-9, without TRN, and improved PTSD as measured by the PCL-5 with follow up ECT outpatient. While the findings can be incidental, they serve as support that ECT may aid in the treatment of TRN. This is among only a few case reports published about the effects of ECT on TRN (3). Further research is needed to determine the efficacy of ECT on TRM and in determining the mechanisms involved in reducing nightmares.

No. 83

Evaluation of Post-Traumatic Stress Disorder After Diagnosis of Stage IV Laryngeal Cancer: A Case Report

Poster Presenter: Shivani Desai
Co-Authors: Frank A. Clark, M.D., Gena Williams, M.D., M.P.H.

SUMMARY:
Mr. S., a 42-year-old Caucasion male with a past medical history of laryngeal carcinoma with recurrent squamous cell carcinoma of the base of the tongue status post-total laryngectomy and past psychiatric history of major depressive disorder,

recurrent without psychotic features, generalized anxiety disorder with panic attacks, and previous suicide attempt, presents to the emergency department for treatment of worsening mood symptoms related to medication non-adherence in the setting of psychosocial stressors such as a pending divorce. The patient initially presented with vague somatic complaints such as facial swelling and pain as well as difficulty swallowing. He subsequently expressed worsening depression and suicidal ideation with discontinuation of medicine 2 weeks prior. He was admitted to the psychiatric hospital for evaluation and treatment. During the patient's hospital stay, the psychiatric team was tasked with correction of medical conditions caused by discontinuation of Synthroid and other medications related to long-term sequelae of laryngectomy in addition to psychopharmacological and psychotherapeutic interventions for management of major depressive disorder and generalized anxiety disorder. The patient's condition became better over time but there was a concern over the 6 recurrent hospitalizations and raised clinical suspicion for cancer-related PTSD. An initial PTSD screen was conducted for further evaluation. On the PTSD Symptom Scale (Rothbaum et. al.), the patient scored 43/51 which is consistent with a diagnosis of PTSD when combined with clinical symptomatology. Through additional testing with MCMI and PCL-5, the diagnosis was confirmed and helped in elucidating the source of this patient's recurrent presentation. With head and neck cancer making up only 4% of all cancers in the United States, and with a 5-year survival rate of 55%, this patient population is small and often overlooked. In this poster, we discuss the challenges and importance of post-head and neck cancer related PTSD identification and diagnosis for proper treatment to improve health outcomes and decrease potential for rehospitalization.

No. 84

Jane Against the World: A Case of Bipolar I Disorder With Persecutory Delusions

Poster Presenter: Ioana Circiumaru
Co-Author: Vikram Gill

SUMMARY:
Unresolved trauma can play a role in the manifestation of certain psychiatric disorders, specifically in patients with long-standing behavioral patterns. The case described aims to facilitate identification of such instances and to explore effective treatment modalities to supplement pharmacotherapy for optimal treatment outcomes. Jane is a 79 year old female with Bipolar I disorder, accompanying persecutory delusions, and PTSD with a childhood history of sexual, physical, and emotional abuse inflicted by her father. Jane was transferred to the inpatient psychiatric unit from an assisted living facility for being "verbally threatening and aggressive," where she also accused the staff of being verbally and physically abusive. Jane has a long history of tirelessly pursuing legal action against landlords, medical professionals, and other institutional employees. She indulgently shares her legal pursuits, including her endeavor to "go after [the] medical license" of her former psychiatrist. Jane reveals a story from her childhood which she describes as the pinnacle of injustice. She shares that her beloved childhood friend, Tim, was often victimized and mistreated by his family members. During that time, Jane herself was the victim of abuse from her parents. Jane lacks insight into the potential implications of her childhood trauma in the development of her behavioral pattern. Jane's legal actions are potentially driven by an unconscious pursuit of resolution to past trauma, with the resulting compulsion to re-enact situations reminiscent of her past. This re-enactment is evidenced by Jane's repeated attempts to provoke staff, eliciting reactions that reinforce her preconceptions through confirmation bias. On mental status exam, Jane is alert and oriented x4. She appears well-groomed. Her mood is irritable. She has a labile affect, pressured speech, poor insight and judgment, and intact memory and concentration. Her thought content revolves around the pursuit of justice for the vulnerable or maltreated. She is initially pleasant, but a few days after her admission, she becomes accusatory and finds fault in numerous employees, claiming they are mistreating her. She recreates a similar narrative to the one described in the assisted living facility. Her inpatient medical management consists of Oxcarbazepine 300 mg, Olanzapine 2.5 mg and

Levothyroxine 25 mcg. Dialectical behavioral therapy and hypnotherapy can have therapeutic benefits in the processing of painful emotions and the integration of trauma. The achievement of emotion regulation with appropriate coping skills could potentially eliminate the need to pursue repetitive legal action and re-enact situations reminiscent of the past. The hypnotherapy can allow the safe remembrance of traumatic events and the integration of the events in a new context with the aim to reduce or eliminate projections onto situationally irrelevant individuals, and to provide emotional and psychological resolution.

No. 85

Posttraumatic Stress Disorder With Secondary Psychotic Features: An Underrecognized Psychiatric Phenomenon

Poster Presenter: Jason S. Lee, M.D.
Co-Author: Lindsay Honaker, D.O.

SUMMARY:
Posttraumatic stress disorder with secondary psychotic features (PTSD-SP) is a diagnosis drawing increasing attention that lacks formal recognition in the Diagnostic and Statistical Manual of Mental Disorders (DSM-5). The effects of trauma on subsequent development of posttraumatic stress disorder (PTSD) and psychosis are well-studied, however, there appears to be considerable overlap between these two secondary disorders that is less understood. While the DSM-5 does include auditory pseudo-hallucinations and paranoid ideation as possible associated features of PTSD, there is evidence PTSD-SP is a distinct diagnostic entity with overt psychotic symptoms. We present the case of a patient with reported past traumas and new-onset emotional distress. A 19-year-old male with no past psychiatric history presented to the psychiatric unit with a complaint of worsening anxiety and depression for one month. He reported recent parental emotional abuse as well as childhood sexual abuse by his older sister. He began using cannabis recreationally three months prior. Assessment was significant for multiple anxiety symptoms, trauma-related symptoms, and depression. The patient was diagnosed with PTSD, cannabis use disorder, and generalized anxiety disorder, and sertraline 50 mg daily was initiated. The subsequent day he expressed persecutory delusions, which were followed days later by paranoid delusions for which an antipsychotic ;was started. Sertraline was titrated to 100 mg daily, and loxapine 40 mg twice daily proved effective in resolving psychotic symptoms. This report demonstrates a possible case of PTSD-SP. Proposed criteria for this condition include meeting criteria for PTSD, having positive psychotic symptoms that follow PTSD onset, and preserved reality testing. While cannabis use is a confounding factor in the diagnosis, it may have been a trigger for the patient's psychotic features. Data suggest that childhood trauma is an independent risk factor for PTSD-SP and positive psychotic symptoms, which is evident in this patient's history. Research demonstrates specific neurobiological and genetic features that differentiate PTSD-SP from PTSD and other related disorders like schizophrenia. These differences include higher baseline cortisol and peripheral platelet serotonin, and polymorphisms in dopamine beta hydroxylase and brain-derived neurotrophic factor. In addition, one imaging study comparing reward anticipation in participants with PTSD-SP versus PTSD showed reduced striatal signaling during salience processing, which had a significant negative linear relationship with positive psychotic symptoms. This case report highlights the significance of PTSD-SP as a distinct psychiatric entity. While evidence demonstrates a unique neurochemical profile in PTSD-SP, research related to prevention and targeted treatment is lacking. Greater acceptance and recognition of this condition in the medical community would likely incentivize further study.

No. 86

Psychiatric Sequelae of SARS-CoV-2 Pandemic

Poster Presenter: Matthew Joseph Johnson, D.O.
Co-Authors: Lainey Bukowiec, Andrew Malanga, D.O.

SUMMARY:
Severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) has spread on an international scale, causing a global pandemic and posing a significant threat due to its transmissibility and significant morbidity and mortality. A critical question that remains to be answered is whether or not an

individual who has recovered from SARS-CoV-2 is at risk for long-term health sequalae. Infection due to SARS-CoV-2 not only threatens physical health, but it also poses a significant psychological threat, especially to vulnerable individuals pre-existing psychiatric conditions. We describe a case of a 36-year-old male without a previous psychiatric history and with a resolved SARS-CoV-2 infection who presented to the emergency department (ED) on 12 separate occasions within a two-month timeframe for chest pain, palpitations, shortness of breath, and anxiety secondary to thoughts of having blood clots. ED work-up including ECG, CT-angiogram, troponin level, urinary drug screen, and routine lab work among other tests through the various visits and have all been negative. The patient was referred to outpatient psychiatric services and was initially started with therapy along with Zoloft and Xanax, which was later switched to Lexapro. It is important to consider psychiatry etiologies as sequelae to COVID-19 infection, though it is still important to rule-out more life-threatening presentations

No. 87

Sexual Abuse as a Risk Factor for the Development of Conduct Disorder

Poster Presenter: Steven Anthony Vayalumkal, M.D.
Co-Author: Kethan Reddy

SUMMARY:
Conduct disorder is a mental disorder of childhood and adolescence, it is diagnosed in children and adolescents with a repetitive and persistent pattern of behavior that violates basic rights of others or major societal norms or rules. Conduct disorder is a risk factor for developing Antisocial personality disorder (ASPD), with an estimated 25% of girls and 40% of boys eventually developing ASPD. The risk factors that lead to the development of conduct disorder are complex and involves environmental and genetic factors but one of the leading factors is child abuse, including sexual abuse. Sexual abuse in children is defined as when a child engages in sexual activity for which he/she cannot give consent. The number of reported sexual abuse cases is estimated to be 1% of all children worldwide, however the number of reported sexual abuse cases is grossly underestimated. Sexual abuse has long been hypothesized as a contributing factor to childhood behavioral disorders. We found the majority of studies to show that early child sexual abuse is a significant risk factor for the development of conduct disorder. Specifically, in this literature review we wanted to assess whether other confounding variable like; gender, physical abuse, childhood neglect, substance abuse, and low socioeconomic status affected the association between sexual abuse and the development of conduct disorder. After evaluating multiple studies, we found that these sociodemographic and clinical variables were found to be independent risk factors but did not confound the strength of association between sexual abuse and conduct disorder. Another issue that may affect the strength of association the question of reverse causality, in which the early development of conduct disorder may subsequently increase the chance of the patient becoming a victim of sexual abuse. We found that patients that develop signs of conduct disorder or patients that are diagnosed with conduct disorder at a young age have an increased risk of being sexually abused as a child or adolescent. It would be unethical to design a true experiment to prove the directionality of association but it may be inferred that both hypotheses may coexist, where the development of conduct disorder may occur before or after the onset of sexual abuse and vice-versa. It is hopeful that this literature review can answer the question of whether sexual abuse is a risk factor for the development of conduct disorder, even when controlling for confounding variables as well as elucidate areas of further potential research. We found that sexual abuse is a significant risk factor for the development of conduct disorder even when controlling for gender, physical abuse, childhood neglect, substance abuse and low socioeconomic status. A potential area of future research can be in identifying the causal mechanism behind why sexual abuse and conduct disorder are so strongly associated with one another.

No. 88

There and Back Again: Art as a Journey Through One's Hell (PTSD and Art Therapy)

Poster Presenter: Valentina Metsavaht Cara, M.D.
Co-Authors: Daniella David, M.D., Laura Gruce

SUMMARY:
Background: Post-traumatic stress disorder (PTSD) is a prevalent condition among combat-exposed veterans. Chronic PTSD can lead to significant morbidity and functional impairment and has been associated with increased suicide risk. First-line interventions include trauma-focused therapy and medications, however studies suggest that up to 30% of patients may remain symptomatic. Other interventions used in outpatient and residential rehabilitation PTSD programs include creative and arts-based therapies, and studies have documented their positive therapeutic impact. The hypothesis behind therapeutic use of visual arts (painting, drawing, sculpture, etc) is that art creation may help bring order to traumatic experiences and unprocessed emotions by establishing relations to nonverbal memories, allowing reintegration of dissociated memories and assisting in meaningful processing of feelings. The process of symbolic, non-verbal expression, safely allows veterans to externalize inner psychological experiences, such as fragmented traumatic memories and express feelings of anger and frustration in a controlled, contained environment. Methods: Here we present and discuss the case of a veteran who participated in an art-therapy intervention as part of his PTSD treatment in a 14-week residential program. Group art therapy is one of the interventions provided, in addition to process groups, individual exposure therapy, psychoeducation, medication management and other recovery-based interventions. Art therapy sessions occurred weekly, facilitated by a certified art therapist, who used different techniques with different themed exercises during the program. Upon graduation from the program, the veteran presented the staff with four creations he developed during the Art Therapy session that reflect his evolution in treatment. The veteran also described the feelings associates with his creative process in a written essay, which echoes published theories about the therapeutic effect of art making. The poster includes pictures of his art works and quotes from his essay, as well as objective measures of symptomatology: the PTSD Checklist for DSM-5 (PCL-5), the General Anxiety Disorder-7 questionnaire (GAD-7) and the Patient Health Questionnaire-9 (PHQ-9). The patient authorized the use of his creations for this project. Results: The veteran experienced improvement in his symptomatology, evidenced by significant decrease in scale scores and by his subjective experience description of the Art Therapy Sessions. Discussion: This case report brings light to the perspective of how art-making, especially in the context of combat-related PTSD, promotes feelings of safety, enjoyment and relaxation, generates positive and more regulated emotions and improves self-esteem and personal relations. We suggest that this therapeutic intervention offers benefits as part of a comprehensive recovery program and veterans would benefit from its routine inclusion in the treatment of PTSD.

No. 89
Trial of a Mu-Opioid Antagonist for Treatment-Refractory PTSD-Associated Nightmares
Poster Presenter: Ashley Leto
Co-Author: Douglas Opler, M.D.

SUMMARY:
Background: Posttraumatic Stress Disorder (PTSD) frequently includes poor sleep and nightmares, which may be a core component of PTSD. Nightmares in PTSD have been managed with SSRIs, SNRIs, anticonvulsants, prazosin, clonidine, topiramate, atypical antipsychotics, trazodone, and vilazodone. Some literature suggests that mu-opioid antagonists (MOA) such as nalmefene or naltrexone may treat these sleep disturbances. The opioid system may have a role in sleep. Opioid use reduces slow-wave sleep and REM sleep. We present a case of PTSD-associated nightmares refractory to multiple medications and report the results of a trial of a MOA. Case Report: A 25-year-old man with PTSD, major depressive disorder, and alcohol and benzodiazepine use disorders in remission presented to clinic for treatment following sexual assault at 11 years old. Daily nightmares, anxiety, and depression persisted despite prior treatments and psychiatric hospitalizations. He reported past trials of escitalopram, vilazodone, bupropion, cariprazine, vortioxetine, lurasidone, and intranasal ketamine over the course of ten years. Past trials of prazosin, mirtazapine, and trazodone failed to treat his sleep disturbance. He completed a course of ECT, during which time treatment was initiated with duloxetine 60mg once daily and depressive symptoms resolved.

Attempts were made to avoid benzodiazepines and non-benzodiazepine GABA agonists due to their relative contraindication in PTSD and the patient's substance history. Quetiapine, gabapentin, and doxepin were prescribed to improve sleep quality, while clonidine and topiramate were given to treat nightmares, but the sleep disturbance continued unabated. He was not compliant with dream rescripting therapy. Given the small literature on MOAs, naltrexone 50mg daily was prescribed without adverse effect, but was ultimately discontinued due to lack of efficacy. Sleep quality finally improved only with chlorpromazine 100-200mg nightly. Discussion: This case suggests that MOAs are unlikely to be a panacea for PTSD-associated sleep disturbance, but a limited evidence base makes it difficult to draw firm conclusions on their utility. While PTSD may be associated with a dysregulation of the endorphin system, no clear link has yet been found. If intrusive symptoms are linked to endorphins, then MOAs such as naltrexone and nalmefene may yet have a role in treatment. Conclusion: A limited evidence base makes it difficult to draw firm conclusions as to the utility of MOAs in the treatment of PTSD. Since small studies show success with MOAs for PTSD, further investigation is warranted as to whether naltrexone should be seen as an option for nightmares in PTSD, although it is likely not a panacea. The ultimate success in improving sleep after myriad medication trials in this case demonstrates that therapeutic flexibility and persistence is needed to treat PTSD-associated sleep disturbance.

No. 90

A Case of Agitated Catatonia Improved by Electroconvulsive Therapy in a Patient With Schizophrenia

Poster Presenter: Emily Grace Royer, M.D.
Co-Authors: Jessica Thai, M.D., Ashish Sharma, M.D.

SUMMARY:

Case Report: A 62-year-old female with chronic paranoid schizophrenia was stable on outpatient 15mg Olanzapine, 1000mg/1500mg morning/nightly Valproic acid, 0.5mg TID Lorazepam, 97.2 BID Phenobarbital, and weekly maintenance ECT. She deteriorated after missing ECT for a month due to port failure. She presented to the emergency department for severe agitation. For psychosis and agitation, a trial of Haloperidol, Lorazepam, Diphenhydramine, Olanzapine and Valproic acid over several weeks was not helpful. She was started on an Etomidate drip, and her port was changed. Other methods to alleviate agitation including family visits, clustered cares, and reduced medication, helped intermittently, but significant improvement was not seen until ECT. ECT was started with bilateral stimulus with 100% energy as this was an agitated catatonic state with mannerisms, grimacing, agitation, and stereotypy. Over the next week, she continued to be agitated and non-conversational. ECT was continued, three days a week. After five treatments, she resumed conversation. She finished 6 weeks of inpatient ECT and returned to baseline functioning. ECT was then transitioned to weekly maintenance treatment before discharge.
Discussion: Catatonia has psychiatric, neurological, and medical causes[i]. It is classically associated with mood disorders but is observed in up to 35% of patients with schizophrenia1,[ii],[iii]. Without prompt diagnosis, catatonia can result in immobility, exhaustion, self-injury, malnutrition and may be fatal[iv],[v]. After a PubMed search for "agitated catatonia," we found only one other case of a patient with undifferentiated schizophrenia who became agitated and was treated pharmacologically with no symptom resolution. After starting ECT with simultaneous 12.5mg daily oral Lorazepam, he had rapid improvement of his symptoms with complete resolution after his fourth treatment[vi]. While ECT has historically been an effective catatonia treatment, it is generally second-line to benzodiazepines (BZDs). However, both BZDs and ECT have been effective treatments for catatonia of any etiology or severity[vii],[viii]. ECT, specifically, may benefit patients with psychiatric catatonia etiologies as it may simultaneously treat underlying mood disorders. There is little literature on ECT in patients with schizophrenia as most studies focus on ECT in affective disorders. Of all schizophrenia subtypes, catatonia may be most ECT responsive, and studies illustrate short-term beneficial effects compared to placebo[ix]. Initial catatonia treatment with Lorazepam has a remission rate of up to 70%. However, ECT has been effective for acute catatonia in 80-100% of cases[x].

Maintenance ECT is often used as an adjunct to schizophrenia pharmacotherapy. Maintenance ECT has been less effective at reducing chronic hallucinations/delusions but shows statistically significant improvement in other symptoms, including violence, refusal of food/liquids, stupor, and catatonia[xii].

No. 91

A Rare Presentation of Excited Catatonia and Encephalopathy After Levonorgestrel-Releasing IUD Placement

Poster Presenter: Sara B. Feizi, M.D.
Co-Author: Aaron Feiger, M.D.

SUMMARY:
Mrs. S is a 38-year-old white female with a psychiatric history significant for untreated mild anxiety and insomnia who presented to the hospital with acute onset of mania, psychosis, and excited catatonia. The only change noted prior to the event was that she had a levonorgestrel-releasing intrauterine device placed five weeks before. Two days prior to admission, she had suddenly stopped sleeping, had increased goal directed activity, pressured speech, tangentiality, and racing thoughts with disorganized and irrelevant content. She had also appeared to be hallucinating and started performing repetitive movements like plugging and unplugging a clock that was not actually there. The patient's features were consistent with a diagnosis of excited catatonia, with initial concern for organic etiology. She was initially admitted to the Neurology service and then transferred to a medicine-psychiatry unit. Autoimmune encephalitis was negative and was treated empirically with IVIg and Solumedrol while receiving Ativan and antipsychotics. She was eventually transferred to an inpatient psychiatry service. She received ECT, which improved her symptoms of catatonia, but her cognition remained very poor. Her inpatient psychiatry primary team consulted OB-GYN to request the removal of her levonorgestrel containing IUD that was placed prior to her hospitalization. Four days after discontinuing her ECT and six days after removing the IUD, the patent's memory dramatically returned, her delusional ideations and confabulations also diminished. She remained amnestic from the initial event and was unable to remember her two months of hospitalization, but she was able to be discharged and return back to her normal life. In this poster, we discuss the challenges faced with this rather unusual case and bring up the possibility that exposure to a levonorgestrel-releasing intrauterine device can be associated with not only depression and anxiety, but also more severe psychiatric symptoms such as psychosis and catatonia. We suggest future studies regarding this topic.

No. 92

Treatment Challenges for Delusional Disorder

Poster Presenter: Alessandra Santamaria, M.D.
Co-Authors: Mohammad Zahirul Islam, Asghar Hossain, M.D.

SUMMARY:
The clinical strategy is first to limit the maintenance factors one by one, then enable patients to enter their feared situations in order to learn that they are now safe. Pharmacotherapy with antipsychotics is generally favored as the most effective method of treatment, with second generation antipsychotics being preferred for their more benign side-effect profile. However, high quality evidence for treatment of the disorder is lacking and there are no treatment guidelines, rendering it quite difficult to treat. We will explore current evidence about the etiology, treatment strategies, and challenges of treating a delusional disorder.

No. 93

Treatment of Electroconvulsive Therapy Induced Mania and Hypomania: A Literature Review

Poster Presenter: Alesia Cloutier, D.O.
Co-Authors: Shawn Jin, M.D., Haley Volk Solomon, D.O., Arkadiy Stolyar, M.D., Brent Forester

SUMMARY:
Introduction: Electroconvulsive therapy (ECT) is considered a safe and effective treatment for bipolar depression, and is particularly effective in cases of treatment resistant bipolar depression. However, it has been well documented that ECT may result in emergent mania or hypomania. The frequency of ECT induced mania or hypomania varies significantly

in the literature, with estimated incidence ranging from 6.7-38.6%. Despite the relatively high incidence rate, there are no established guidelines for the treatment of ECT induced mania or hypomania. The aim of this systematic literature of review is to compile data on the treatment ECT induced mania or hypomania to help guide clinicians. Methods: The Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) Guidelines were followed for the current systematic review9; however, the protocol for this systematic review was not registered prior to conducting the review. MEDLINE/PubMed was searched for studies published between 1980 through August 2020 that evaluate the treatment of ECT induced mania and/or hypomania. Search terms included Boolean combinations of the following: ECT, mania, hypomania, and ECT induced. Two rounds of screening were conducted. Due to the limited number of articles, there were no restrictions regarding type of article, quality of study, randomization, or use of a control group. Results: A Medline/Pubmed search yielded 1,662 articles, which were screened by title to obtain 150 relevant articles. Duplicates were removed, and 111 articles were further screened by title and abstract which resulted in 52 articles. After a full-text review of 52 articles, 12 case reports and case series met criteria and were included in this review. Of the cases that were treated by discontinuing the ECT, 7 patients spontaneously recovered and 5 patients were treated with a mood stabilizer. The remaining patients continued ECT, in which 3 patients continued ECT alone, and 1 patient continued ECT in conjunction with a mood stabilizer. Discussion: Based upon a review of the available literature, there are no established treatment guidelines for ECT induced mania or hypomania. Treatment strategies include continuing ECT, holding ECT and observing for spontaneous remission, or aborting ECT and starting a mood stabilizer.8 More research is sorely needed on this topic, as we were only able to locate 12 case reports and case series. This review serves to examine treatments of ECT induced mania or hypomania to help inform providers about treatment strategies as well as the notable knowledge gaps within the literature.

No. 94

A Case Study of Suicidality in Premenstrual Dysphoric Disorder

Poster Presenter: Matthew Joseph Johnson, D.O.
Co-Authors: Lainey Bukowiec, Andrew Malanga, 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 using the DSM-V definition, 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 previous four months, the patient had been hospitalized four times with two suicide attempts. The patient failed both SSRI and OCP therapy and had started a depot GnRH agonist with no response as of admission. The patient was stabilized, notably after menses, on a combination of one SSRI, continued GnRH agonist injection, an OCP and an antipsychotic as adjunctive treatment. At time of admission, the patient had been in the process of scheduling a hysterectomy with bilateral salpingo-oophorectomy, which was eventually scheduled.

No. 95

Postpartum Psychosis and Postpartum Thyroiditis

Poster Presenter: Lillian Elaine Duffee, M.D.

SUMMARY:

Postpartum psychosis affects 0.1% of peripartum women and is associated with significant morbidity. Several risk factors have been well-established,

including a history of postpartum psychosis, bipolar disorder, and other preexisting psychotic disorders in the patient or the family. However, the relationship between postpartum psychosis and thyroid dysfunction is less broadly considered, particularly with more subtle presentations. While the relationship between overt thyroid crisis, such as thyrotoxicosis, and psychosis is recognized, the relationship between postpartum psychosis and postpartum thyroiditis is less so. For your review, we present a case of a 25 y.o. G3P1 female with no past psychiatric history and past medical history of autoimmune thyroiditis who presented 3-weeks postpartum with paranoid delusions. On presentation to the Emergency Department, initial TSH and T4 were ordered, and patient was found to have low TSH (0.25) and free T4 at the upper limit of normal (1.4). Patient was also tachycardic; however, this was attributed to anxiety related to current state at the time. Patient was admitted to the psychiatric unit and received quetiapine for its safety profile with breast feeding. Given her history of autoimmune thyroiditis, TPO antibody levels and repeat testing of T4 and TSH were ordered. Labs revealed elevated TPO antibodies as well as further elevation in T4 (1.6) and consistently low TSH (0.29). Physical exam findings were significant for tenderness with thyroid palpation. Patient's levothyroxine was subsequently decreased. Over the next few days with decreased dosing of levothyroxine and continued titration of nightly quetiapine, patient demonstrated improvement in sleep and thought process and resolution of psychotic symptoms.
DISCUSSION/RECOMMENDATIONS A correlation has been established between the development of postpartum psychosis and postpartum thyroiditis; however, the etiology of this association is not fully known. It has been theorized that increased immune activation in the postpartum period may be associated with the development of both these conditions concomitantly. Regardless, preliminary data support more broad screening for thyroid dysfunction, including anti-TPO antibodies, in the peripartum period, particularly for patients who are at increased risk of postpartum psychiatric symptoms.

No. 96

Characteristics of Calls to a COVID-19 Mental Health Hotline in a New York Pandemic Epicenter

Poster Presenter: Hussain Abdullah, M.B.B.S.
Co-Authors: Stephen John Ferrando, M.D., Alexander C. L. Lerman, M.D., Jimmy Feng, Matthew Francis Garofalo, M.D.

SUMMARY:
Background: Since the onset of the COVID-19 pandemic, clinicians have discussed the stress and potential for mental health disorders. However, data on how this pandemic is affecting the population is minimal. Surveys from China indicated anxiety, depression, and alcohol use reported by approximately one third of respondents, with young adults (18-40 years), elderly, women and more educated individuals reporting higher levels of distress.1,2 Mental health surveys in the United Kingdom and the United States showed that approximately 33% of individuals surveyed met criteria for one or more psychiatric illness, including depression and anxiety, which is increased from 11-19% prior to the pandemic.3,4 Mental Health America screenings increased by 400% during the pandemic, with increases in depression, anxiety, suicidal ideation and psychosis.5 Our hospital is located in Westchester County, 30 miles north of New York City, which was the epicenter of the New York State pandemic. After reviewing the research, our Psychiatry Department launched a COVID-19 Mental Health Hotline staffed by Psychiatry Residents and Psychologists, which received over 200 calls. Callers included hospital employees; however, the majority of callers were from the general public. Callers were provided with coping skills, de-escalation, and appropriate referrals during their call. **Study Design**: Investigators reviewed the 200 phone calls made and recorded variables of interest, including the nature of the call, such as "COVID-19 death in family", "Anxiety related to Quarantine", and more. Any symptoms currently being experienced such as depression, anxiety, suicidal ideation, etc., were recorded. Demographic and historical information was also obtained. If the caller was referred to outpatient care, this was recorded as well. **Discussion**: On review of these 200 calls to the Hotline, we found most callers experienced anxiety and/or panic symptoms. Many

callers also expressed depressive symptoms. There were a large portion of callers who expressed increases in substance use, most prominently increases in alcohol use. Only 3% of callers were rated at “high acuity” and required an Emergency Department evaluation. The rest were rated at a low to moderate level of acuity. Most callers received a referral to our own outpatient psychiatry department and were able to receive care at our facility. **Conclusions**: It is evident that COVID-19 has been associated with a dramatic increase in collective and individual stress throughout the United States. One social media survey in March 2020 indicated that approximately 70% of the 9009 participants felt “very” or “extremely” concerned about COVID-19, with the primary concern being about being infected with the virus.6 The volume and nature of the calls to our COVID-19 Mental Health Hotline further demonstrates the need for increased mental health services to be put in place.

No. 97
Enuresis Associated With Antipsychotic Medications: A Review Emphasizing Under-Reported Side Effect That Can Lead to Treatment Non-Adherence
Poster Presenter: Mehwish Hina, M.D.
Co-Author: Tania Sultana, M.D.

SUMMARY:
Antipsychotics are also known as Neuroleptics are primarily indicated for the treatment of psychotic disorders, mainly schizophrenia and other psychotic disorders include schizoaffective disorder, delusional disorder, bipolar affective disorder. They are categorized as first-generation antipsychotics (FGA) or “typical” and second-generation antipsychotics(SGA) or “atypical”. A significant number of side effects are associated with antipsychotic use. FGAs are associated with the burden of extrapyramidal side effects whereas patients on SGAs are more prone to develop metabolic side effects(1). Among the side effects of neuroleptics, enuresis and urinary incontinence are lesser reported in the literature despite increasing the number of incidences. However, this adverse effect can be embarrassing and may lead to poor compliance with the medication(2). Bed-wetting is a relatively common side effect of antipsychotic use, with 21% of patients on clozapine and 10% on other antipsychotic medications (3). In this review, we emphasize the association of enuresis with the antipsychotic medication and also the management of this bothersome effect. Although enuresis is not a serious or life-threatening side effect, this can be embarrassing for the patient, infuriating for the family and caregiver, and also can lead to treatment non-adherence. Clinicians should be more vigilant about the above-mentioned side effects that would improve the doctor-patient relationship, therapeutic alliance, and also the quality of life.

No. 98
WITHDRAWN

No. 99
WITHDRAWN

No. 100
WITHDRAWN

No. 101
Gaps in Access to Addiction Services During the Pandemic Covid-19
Poster Presenter: Keriann Leigh Shalvoy, M.D., M.P.H.

SUMMARY:
In the era of social distancing to prevent the spread of COVID-19, the focus of assessing the effectiveness of remote treatment has been on traditional individual outpatient therapy and medication management services. However, addiction psychiatric services are far more diverse in their structure and funding. It is an apt time to reflect on the historical development of our community psychiatric system in order to more fully understand the importance of community addiction services. We also review changes to addiction services in NYC since March 2020 and suggest socially distant interventions to bridge the new gap in community addiction services we are now reckoning with as a result of COVID-19, including using apps, text messaging, and virtual groups as adjuncts to virtual individual addiction services. Currently, there are very limited data and little research examining this

issue. Therefore, greater awareness and advocacy are needed. Community psychiatric services expanded greatly in the 1990s when Medicaid began more widely funding these services, and reflecting on the conditions for people with mental illness in the community prior to that expansion reveals that the loss of community-based programs will be a blow to all patients with mental illness, but particularly the poor who rely on Medicaid-funded programs. The authors conducted a systematic review of published literature dating from December 2019 to June 2020 via five online databases (PUB-MED, PsycINFO, Web of Science, EMBASE, and MEDLINE.) Key words employed during search inquiries included addiction services, COVID # 19, New York City, Medicaid, Affordable Care Act, mental health treatment, apps, text messaging, telepsychiatry. The purpose of this literature review is to closely examine the need to expand remote treatment and ensure that new programs will be reimbursed by Medicaid. However, literature is significantly limited and more epidemiological studies are needed to further assess the effectiveness of addiction treatment during the COVID-19 pandemic. Based on historical context, it is clear that in New York City there is an urgent need for further funding of remote addiction services.

No. 102
WITHDRAWN

No. 103
Significantly Delayed Clinical Presentation of Benzodiazepine Withdrawal: A Case Report

Poster Presenter: Victoria Ip
Lead Author: Kristy A. Fisher, M.D.
Co-Authors: Jessica V. Kroin, M.D., M.S., Robert F. Vassall

SUMMARY:

The patient is a 54 year old male, with past medical history of Hypertension and Bipolar I Disorder, who presented involuntarily to the psychiatric inpatient unit due to acute manic symptoms, including hyper verbosity, with fast, pressured speech and a flight of ideas, requiring frequent redirection upon interview. The patient reported regular outpatient follow-up and compliance with home medication regime (valproic acid 500mg twice daily and quetiapine 100mg daily and 300mg nightly). Urine toxicology was positive for cocaine, amphetamines, opiates, and benzodiazepine upon admission. The patient (falsely) reported daily use of 2mg alprazolam for the past five years. The patient's home medications were initiated and he was placed on a brief alprazolam taper, with no signs of benzodiazepine withdrawal noted. Eight days after hospital presentation, an acute and severe onset of agitation, disorientation, tremoring, and gait imbalance was noted, with a disorganized and illogical thought process. The patient was noted to be actively responding to tactile hallucinations, stating that there were birds crawling on his lower extremities. Autonomic instability with tachycardia was noted. Alprazolam 2mg was immediately administered intramuscularly with minimal improvement. Diazepam 10mg every 4 hours with as needed alprazolam was initiated. Within one day, the patient exhibited immediate and drastic improvement. As per collateral, the patient was taking at least 8mg of alprazolam daily for many years. In this poster, we discuss a significantly delayed clinical presentation of benzodiazepine withdrawal due to underreported use of alprazolam and resultant inadequate maintenance and withdrawal prevention.

No. 104
Substance Use Patterns and Schizophrenia Spectrum Disorders: A Retrospective Study of Inpatients at a Community Teaching Hospital

Poster Presenter: Terence Tumenta, M.D.
Co-Authors: Oluwatoyin Oladeji, Manpreet Gill, Olaniyi O. Olayinka, M.D., M.P.H.

SUMMARY:

Schizophrenia is a chronic psychiatric illness that is characterized by delusions, hallucinations, disorganized thought process and behavior, and cognitive decline. It is a severe mental illness that frequently leads to a lifetime of impairment and disability. Several epidemiologic studies have shown that schizophrenia spectrum disorders [SSD] are a leading cause of years lived with disability. Additionally, co-occurring substance use disorders are common among patients with SSD (a comorbidity also known as dual diagnosis), attracting

notable attention over the past few decades. For example, the prevalence of substance use disorder among patients with schizophrenia was estimated at 47 percent in one epidemiological study. Persons with schizophrenia and other psychotic disorders frequently have coexisting substance use disorders that require modifications to treatment approaches for best outcomes. We conducted a retrospective review of the electronic medical charts of patients discharged from the psychiatric unit of our hospital from July 1, 2017 through October 31, 2017. 365 (52.2%) patients had a discharge diagnosis of SSD, and 349 were included in the study. 76.8% of the patients used substances. Tobacco use was most prevalent (62.3%), followed by cannabis use (41.5%), alcohol use (40.2%), and cocaine use (27.4%). Patients who reported using tobacco, were more likely to have comorbid alcohol use (OR = 7.24; p-value = 0.000), cannabis use (OR = 2.80; p-value = 0.000), cocaine use (OR = 5.00; p-value = 0.000), and synthetic cannabis (K2) use (OR = 4.62; p-value = 0.048). Results of the multivariate analyses supported the other findings. Our study like others, found a high association between schizophrenia spectrum disorders and substance use. The prevalence of substance use was higher than previously reported, in a community where social determinants of mental health remain significant. Almost all studies if not all, have concluded on the need to modify treatment to accommodate or address substance use comorbidity in order to get a favorable outcome. This makes it important to establish if a patient with schizophrenia has a co-morbid substance use disorder. Key words: substance use, schizophrenia, schizophrenia spectrum disorders, public health

No. 105
WITHDRAWN

No. 106
WITHDRAWN

No. 107
Risperidone Induced Enuresis in an Adult Patient With Autism Spectrum Disorder: A Case Report

Poster Presenter: Mehwish Hina, M.D.
Co-Authors: Tania Sultana, M.D., Puja Parikh

SUMMARY:

Autism Spectrum Disorders (ASD) are neurodevelopmental disorders defined as a persistent impairment in reciprocal social communication and social interaction, and restricted, repetitive patterns of behavior, interests, or activities. The symptoms are present from early childhood which can limit or impair individuals' everyday functioning. In recent years, reported frequency has been approached to 1% of the population worldwide (1). According to the CDC, 1 in 59 children is estimated to have autism spectrum disorder. Autism Spectrum Disorder is 3-4 times more common in boys than girls (2). ASD can also be associated with higher rates of aggression. This aggression can be detrimental to the development needs of children with ASD as it can cause reduced social support, increased stress levels for the child and his/her caretakers, and decreased standards of health, comfort, and happiness(3). Antipsychotics are the most effective drugs for the treatment of irritability, aggression, and other symptoms in ASD patients (4). Risperidone, an atypical antipsychotic, has been shown to be successful in patients with ASD with behavioral disturbances and aggression (5). This case report presents enuresis as a side effect in an adult patient, no history of enuresis, taking risperidone for ASD behavioral aggression. Enuresis is an uncommon adverse effect of Risperidone and has been reported in case reports and observational studies both in child and adolescent and adult patient populations (6, 7, 8, 9). This case report includes a detailed literature review on risperidone induced enuresis. Enuresis is an under-reported side effect and its deleterious consequence is treatment non-adherence. Clinicians should be more vigilant about this side effect, especially in a patient with developmental disorders.

No. 108
Clozapine Associated With Pneumonia: Case Report

Poster Presenter: Joseph Venditto
Co-Author: Khaled Said, M.D.

SUMMARY:

Clozapine is a second generation antipsychotic traditionally used for cases of treatment-resistant

schizophrenia or schizophrenia with enduring suicidal ideation1. More common side effects include sedation, orthostatic hypotension, anticholinergic effects, hyper salivation, and metabolic dysregulation, in particular, weight gain and insulin resistance. Less common adverse effects include incidences of agranulocytosis, seizures, and constipation2. There is limited, but growing, data suggesting that clozapine may indirectly cause aspiration pneumonia3,4,5. Our patient is a 50 year old female with a relevant past medical history significant for schizophrenia controlled with clozapine for the last 20 months and haloperidol who was admitted to the hospital from her personal care home for multi-lobar pneumonia. Initial white blood cell count in the emergency department was 20,000 cells/μL and a computerize tomography scan of the chest revealed multiple patchy airspace opacities of both lower lobes, with the left lobe more afflicted. Treatment was begun appropriately for her pneumonia and the psychiatric consult liaison service was consulted for adjustments to her clozapine dose. Patient reported excessive salivation since beginning her clozapine raised suspicion of aspiration pneumonia and represents a trend in patients being treated with clozapine seen by our consult liaison service. Learning Objectives: At the conclusion of this session, the participant will be able to Understand the common and infrequent side effect profiles characteristic of clozapine usage. Maintain a high clinical index of suspicion for medication-induced medical and psychiatric pathologies. Describe the emerging concerns and evidence underlying cases of clozapine-induced pneumonia.

Sunday, May 02, 2021

Poster Session 5

No. 1

Cannabis Induced Psychosis in Adolescents: A Case Report

Poster Presenter: Mehwish Hina, M.D.
Co-Author: Asghar Hossain, M.D.

SUMMARY:

Introduction: Marijuana is the dried leaves and flowers of the Cannabis sativa or Cannabis Indica plant(1). Marijuana is the most commonly used substance among adolescents after alcohol(2). Cannabis use is more prevalent in males than in females(3). According to 2018 monitoring the future survey the life time prevalence of marijuana use in 8th graders is 13.90, 10th graders is 32.60 and in 12th graders is 43.60(4). Marijuana use can cause harm on teen brain. Cannabis use during adolescence is associated with increased risk for depression, anxiety, psychosis and suicidality(5). Objective: Explained a case of first episode psychosis after continued use of cannabis To discuss the relationship between regular use of cannabis in development of psychosis. Case: 16-year-old M teenager with history of substance abuse and psychosis presented to our ER for worsening psychosis in context of cannabis use and noncompliance with the medications. He has been withdrawn, socially isolated and exhibiting symptoms of persecutory delusions, command type auditory hallucinations telling him to kill people. Patient relapsed on cannabis 2 weeks ago and soon after he decompensated with psychotic symptoms and persecutory delusions. Secondary to these symptoms, patient started feeling depressed intermittently and experiencing symptoms of anxiety. Patient has history of cannabis use since age 13 and last use is one day ago before come to the hospital. He was prescribed risperidone 1 mg 3 months ago for psychosis which did not show any significant effect on his psychosis and he stopped taking due to lethargy and sedation. Later he was started on aripiprazole 10 mg which lead to significant alleviation of his psychosis but he was noncompliant. Discussion: In this case report we discuss about cannabis use and its association with development of psychosis. Cannabis induced psychosis may begin at an earlier age in those who are at greater risk for psychosis than the general population(6). Review of literature states that cannabis is a known risk factor for development of psychosis however the exact neurobiology process is not known(6). The majority of people who use cannabis are unlikely to develop any lasting mental illness as a result of its use. However, continued cannabis use may increase the chances of developing psychosis with a poor long-term outcome in those with an existing psychotic disorder. CONCLUSION: In conclusion the available evidence

suggest that cannabis use may increase the chances of developing psychosis with a poor long-term outcome. Identifying cannabis use in vulnerable population and optimum and timely management helps in ameliorating psychosis and leading a normal life.

No. 2
Cannabis Induced Psychosis in Adolescents: A Literature Review
Poster Presenter: Mehwish Hina, M.D.
Co-Author: Padma Kotapati

SUMMARY:
Introduction: Cannabis is most widely used addictive substance in adolescents after tobacco and alcohol(1). The potential component in cannabis is tetrahydrocannabinol (THC),which increases the risk of negative effects on adolescents' brain and functioning(2). The lifetime prevalence of cannabis use in 12th graders is 43.60%, in past year is 39.90%, in past month is 22.20% and daily is 5.80%(3). Short term cannabis use can affect learning ability, memory, attention, judgment and decision making(4). Long term use can negatively impact adolescent's health, cognitive impairment, education, school performance, social life and employment(4). New research suggests that cannabis use can increase the risk of depression, anxiety and symptoms of psychosis like hallucinations, delusions, and change in behavior and mood(5). Objective: · To explore the role of cannabis and its effects on adolescents' brain in developing psychotic disorders. · To discuss the neurobiology pathway of brain in developing psychosis after cannabis use. Discussion: The current literature suggests that cannabis use for longer durations can have a permanent effect on the developing brains of adolescents and young adults(6). It can lead to reducing blood flow to parts of brain, lower quality of brain connection and changes to the brain structure which may hurt brain functioning in adolescents(6). Delta-9-tetrahydrocannabinol (THC), a psychoactive component of cannabis stimulates endocannabinoid receptor CB1 in the brain, which plays an important role in adolescents brain development process like neural cell proliferation, migration and differentiation leading to changes in mood and behavior(7). Literature also states that early age of cannabis use increases the risk for developing early onset psychotic disorders(8). Treating the new onset psychosis is quite challenging as clinicians should be careful in watching cannabis and other cannabinoids use. Treatment should be focused on acute psychosis for preventing future episodes and treating underlying condition. Several psychosocial interventions like psycho education, motivational interviewing, cognitive behavioral therapy and pharmacotherapies like use of benzodiazepines, second generation anti psychotics and mood stabilizers are used for treatment of cannabis induced psychosis(9). Prevention of marijuana use should be the ultimate aim of all the management strategies in treating the people at risk of psychosis(10). Conclusion: Using marijuana can have some harmful and long-term effects on adolescents like poor neurocognitive performance, impairment in brain structural development and alterations in brain functioning. So, it is important for clinicians to quickly identify the cannabis use, and how it affects the brains of teens and how treatment of psychosis and ongoing use of marijuana result in better outcomes and leading a normal life.

No. 3
WITHDRAWN

No. 4
Key Distinctions in the Diagnosis and Management of Adult Versus Pediatric ADHD
Poster Presenter: Rajesh Gaddam, M.D.
Co-Authors: Kaveer Greywal, Syed Naveed Kamal, M.D., Sameerah Akhtar

SUMMARY:
Attention-Deficit Hyperactivity Disorder is commonly characterized by the core symptoms of hyperactivity, inattentiveness, and impulsivity. Recent estimates of the prevalence of adult ADHD range from 2% to 6% of the adult population. A widely held misconception that persists among both clinicians and laypersons alike is the notion that ADHD is a phenomenon confined to the child, adolescent, or young adult patient. There are several reasons for this, from cultural to the objective findings that hyperactivity

does indeed tend to decline dramatically by late adolescence. However, the inattentive domain of the condition continues to persist, often invisible to the untrained observer who may not be open to the idea of an adult with a “childhood” condition. Contrary to popular belief, ADHD is not a condition that a patient can be expected to simply “grow out of” upon reaching adulthood. A second misconception about ADHD concerns impairment in cognitive function. Many clinicians lean too heavily on academic or career achievement to rule in or rule out the condition. The unfortunate reality for many ADHD sufferers is that their diagnosis is missed simply because they are performing “too well” in their academics or career for a clinician to deem them impaired. But because there is no way for a clinician to know the baseline of someone who presents with an impairment, the assumption that someone performing “well” could not possibly still be performing below their baseline (unimpaired) ability is a dangerous one. Many people with undiagnosed (and untreated) ADHD become physicians, business executives, and succeed in all other manner of “successful” careers. The truth is that, as well as some ADHD sufferers may be performing relative to the “average performer” in a society, they may still be underperforming relative to their own individual potential. Thirdly, an adult patient with ADHD will tend to present somewhat differently than the child with ADHD. Adults with ADHD tend to display far more emotional dysregulation. There is a high correlation of anxiety and depressive mood disorders with adult ADHD. It has been posited that by the time a patient reaches adulthood, the cumulative effect of years of underperformance has resulted in a loss of self-esteem and a decreased faith in one’s own abilities. This leads to guilt and depression over past failings as easily as it leads to self-doubt and anxiety regarding the likelihood of overcoming a future challenge. Adults tend to have developed specific coping mechanisms, and though they respond to CBT and medication much in the way that children do, their therapy needs to target the subtle distinctions of an adult with the condition, and their medication may need to target mood disorders as well as ADHD as a stand-alone entity.

No. 5

Pathways Between Maternal Stress and Childhood Irritability

Poster Presenter: Aderonke Oyetunji, M.D., M.B.A.
Co-Authors: Prakash Chandra, M.D., Susanna Ciccolari Micaldi, M.D.

SUMMARY:

Irritability is defined as a proneness to anger and it is present in many diagnostic categories, including externalizing, internalizing, and neurodevelopmental disorders. One association between prenatal stress and childhood temperament is through a biological mechanism that employs maternal inflammatory cytokines (Gustafsson et al., 2018). This ultimately leads to infant poor self/mood regulation and negative affectivity. This review aims to determine the different pathways leading to childhood irritability and its link to maternal depression. A systematic review of articles on PubMed and other databases spanning a period of ten years from 2007 to 2017 using search terms such as childhood irritability, infant irritability, maternal and prenatal stress revealed 43 articles found to have determined specific pathways linking maternal stress to irritability in children. Studies have elucidated that the genetics of irritability are progressive with a heritability of irritability found to be roughly 30% to 40%. Regarding the progressive nature of irritability and its relationship to gender, males show rising heritability from childhood through young adulthood, differently from females (Brotman et al., 2017; Coccaro et al., 1997; Leibenluft, 2017). An endogenous maternal stress hormone, known as cortisol, is deemed a mediator between prenatal stress and childhood irritability and could be a primary candidate for programming the fetal brain and infant behavior (Davis et al., 2007). Cortisol is important in the development of emotion and cognition. However, sustained levels of cortisol, due to maternal stress, could have deleterious consequences for brain structures and functions and could lead to a higher risk of depression, anxiety, attention deficit/hyperactivity disorder, and delay in language. Aberrant threat, reward and altered facial emotion processing represent other mechanisms underlying the pathophysiology of childhood irritability (Brotman et al., 2017). The hypothesis of irritability as it relates to abnormal threat processing

could suggest that irritability reflects dysfunction in the amygdala-hypothalamic-periaqueductal gray threat response circuitry (Leibenluft, 2017). Irritability associated with neurodevelopmental disorders especially ADHD and ASD is helpful for identifying children at risk for depression in later years. This relationship provides an opportunity for early identification and prevention of depression with early treatment of childhood irritability. Given that the inability of individuals to manage and regulate emotions is the process that possibly underlies irritability found in many neurodevelopmental diagnoses, adopting already existing treatment modalities addressing emotional regulation, as seen in evidence-based CBT modules, could prove useful for managing childhood irritability.

No. 6
WITHDRAWN

No. 7
The Covid-19 Pandemic's Potential to Disproportionately Impact Mental Health in Minority Youth: A Literature Review

Poster Presenter: Chloe Soukas
Co-Author: Cheryl A. Kennedy, M.D.

SUMMARY:

Background: The COVID-19 pandemic has changed society's way of life, requiring initiatives like social distancing and virtual interfaces. Social isolation and discrimination are impacted by COVID-19 and play a role in child and adolescent mental health. Minority individuals and those with lower socioeconomic status (SES) are disproportionately negatively affected by COVID-19. This group has pre-existing health disparities that can only be magnified during a pandemic. Methods: Literature search of PubMed database to identify relevant articles with keywords "youth," "mental health," "disparities," "COVID-19" published from 2013 until June 2020. We focused on systematic and narrative reviews, observational studies, and editorials. Results: Children are adjusting to changes in their and their families' routines and to the impact on family dynamics. Regarding COVID-19, significant negative influences on youth include: having a relative sick with COVID-19; having a relative working on the frontlines; or employment termination within the family. Throughout the country, underrepresented minorities, and those with lower socioeconomic status (SES) are a disproportionate population share of COVID-19 cases and deaths. Poor COVID-19 outcomes are related to the many pre-existing comorbidities disproportionately present in minority individuals, and communities where many minority individuals reside often have a low SES and high housing density. Trends show that those with a lower income began working from home later and had a delayed start on socially distancing while the virus spread. Children in these at-risk families may feel uncertain not knowing if loved ones will recover from COVID-19 or feel isolated due to less physical interaction within families, many of whom have feelings that increase vulnerability to adverse psychological consequences. Historically, there have been mental health inequities in minority children, including less delivery of mental health care and less psychotropic drug use when compared to white counterparts. Further, minority populations are often underrepresented in clinical research. Conclusions: There is ample evidence to demonstrate that the mental health of youth, notably minority youth, will be adversely impacted by COVID-19. These children and adolescents are at high risk for poor outcomes due to a host of other risk factors as well. Research on diversity and inclusivity in children and adolescents should become a priority to help guide interventions in combatting pandemic-related factors that impact psychological development. Additionally, support is needed for more focused clinical training for all mental health providers who encounter this population to improve access to care. Specialized programs for recruitment of diverse and multi-lingual providers and training in the types of mental health services that minorities will accept should be a part of all clinical care training systems.

No. 8
WITHDRAWN

No. 9

The Effects of Covid-19 on Infant Mental Health: Predicting Future Outcomes Among the "Quaranteens"

Poster Presenter: Celine C. Corona, M.D.
Co-Author: Marilena Adames-Jennings, M.D.

SUMMARY:

Community wide calamities pose a heavy burden on society's mental health, leading to drawn out periods of heightened psychiatric symptoms like anxiety and depression1. The prolonged presence of the Covid-19 pandemic is considered a traumatic event that will likely lead to worsening of pre-existing conditions and development of new psychopathology2,3. Much has already been highlighted of the increased rate of prescriptions for anxiolytics, antidepressants and anti-insomnia medication with 78% of these being new scripts written at the pandemic's peak in the U.S. in March4. Clearly the average individual has been shaken to the core, but what more the youngest and most vulnerable members of society? Infancy, encompassing the first two years of life, is the period wherein one is at the sole mercy of their care givers. A secure, predictable and loving attachment between the infant and caregiver is of paramount importance to developing neural connections that will provide the foundations for a robust psychological and social base5. This in turn will set the scene for success in academics and adult life later on. A barrier to such an ideal scenario is the staining of early relationships due to parental high stress 6. A survey of 900 women who were either pregnant or having just delivered reflected a significant increase in depression and anxiety before and during the pandemic 7. Moreover, parents have more prominent, negative reactions to disasters.1 A mentally absent caregiver, financial hardship and uncertainty heighten the risk for adverse outcomes such as school failure and impaired social relations 6. Children younger than 6 years of age already have the same incidence of mental illness as their older counterparts8, what more given this time of unprecedented global turmoil? Neuropsychiatry would benefit from follow up on the emotional and behavioral development with accompanying brain scans on infants born during this period, especially those whose caregivers were living in pandemic hot zones at the time. It would add to our knowledge on neural pathways of depression and anxiety and the development of resilience. Efforts to increase awareness of these possibilities in primary care physicians, pediatricians and obstetricians may help to mitigate these concerns and the development of more serious psychiatric conditions. A lower threshold for seeking mental health care especially during this time of unprecedented circumstances should be strongly endorsed by the medical community and local government officials not only to soften the pandemic's acute effects on our frazzled nerves, but to prevent further insult to our precious "quaranteens."

No. 10

A Mandate to Innovate: Limited Mental Health Resources in the Context of Increasing Nursing Home Demand

Poster Presenter: Tamie D. Wells, M.D.

SUMMARY:

An increasing demand for nursing home care coupled with increasing pressure from the government to provide high quality care in the context of limited resources and an expected decrease in the number of practicing psychiatrists, mandates the need for innovation. In 2015, just over 1.4 million residents were living in US nursing homes, representing 2.6 % of the over 65 population and 9.5 % of the over 85 population. Nursing home care is the third largest segment of the health care industry and is projected to grow as a result of increasing longevity, shifts in morbidity, and changing demographics. Given present demographic trends, the United States will need to increase its nursing home bed supply to accommodate 4.3 million elderly who are expected to be institutionalized by 2040 (Doty et al., 1985). Currently, 15.5% of the nursing home population is under age 65, while 7.8 % are over 95 years. Almost 15% of those residents have severe cognitive impairment and more than five Activities of Daily Living limitations. Antipsychotic use is common, with more than 1 out of 5 residents (21.7%) receiving an antipsychotic medication at least once in the past 7 days. In 2012, the Centers for Medicare and Medicaid Services (CMS) launched the National

Partnership to Improve Dementia Care in Nursing Homes (Partnership). In 2015, CMS revised the Five-Star Quality rating system for nursing homes, reflecting an improvement of performance standards. In October 2017, the Partnership announced a new fifteen percent reduction in antipsychotics use goal by the end of 2019 and committed to increase non-pharmacological person-centered methods of care. Doctor shortages are complicating the delivery of quality care and medication management for patients in nursing homes. In 2018, the National Center for Health Workforce Analysis projected Tennessee to experience a shortfall of between 700 and 780 psychiatrists by 2030. Tennessee ranks 44th in the nation in Mental Health Workforce Availability indicating a higher prevalence of mental illness and lower rates of access to care as compared to other states in the union. Integrating modern technologies into effective telemedicine patient care delivery models is gaining more interest. Providers have recently adopted telehealth at record levels to provide care during the COVID 19 pandemic after federal and state governments passed emergency measures to expand health coverage and make this possible. Data is being gathered on the increased use of telehealth during the pandemic. There are serious issues to address surrounding a more expansive adoption of telemedicine such as state licensure barriers, broadband internet access, HIPPAA, data security and privacy issues, and private payer reimbursement. However, leveraging telemedicine appropriately has the potential to provide meaningful system-based solutions to reduce inappropriate hospitalizations, generate savings for CMS and the state, and improve patient-centered quality of care.

No. 11

Assisted Outpatient Treatment in Community Mental Health: An Outcome and Cost Analysis in Southern Alabama

Poster Presenter: Michael Marshall, M.D.
Co-Authors: Bradley Brooks, D.O., Evan Chavers, Praveen Narahari, M.D.

SUMMARY:
Background: According to the Substance Abuse and Mental Health Services Administration, in 2017, an estimated 11.2 million adults aged 18 and above in the United States were diagnosed with a serious mental illness (SMI), but only 66.7% received mental health treatment within the past year.1 Involuntary outpatient commitment (OPC) is a civil court procedure intended to aid persons with severe mental illness who require more intensive intervention to adhere to outpatient treatment while maintaining a less restrictive environment.2 OPC remains a controversial treatment intervention due to conflicting evidence of efficacy and implications involving consumer rights. A federal grant allowed for the establishing of an Assisted Outpatient Treatment (AOT) Program in Baldwin County, Alabama, making a wide range of services available to those placed on OPC. Primary endpoints for this program are to reduce the incidence and duration of psychiatric hospitalizations, emergency room visits, interactions with the criminal justice system, homelessness for individuals with an SMI, and to improve access to and compliance with healthcare. Here we present the primary endpoint findings and an analysis of the net costs of Baldwin County's AOT program during its first year of implementation. Methods: Data from 12 months before and following enrollment was collected to measure the primary endpoints for 65 consumers registered in the AOT program upon discharge from psychiatric hospitalization or as a step-up referral from outpatient between January 2017 to August 2018. The pre and post-intervention groups were conducted utilizing a paired Student's t-test. Results: The average number of hospital admissions [pre- ($M = 1.49$, $SD = 1.15$) and post-enrollment ($M = 0.25$, $SD = 0.73$) ($p<.001$)], average number of hospital days [pre- ($M = 24.77$, $SD = 32.63$) and post-enrollment ($M = 4.85$, $SD = 17.02$) ($p<.001$)], number of emergency room visits [pre- ($M = 0.42$, $SD = 0.79$) and post-enrollment ($M = 0.18$, $SD = 0.53$) ($p<.01$)], and average number of encounters with law enforcement [pre- ($M = 1.25$, $SD = 1.75$) and post-enrollment ($M = 0.45$, $SD = 1.19$) ($p<.01$)] were all significantly improved 12 months following enrollment in the AOT program. Conclusion: Our analysis of the Baldwin County AOT program indicates a statistically significant reduction in

hospital readmission rates and the average number of hospital days utilized. The Baldwin County AOT program was provided with estimated costs by local emergency departments, Altapointe Health Systems, and law enforcement agencies; we roughly calculate a cost savings of over $1,004,000 in these areas alone. These outcomes highlight the sustainability of assisted outpatient treatment models offering a broad scope of services, and this can be the solution for the huge deficit in accessing acute psychiatric care created by the closure of state hospitals across the United States.3

No. 12

Association Between Suicidality and Psychosocial Risk Factors During the COVID-19 Pandemic in a Canadian General Population Sample

Poster Presenter: Emily C. Yung
Co-Authors: Anthony Levitt, Roula Markoulakis, Kamna Mehra, Mark Sinyor

SUMMARY:

Background: The COVID-19 pandemic, including threat of illness, economic uncertainty, and social isolation, is likely to have a substantial impact on mental health across societies. The goal of this study was to identify psychosocial risk factors for suicidality in a general Canadian population during the first 5-6 months of the COVID-19 pandemic. **Methods**: This cross-sectional, community-based study recruited participants from a provincially representative sample through a research panel (AskingCanadians). Ontarians were surveyed in July-August 2020 (N=2503; mean: 49 years, range: 18-89 years; 50% identified as men). Suicidal ideation (SI) during the previous two weeks was the primary outcome of interest, measured by the American Psychiatric Association DSM-5 Cross-Cutting Symptom Measure. Risk of exposure to COVID-19 was self-reported. Perceived socioeconomic status (SES), social support satisfaction, and mental/emotional health change during the COVID-19 pandemic were measured on a Likert scale. Descriptive, chi square, ANOVA, and linear regression analyses were conducted. **Results**: In the prior two weeks, 8.4% of the sample had SI. Gender identity was not significantly associated with SI. Younger age was associated with increased SI (B= 0.536, p<0.001). People with concurrent psychiatric diagnoses reported higher SI compared to those without concurrent disorders (32.1% vs. 5.2% respectively; X2=220.613, p<0.001). People experienced more SI in the high risk COVID exposure compared with low risk COVID-19 exposure (21.0% vs. 7.5% respectively; X2=36.774, p<0.001). Changes in SES during the pandemic were associated with higher SI (X2=22.974, p<0.001), with reduced (11.1%) and increased SES (15.5%) experiencing more SI than with unchanged SES (7.0%). Higher social support satisfaction pre- (B=-0.507, p<0.001) and during (B=-0.321, p<0.001) COVID-19 were associated with reduced SI; however in a stepwise linear regression model, current social support satisfaction was no longer significant, while lower social support satisfaction pre-COVID (B=-0.09, p<0.001), younger age (B=-0.007, p<0.001), lower current SES (B=-0.034, p<0.001), and high risk COVID-19 exposure (B=0.043, p<0.001) were associated with more SI. **Conclusion**: This study identified a number of factors associated with high SI during the pandemic in keeping with a priori hypotheses including (younger age, psychiatric morbidity, COVID-19 exposure, reduced SES) while also identifying long-term greater social support as potentially protective. An increase in SES associated with high SI was an unexpected finding. Potential explanations include a direct effect (i.e. positive life changes can be stressful and confer risk) or that this factor is a proxy for other stresses (i.e. those earning more during the pandemic may work in essential industries/services and are under more workplace pressure). Further study of and public health efforts to address these psychosocial risk factors are warranted.

No. 13

Association of Household Dysfunction in Childhood With Cognitive Decline: Insights From the Texas BRFSS Survey

Poster Presenter: Preetam Nallu Reddy, M.D.
Co-Authors: Gaurav Chaudhari, Darshini Vora, M.D., Priya Kodi, Mahamudun Nabi, M.D.

SUMMARY:

Introduction: Experiencing Adverse Childhood Experiences (ACE''s) can impair cognitive

development. ACE’s can be divided into several categories, with some more explicitly related to household dysfunction. We aim to identify the types of household dysfunction (in the form of ACE’s) that have the strongest association with cognitive decline. **Methods**: Subjects were included from the BRFSS 2015 Texas survey data [1]. Based on previous publication [2], data on five household dysfunction domains related to ACE’s was collected including: household mental illness, household substance abuse, domestic household violence, parental divorce/separation, and incarcerated household member [3]. The associations between overall, as well as specific household dysfunction experiences and subjective cognitive decline (SCD) were assessed. SCD was considered to be present if a subject responded ‘Yes’ to a question drafted as, ‘During the past 12 months, have you experienced confusion or memory loss that is happening more often or is getting worse?’. Associations were evaluated by logistic regression analysis. **Results**: Subjects ≥ age 45 (2900 subjects) who responded ‘definitively’ to the household dysfunction questionnaire were included. The mean age was 61 years, 54% of subjects were female, and 86% were racially white. Household dysfunction experience was present in 43% of subjects, of which the most common were household substance abuse (22%) and parental divorce/separation (21%). SCD was highly prevalent (16.7% vs. 9.0%, p <0.001) in subjects with household dysfunction as compared to those without. **Conclusions**: Overall, there is a significant increase in the self-reporting of SCD amongst subjects who experienced some form of household dysfunction; this supports our notion that there is a strong positive association between household dysfunction and cognitive decline. Of the specific types of household dysfunction, SCD was most strongly associated with household mental illness followed by household substance abuse. Parental divorce/separation, although commonly experienced by the population, was not associated with SCD.

No. 14

Case Report: Hallucinations and Delusions and the Interplay Between Them

Poster Presenter: Ron M. Israel, D.O.

Co-Authors: Brandon Ilechukwu, Robert F. Vassall, Jieun Lee

SUMMARY:

Patient is a 55 year old female presented under a Baker Act for holding a knife to her son saying that her son is not her son but instead was a gang member holding her hostage. Per report she can communicate with her boyfriend via telepathy. The patient is bizarre, delusional and responding to internal stimuli. When asked if we could contact her husband she said "sure he is in the room" and pointed towards the empty restroom. She states she communicates with her husband through the speaker system of the hospital and that he is a few floors up on the obstetrics floor with her children. Patient then paused and said "listen to his voice"; however, no voice could be heard. The patient states she is the queen of Italy. Urines were positive for Benzodiazepines. Discussion: This patient can further our understanding of delusions and hallucinations by demonstrating both within the same time frame. The patient experienced capgras delusion, delusions of royalty, auditory and visual hallucinations. Explanations for these symptoms include an atypical benzodiazepine withdrawal versus pure psychosis. This poster will explore hallucinations and delusions and possible causes in the context of an acute combined presentation

No. 15

WITHDRAWN

No. 16

WITHDRAWN

No. 17

Chinese Parachute Children: Pearls and Pitfalls in a Transcultural Psychiatry Case Series

Poster Presenter: Jia Pamela Guo, B.S.

SUMMARY:

Background: “Parachute kids” are unaccompanied minors from East and Southeast Asian countries sent to the United States for primary and secondary education while their parents remain in the origin country (Tsong 2009). In 2016, there were a reported 35,627 Chinese parachute students in

American K-12 schools. High academic expectations, mental health stigma, and the acculturation process combined with lack of familial nurture and structure in formative years contributes to psychosocial, emotional, and mental health issues (Hom 2002, Tsong 2009, Cheng 2019). To our knowledge, there is no clinical psychiatric literature characterizing the mental health challenges and care of Chinese parachute children, though this population has been examined through the lens of different disciplines including education, sociology, migration and ethnic studies, and psychology. Through a case series of 2 patients who were hospitalized in an inpatient academic medical center, we will review the pearls, pitfalls, and future directions towards psychiatric care in this population along with a thorough literature review on this topic. Case series: We present 2 Chinese females aged 15 and 17y old admitted with suicidal ideations and attempts both ultimately diagnosed with major depression, generalized anxiety and unspecified eating disorder. Mental health stigma, lack of family support, achievement-oriented pressure, and loneliness/isolation emerged as common themes. Transatlantic conference call, interpreters, and in-person family meeting were used by providers to communicate with parents and patients, but there remained a cultural gap and nuanced language barriers. Lack of follow up to home country services and insufficient host family training were unique challenges faced by the treatment team. Discussion: This case series illustrate the complexities in the care of Chinese parachute children. Few papers address approaches to transcultural psychiatric care. Typically, this is in the context of adult immigrants or minors living in a cohesive family structure. To identify high-risk parachute kids and prevent progression of significant mental disruption, community relationships with school teachers, counselors and psychiatrists may be established for appropriate referral and preventative care. The ideal transcultural psychiatric approach may include culturally trained and informed staff, relationships with social scientists or non-physician experts who can offer consultative services, partnership with cultural ambassadors, continued research investigation, and a focus on integrating preventive services directly in the community (Minde 2005). Conclusion: Community psychiatrists must be aware of the mental health aspects of Chinese parachute children as they are vulnerable to mood and eating disorders given their unique psychosocial challenges and substantial presence in the US K-12 school system. Further studies are much needed in this under-represented population.

No. 18
Decompensation of Mental Illness After Covid-19 Infection: A Case Series
Poster Presenter: Khaled Said, M.D.
Co-Authors: Joseph Venditto, Shevani Ganesh, Sanjay Chandragiri

SUMMARY:
COVID-19 is an abbreviation that stands for Coronavirus Disease.1,2 The number 19 refers to the year during which the virus was initially identified, or 2019.1,2 COVID-19 was initially recognized as a respiratory illness.2 However, COVID-19 was later found to cause multi-organ damage.3 The effect of COVID-19 on the brain was studied through neuroimaging during the epidemic in Italy.4 The most common positive findings were altered mental status followed by ischemic stokes.4 In another study that took place in the United Kingdom, almost two thirds of the patients who presented with altered mental status met criteria for psychiatric diagnosis.4 Acute onset psychosis followed by neurocognitive syndrome were the most common psychiatric presentations.4 In this case series, we present two cases of patients who had decompensation of their mental illness after COVID-19 infection. The first patient is a 59-year-old white male with a past medical history significant for diffuse large B-cell lymphoma (currently in remission since 2013) and major depressive disorder with psychotic features. His symptoms were successfully maintained on ziprasidone 60mg daily since 2007. Earlier this year, a close family member of his passed away from the COVID-19 virus. Our patient was diagnosed shortly thereafter and entered self-quarantine. He was admitted to the inpatient psychiatric unit following sudden decompensation, return of psychotic symptoms, and one suicidal attempt. He was admitted to the inpatient psychiatric unit four times over the course of his psychiatric inpatient treatments. He was trialed on

several additional psychotropic medications, including lithium, olanzapine, lurasidone, aripiprazole, and brexpiprazole. The second case describes a 65-year-old man who initially presented to the hospital after he suffered cardiac arrest. Return of spontaneous circulation (ROSC) was obtained, and the patient underwent emergent cardiac catheterization. He tested positive for the 2019 novel coronavirus; his first encounter with the consult liaison psychiatric service was for prolonged QTc and history of schizophrenia. The patient was psychiatrically stable for years off psychotropic medications until he was diagnosed with COVID-19, at which point he decompensated. He returned to the hospital two months later, where he exhibited auditory hallucinations, was noted to be responding to internal and unseen stimuli, and exhibited paranoid ideations regarding COVID-19. He was unable to care for himself and warranted involuntary placement to the inpatient psychiatric unit, where he stayed for nine days and eventually stabilized on long-acting paliperidone preparation.

No. 19

Dual Diagnosis Theater: A Pilot Drama Therapy Study for Individuals With Serious Mental Illness and Substance Use Disorder

Poster Presenter: Amy Cheung
Co-Authors: William-Bernard Reid-Varley, M.D., M.P.H., Xiaoduo Fan, M.D., M.P.H., M.S.

SUMMARY:

Objective: This pilot study assessed the feasibility, acceptability, and efficacy of a group-based drama therapy intervention culminating in a performance open to the community for individuals with a dual diagnosis of serious mental illness and substance use disorder. Methods: The group completed a nine-week drama therapy program which included a public performance with a talkback discussion. The Theater Impact Scale, Brief Psychiatric Rating Scale (BPRS), and Attitudes, Knowledge, and Beliefs Related to Substance Use questionnaire were administered pre- and post- program to measure the impact of the intervention. Audience members were surveyed to gather their perspectives on the performance. One week after the performance, a focus group was conducted to evaluate participants' experiences in the program. Results: Ten individuals with dual diagnosis were recruited, and four completed the pilot program. A reduction in the BPRS total score was observed between pre- and post- intervention, although the difference did not reach statistical significance (42 ± 9.9 vs 37 ± 12.8, p=0.068; mean ± SD, pre- versus post- program). Thematic analysis generated six themes in the post-performance focus group: (a) advocating change in the mental health field; (b) fostering a safe space; (c) sense of community among participants with lived experience; (d) facilitating expression and recovery; (e) importance of external support; and (f) growing confidence and positive feelings. In addition, audience members (n = 15) found the performance to be impactful and effective in reducing stigma associated with dual diagnosis. Conclusion: Drama therapy groups, with the inclusion of a theater performance, present an opportunity for individuals with serious mental illness and substance use disorder to process and share their journeys with their diagnoses to re-create a healthy sense of self with increased community awareness.

No. 20

HARMONIOUS: A Virtual Community-Based Mental Health Initiative Among Chinese-Americans and Chinese Immigrants

Poster Presenter: Zilin Cui
Co-Authors: Yiyang Yuan, M.P.H., Kun Hu, Julia Chun, Xiaoduo Fan, M.D., M.P.H., M.S.

SUMMARY:

Background: Asian-Americans tend to use mental health services almost three times less than non-Hispanic whites, and those who do seek help may present with greater distress.1,2 In a study at MGH, Asian patients were only half as likely to be diagnosed with a mental disorder, and half as likely to receive medication.3 A large part of this disparity can be explained by stigma, which tends to be higher in Asian-Americans.4 The COVID-19 pandemic this year has presented additional challenges by limiting in-person interventions. However, mental health resources online that could address these challenges tend to focus on a younger, English-speaking, non-Asian population. We seek to test a new stigma reduction intervention named "HARMONIOUS," a

community-based bilingual education and support initiative delivered virtually with a focus on Chinese-Americans of all ages in Massachusetts. Methods: This pilot study uses an interrupted time series design to test the effects of a social media intervention on the mental health attitudes of local Chinese individuals using survey data. Online surveys were distributed through local organizations and cultural groups and participants were divided into two groups based on the language in which they chose to take the surveys. Acculturation was measured with the Suinn-Lew Asian Self Identity Acculturation Scale (Short Form), public stigma with the Stigma Scale for Receiving Psychological Help, self-stigma with the Self-Stigma Of Seeking Psychology Help, and attitudes towards mental health with the Inventory of Attitudes toward Seeking Mental Health Services. Results: This analysis included 105 total participants, including 36 individuals who took the survey in English (mean age = 26.3, 58% female) and 69 who took it in Chinese (mean age = 33.2, 68% female). Survey language was significantly correlated with acculturation ($p < .01$). Interestingly, within participants who took the survey in Chinese, more acculturation was associated with a slight decrease in stigma. However, this effect was not seen within those who took the survey in English. Higher public stigma was associated with English language and age when controlling for language. In terms of self-reported mental health knowledge, those who took the survey in Chinese tended to report less knowledge than those who took the survey in English ($p = .01$). Conclusion: Although preliminary, this data suggests that there are multiple factors that affect stigma and mental health attitudes within Massachusetts Chinese. Higher public stigma with greater acculturation and English language usage was unexpected; this may be explained by increased awareness of stigma in Chinese culture or from sampling bias. These results will inform future studies and interventions on mental health stigma in the Massachusetts Chinese population. We plan to continue sampling our population every three months and use our data to improve the initiative based on community feedback.

No. 21

Integrating Primary Care Into Community Mental Health Settings

Poster Presenter: Barbara N. Trejo, M.D.
Co-Author: Jean-Marie E. Alves-Bradford, M.D.

SUMMARY:

Integrating primary care into behavioral health services, has been shown to improve access to and quality of primary care services, particularly within the SMI population which has worse health outcomes than the general population. In 2016, a qualitative study of 15 adults receiving mental health services at the Washington Heights Community Service (WHCS) was conducted assessing participant perspectives on integrating primary care into behavioral health services (also known as reverse integrated care), in which participants highlighted the value of integrated care. The WHCS subsequently hired a nurse practitioner to provide primary care services within its mental health outpatient services in 2017. In its first year, only 30% of mental health patients have participated in the primary care services, with men and English-speakers representing most of participants. Only 21% of all Latino patients participated in integrated care services whereas patients of other ethnicities had a higher (32%) participation rate. This study explores factors leading to these significant findings and determines ways to increase participation overall and specifically among women and Spanish speakers. Methods: 37 interviews were conducted to assess patterns of use and perceptions around the primary services offered at the clinic. We utilized a purposive sample of 20 participants that included integrated care participants, non-participants, and English and Spanish-speakers. We also interviewed eight adults who participated in the formerly mentioned qualitative research study as well as nine staff members. An inductive thematic analysis was utilized. Results: Preliminary results indicate that consumers who have participated in the integrated care model, as well as those who have not, all expressed positive views regarding the services offered. Emphasis was also placed on convenience as well as trust within the mental health setting. Consumers commonly identified lack of knowledge about the implementation of integrated care as the main barrier to access, with recurring emphasis on

suggestions to increase awareness about the availability of these services. Spanish-speaking participants mention language as a possible contributing factor towards decreased participation. Staff members noted changes in clinic culture, while emphasizing the increase in access to primary care services among participating patients. Conclusions: Preliminary study findings suggest positive reception of the integrated primary care services. Study also highlights perceptions within a majority Latino, Spanish-speaking sample, which tend to be less represented in similar studies and which comprise the patient population among which we aim to increase participation in the reverse integration model. The results of this study are being utilized to design and implement an intervention in the WHCS clinic to address the barriers identified by participants and increase patient access to primary care services.

No. 22

Neuropsychiatric Manifestation of Covid-19: A Literature Review

Poster Presenter: Mehwish Hina, M.D.
Co-Authors: Tania Sultana, M.D., Asghar Hossain, M.D.

SUMMARY:
Coronavirus disease 2019 (COVID-19) has been declared by the World Health Organization(WHO) as a public health emergency on 30 January 2020 and a pandemic on 11 March 2020. It is caused by severe acute respiratory syndrome coronavirus (SARS-CoV-2) (1). It is an enveloped positive-sense single-stranded RNA virus that enters the host cell by binding to Angiotensin Converting Enzymes 2 receptors (ACE-2), which is found and expressed in many organs in the human body thought to be the reason of multi system involvement of SARS-CoV-2 including heart, lung, kidney, and brain tissue (2, 3). Fever, dry cough, fatigue, headache, pain, diarrhea, conjunctivitis, loss of taste or smell are the common symptoms of coronavirus disease 2019 listed by the World Health Organization (WHO) (4). Several case reports, case series, and observational studies have been described as the neuronal involvement and neuropsychiatric manifestations due to COVID-19, among them most commons are anosmia, ageusia, encephalopathy, stroke, TIA, seizure, delirium, insomnia, mood symptoms, anxiety disorder (5-9). In this selective review, the authors report the neuropsychiatry manifestation based on available evidence and possible pathophysiology related to the symptoms. The authors also emphasize mental health consequences in the general population and health care workers due to the COVID-19 pandemic. This review will help to understand the importance of long-term follow up of COVID-19 survivors, and also the importance of community-level intervention and preventative measures.

No. 23

Pandemic After Pandemic: The Effect of the Covid-19 Pandemic Induced Lockdown on Lifestyle and Behavior—a Global Survey

Poster Presenter: Aiman Tohid, M.D., M.P.H.
Co-Authors: Faiza Khan, M.D., Darakhshan Adam, M.D., M.B.B.S., Ahmad Rehan Khan, M.D., Kiran Khalid

SUMMARY:
Background: Due to the pandemic state, public health and governments have imposed lockdowns and restrictions worldwide, including physical distancing and isolation. While firm precautionary actions are essential to avoid infection, however, they can fundamentally change the lifestyle and behaviors of individuals. The purpose of this study is to look for the effects of the pandemic in daily life, in terms of social interaction and personal habits. Methods: We conducted a global cross-sectional study and distributed a questionnaire/survey on online platforms, social media groups, and phone apps. Our study investigated the impact of the COVID-19 pandemic on behavior and lifestyle changes among the global population aged?≥?16 years. The study consisted of a designed survey that included questions regarding demographic information (age, location, gender, marital status, etc.); changes in weight; changes in appetite, lifestyle habits (grocery shopping, sleep changes, etc.); changes in behavior (handshaking, excessive hand washing, cleaning, etc.); screen time; adoption of new hobbies, etc. Results: We received a total of 722 responses. 40.3% of people reported no change in sleep, and 31.6% reported decreased sleep since

the pandemic. 42.3% of people reported no difference in appetite, and 41.7% reported increased appetite. 69.9% reported increased bulk-buying or online shopping. 51% of people stated increased weight. 43.7% of people said that they would socialize less than before the pandemic, and 45.1% reported no change in socializing. 78.6% of people reported increased screen time. 54.5% of people reported excessive hand washing, wiping surfaces, and cleaning. 45.2% of people said that they had overcome the fear of contracting COVID with social distancing. 44.9% noted no change in relationships with family and friends due to COVID, and 30.8% noted it had been impacted negatively. 80.8% of people noted changes in behavior, including shaking hands, hugging, interacting with strangers, speaking with a mask on, visiting nearby family/friends. 47.3% of people reported adopting new hobbies like reading, writing, etc. 50.1% of people noted no change in meditation or spirituality, and 37.8% of people noted an increase in religious activities. Conclusions: The COVID-19 pandemic and isolation have resulted in increased screen time, reduced sleep, increased motivation to eat, perceived weight gain, increase in bulk-buying or online shopping, adoption of new hobbies, increase in meditation, and excessive hand washing/wiping surfaces/cleaning. There are changes in behavior in how people interact with others like shaking hands, hugging, speaking with a mask on, etc. People find social distancing beneficial in overcoming fear of contracting the infection. It also seems that relationships with family and friends have been impacted negatively. COVID-19 pandemic is ongoing, and our data needs to be complete and explored in more population studies.

No. 24

Patient-Centered Outcomes of a Student-Run Free Mental Health Clinic

Poster Presenter: Melissa P. Chan
Co-Authors: Kasra Zarei, Hope Kramer, Thad E. Abrams, M.D.

SUMMARY:

The Iowa City Free Mental Health Clinic (FMHC), created in 2006, is a student-run free clinic held twice monthly. Volunteer psychiatry residents, social work, pharmacy and medical students participate in this multidisciplinary model under the supervision of experienced mental health (MH) prescribers. To train student volunteers, senior medical students hold a series of didactic sessions. The objective of this work is to report on the FMHC patient-centered outcomes and educational benefits of the training model. Methods: Data was examined between July 2016 when an electronic medical record was initiated and March 2020. Selected variables reflect outcomes of current clinic practices and the state of mental health care in Iowa. Key variables abstracted included: demographics, self-reported insurance status, clinician-recorded diagnoses, clinic utilization, and medications. The patient-centered outcomes chosen are: 1) transition to insurance-supported MH care, 2) improvements in depression (PHQ-9); and, 3) improvements in anxiety (GAD-7). Secondary outcomes of the FMHC training model included: 1) volunteer participation in the training program, 2) mean participation in clinics per student by discipline; and, 3) students matching into a psychiatry residency. Results: 684 clinical encounters represented 237 patients with an average age of 37.8 (SD = 11.2) and a mean of 3.04 clinic visits per patient (median=2.00). 75% of patients had less than 4 visits. 55.6% of patients reported no insurance, and 61.2% reported being unemployed. Among 119 patients with multiple PHQ-9 scores, 33 (27.7%) reported improvement at least 50% or greater; similarly, 111 patients had multiple GAD-7 scores and 33 (29.7%) reported at least 50% or greater clinical improvement. No patient suicides were reported during the study period, but there was one patient suicide in August 2020. Roughly a third of the patients transitioned to established MH care (n=73), but nearly half (n=128) were unable to be tracked (54.0%). Currently n=36 (15.2%) are active in the clinic. Psychiatry resident volunteers (n=5) averaged 4.7 clinics. Student volunteering averaged 5.1, 5.5, and 6.0 clinics for the medical (n=286), pharmacy (n=80), and social work sciences (n=27). Of the 49 medical students who graduated from the Carver College of Medicine and matched into psychiatry or a related subspecialty, 30 had participated in the FMHC. Participation in the training program (relative to non-participants) resulted in an increase in average clinic attendance (4.4 to 6.1; p=0.013). Discussion: The Iowa City FMHC cares for a largely

uninsured and unemployed population of patients with depression and anxiety resulting in reasonable patient outcomes. Importantly, the clinic remains 100% volunteer based, relying on limited resources, and bridging patients into more stable MH care. Finally, the FMHC allows students to explore and solidify their interest in psychiatry.

No. 25

PHQ-2 Scores in Broward County's Homeless: Prevalence, Barriers, and Proposed Solutions to Mental Health Disparities

Poster Presenter: Jeena April Kar, D.O.

SUMMARY:

Introduction: This research study surveyed members of the homeless population in Broward County to investigate the utilization of healthcare and mental health resources and the accessibility of the target population to adequate care. The study was conducted to address mental health disparities in the homeless population by quantifying their need for evaluation and care and by further uncovering the barriers they face in accessing this care. A statistical analysis of the data collected including demographics concerning homelessness such as age and gender, as well as prevalence of mental illness, history of substance abuse and emergency department utilization allowed for further insight in offering appropriate solutions for the healthcare disparities observed. Florida ranks 9th in states with highest prevalence of mental illness among homeless individuals. The state also ranks 43rd of 52 states in providing adequate access for mental health concerns in homeless individuals.5,16 Methods: The Community Based Participatory Research model was employed while working with local volunteer organizations such as Project Downtown and Jubilee Center of South Broward. The participants completed an 18 question survey and standardized depression screening tool at three separate feeding sites in Broward County, on three independent dates, totaling 136 participants who met the inclusion criteria. Patient participation was encouraged with food and hygiene items. Results: 100% of participants surveyed had an income below $12,488, thereby falling in the Affordable Care Act (ACA) coverage gap. 66% stated "none" as insurance plan, 67% of this population screened positive for depression with the PHQ-2 questionnaire, while 57% acknowledged suffering from mental illness. Only 19% of individuals acknowledged going to the ER during mental health emergencies such as thoughts of suicide but 80% of this population had at least 1 ER visit within the year. Individuals who reported no to the question, In the past year, was there ever a time when you were prescribed a drug but were unable to get it, scored 1.23 points lower (95% CI: -0.33,-2.12) on the PHQ-2 than individuals who were able to get their medications. Individuals who admitted to history of binge drinking, use of illicit drugs and thoughts of suicide scored scored 1.21 points higher (95% CI: -0.14,-2.28) on the PHQ 2 than individuals who responded no. Discussion: The results of the PHQ-2 data collection screening tool suggests a majority of homeless individuals need further medical assessment concerning for depression. Based on the utilization of the ER, health care resource awareness is inadequately approached. Of the programs available, they are under utilized due to lack of awareness, accessibility and outreach. The analysis of data collected aims to encourage redistribution of funding and further advocate for resources available to this population.

No. 26

Prevalence of Depression Among the Transgender Population and Relationship of Socio-Demographic Factors With Depression

Poster Presenter: Usama Bin Bin Zubair, M.B.B.S.

SUMMARY:

Background: Depression has been one of the most commonly diagnosed mental health disorder in Pakistan. Census conducted by government of Pakistan in 2017 has shown that more than 10000 trans-genders live in Pakistan. HIV, illicit substance use and mental health issues including depression are the main health problems faced by this part of community. Trans-gender population has been suffering from depressive illness more than normal population all over the world. Aim: To assess the prevalence of depression among the transgender population and analyze the relationship of socio-demographic factors with depression. Study design: Cross-sectional study Place and duration of study:

Twin cities (RWP and Islamabad). 3 months Subjects and Methods: The sample population comprised of one hundred and forty two transgender people of Rawalpindi and Islamabad. Beck depressive inventory II (BDI-II) was used to record the presence and severity of the depressive symptoms. Depressive symptoms were categorized as mild, moderate and severe. Relationship of the age, smoking, family income, illicit substance use and education was studied with the presence of depressive symptoms among these transgender population of twin cities of Pakistan. Results: A total of 142 transgender people were included in the final analysis. Mean age of the study participants was 39.55 ± 6.18. Out of these, 45.1% had no depressive symptoms while 31.7% had mild, 12.7% had moderate and 10.6% had severe depressive symptomatology. After applying the binary logistic regression we found that presence of depressive symptoms had significant association with illicit substance use among the target population. Conclusion: This study showed a high prevalence of depressive symptoms among the transgender population of twin cities of Pakistan. Use of illicit substances like tobacco, cannabis, opiates and alcohol should be discouraged and those using these should be routinely screened for the presence of other mental health issues in order to timely diagnose and treat them. No financial disclosure or conflict of interest

No. 27
WITHDRAWN

No. 28
Symptomatology Changes of Adult Los Angeles County Mental Health Patients During Covid-19 Pandemic
Poster Presenter: Yeun Lim
Co-Authors: Christina Guest, M.D., Michael Couse, Elena Ortiz-Portillo, M.D.

SUMMARY:
In January 2020 the World Health Organization declared COVID-19 an international public health emergency. Since then, the number of cases have increased exponentially including in Los Angeles, CA. By 8/24/2020, the total number of confirmed cases in Los Angeles County was about 232,000, comprising 34% of the state's total cases. Although initial studies focused on medical complications, there is now mounting evidence suggesting a relationship between the pandemic and symptoms of post traumatic stress disorder, anxiety, and depression in the general population, particularly affecting some at risk populations. For example, a study in Italy found high rates of post-traumatic stress symptoms and anxiety in the general population 3 weeks into lockdown, with females and youth associated with higher risk (4). Furthermore, in their study of 1,210 Chinese residents in the 2 weeks that followed the outbreak in China, Wang et al found that women reported higher levels of anxiety, depression and stress. Wang et al also found that students suffered greater psychological distress. However, there are very few studies focusing on how the pandemic affects patients with preexisting mental illness. Based on our department's experience, our outpatient population in LA County has presented with more symptoms post-pandemic, but we do not have a clear picture of how much the pandemic has affected patients' mental health and what risk factors contribute to worse mental health symptoms. Therefore, in this poster, we aim to: Characterize post-pandemic symptom changes among existing adult and child LA County mental health patients in the resident clinic at UCLA Olive View. By using an online survey we will identify existing diagnosis, extent of changes in depression, anxiety, psychosis, mania, substance abuse, and PTSD.

No. 29
Worsening Depression, Anxiety and Insomnia Due to Overcorrection of Thyroid Medication in a Patient With History of Bipolar Disorder: A Case Report
Poster Presenter: Ivan Pagan Colon, M.D.
Lead Author: Jessica V. Kroin, M.D., M.S.
Co-Authors: Neha Bapatla, Kristy A. Fisher, M.D., Richard Callahan, M.D.

SUMMARY:
The patient is a 39 year old female, with history of newly diagnosed hypothyroidism, diabetes mellitus, bipolar I disorder, and alcohol use in early remission, who presented voluntarily due to progressive crying

spells for the past 4 days. The patient presented in an emotionally overwhelmed state, with inability to concentrate and reported recent history of weight loss, which she attributed to topiramate. The patient endorsed worsening depression, anxiety, and insomnia, with reported sleep of 2 hours per night for the past 4 nights. No recent stressors attributing to the change in mood could be identified. The patient reported a history of solely manic episodes, but upon presentation to the unit, she displayed behavior similar to a bipolar mixed episode. The patient denied racing thoughts, delusions, paranoia, and hallucinations. Upon further investigation, the patient reports recent changes in psychiatric and hypothyroid medication, with regular follow-up at an intensive outpatient therapy program (IOP). Due to her worsening symptoms, the patient was transferred from IOP to the inpatient psychiatric unit. The patient's home psychiatric medication included lithium 900mg qHS, clonazepam 0.5 daily prn daily, topiramate 50mg daily, and recent reduction of quetiapine from 100mg to 50mg due to reported weight gain. Urine toxicology was positive for cannabinoids. During a previous psychiatric hospitalization 1 month earlier, the patient was noted to have elevated TSH (10.30) and Free T3 (5.65) with normal FT4 levels and was diagnosed with hypothyroidism. At this time, the patient was initiated on Levothyroxine 100mcg, which was later decreased to 88mcg due to increased anxiety, palpitations, and jitteriness. During the present admission, TSH was noted to be very low (0.318). Endocrinology began following the patient, with suspicions of overcorrection of an initial subclinical hypothyroidism and attributed this as the cause of the alteration in her mood and sleep. The patient's LT4 was tapered down to 50mcg daily, with instructions to obtain a repeat TSH level in 4-6 weeks. On the unit, the patient underwent the following psychiatric medication adjustment: discontinuation of quetiapine and topiramate, increase in lithium to 300mg qdaily and 900qHS for mood stabilization, initiation of sertraline 50mg daily for mood and doxepin 25mg bedtime for sleep. After 4 days, the exhibited symptomatology on admission resolved and the patient was cleared for discharge and reinstatement back to IOP.

No. 30

Medical Neglect Secondary to Stigma of Mental Illness: A Case Series

Poster Presenter: Khaled Said, M.D.
Co-Authors: Sanjay Chandragiri, Casey Lenderman, D.O., Shevani Ganesh, Zackary G. Byard, D.O.

SUMMARY:
The term "stigma" may be defined as a feeling of shame and disgrace due to physical, mental or social characters. Stigma is associated with low self-esteem and depression.1 It may not be surprising that the stigma surrounding mental illness leads to higher rates of psychiatric emergencies.2 Stigma around mental illness has been a documented issue since the middle ages, and has resulted in societal discrimination against people with mental illness.3 The medical care field is one section of society where discrimination against people living with mental illness can be commonly found.3 Patients with a positive psychiatric history receives less medical care in comparison to the general population.3 Such discrimination leads to medical neglect and contributes to higher mortality rates of mentally ill patients when compared to the general population.4 In this case series, we present two cases of patients who needed higher level of care, which was delayed due to the stigma surrounding mental illness. The first case is of a 50-year-old female patient who was admitted to the hospital for Altered Mental Status (AMS) The patient was agitated, however, an urgent computed tomography (CT) scan of the brain was ordered not completed on admission. On the next day, the primary care team consulted psychiatry under the impression that the patient had AMS secondary to acute psychosis versus polypharmacy, because the patient had a history of bipolar disorder. CT was reordered by the psychiatry team with sedation, which showed a massive cerebral infarct that left the patient hemiplegic and aphasic. The second is a case of a 63-year-old patient who was admitted to the hospital as trauma alert. CT of the brain was done in the emergency department (ED), and showed new hypodense lesions in the cerebellum. However, the primary care team consulted psychiatry for a possible overdose, as the patient had a history of schizophrenia and alcohol use, before checking results of CT brain. The psychiatry team notified the

primary care team with findings from the CT brain and consulted the neurology team urgently. The neurology team ordered magnetic resonance imaging (MRI) of the brain, which showed bilateral frontal, parietal, and temporal lobe acutesub-acute infarcts. The patient was transferred to another facility for intervention; however, the patient ended up in the intensive care unit (ICU) and died later.

No. 31

Thyroid Storm Presenting as Delirium With Psychotic Features

Poster Presenter: Santiago Castaneda Ramirez, M.D.
Co-Authors: Raj Addepalli, Jason I. Koreen, M.D.

SUMMARY:
MJ is a 40 year old woman, single, unemployed, supported by supplemental security income, with no past psychiatry history, no history of inpatient admissions, with history of cannabis use, no previous history of self injurious behavior or suicidal attempt who was brought to the hospital by ambulance activated by family reporting that patient was not acting like herself and hallucinating. On initial evaluation, the patient was presenting with intense eye staring, mumbling, not coherent in her answers, disoriented in date and place, poor attention and awareness, hyperactive and appearing to respond to internal stimuli. Vital signs at the time of admission showed a temperature of 98.3 F, a heart rate of 147, and a blood pressure of 142/81. Physical exam showed a palpable thyroid. Collateral information obtained from her father revealed recent abnormal behavior that started a couple of weeks ago where patient was observed to be disorganized, having pressure speech, impulsive and aggressive behavior with family, racing thoughts and auditory and visual hallucinations hearing and seeing dead people. He denied any past psychiatry history. Basic labs were performed, with an unexpected TSH of <0.01 uIU/mL, T4 was done afterwards, which showed increased levels of 5.3 ng/dL, urine toxicology was only positive for cannabis. Endocrinology team was consulted, finding the patient to be in a thyroid storm based on Burch-Wartofsky Point scale which takes in account temperature, gastrointestinal, cardiovascular, CNS disturbance and the presence of precipitating event. Consequently, patient was treated with Methimazole, Propranolol and Hydrocortisone along with Haloperidol to treat her mood dysregulation and psychotic symptoms. During the course of 4 days, MJ was noticed to be calmer, cooperative, in good behavioral control, euthymic and more organised in thought process. Patient was oriented in person, time and place, with improvement of attention, fundamental knowledge, registration and memory. Patient admitted she was not acting like herself, unsure of what happened prior hospital admission. No objective signs of mania or psychosis were exhibited on the 4th day of hospital admission for which antipsychotics were discontinued. MJ was discharged after 7 days of hospital admission on Methimazole and Propranolol and with a Primary Care Physician follow up appointment. This case highlights the importance of a thorough medical workup and an interdisciplinary approach, in the treatment of psychiatric conditions due to medical conditions in an underserved community where in substance induced psychiatric disorders may be more prevalent and may mask symptoms from underlying medical conditions. Haloperidol may be an alternative agent in resolving psychotic features while medical conditions are treated.

No. 32

Social Media Use and Depression Among Adolescents: A Review of the Literature

Poster Presenter: Philip Wong, M.D.
Co-Authors: Anna J. Sheen, B.S., Chaden R. Noureddine

SUMMARY:
Social Media Use and Depression Among Adolescents: A Review of the Literature Background The ubiquity of social media, especially among teenagers and young adults, may not be as harmless as once thought. Research shows that five to eight times as many high school and undergraduate students are likely to suffer from depression than they were 50 years ago. As social media sites become more popular (especially in light of the COVID-19 pandemic), usage is expected only to continue rising. Physicians will need to navigate new ways in which to combat depression in the continually changing technological

age - but first, physicians must appreciate the negative mood implications associated with social media. In this review, we sought to better understand the current literature regarding the use of social media (specifically social networking sites) and depression among adolescents. Objectives describe what is considered social media (or social networking sites) appreciate some of the negative mood implications associated with social media use increase awareness of our limited understanding of social media use Methods A PubMed literature review was performed searching for social media, social networking sites, depression, and adolescent. We summarize the literature associated with the social media use (specifically social networking sites) and depression among adolescents. Results We included five full text-peer-reviewed articles for our literature review. Four of the five articles were able to establish statistically significant correlations between use of social media (or social networking sites) and negative mood changes or psychological distress, including but not limited to depression. Most of the articles address the limitation of establishing any causal relationship associated with use of social media (or social networking sites). Conclusions Due to the small number of studies and study design, limited conclusions could be drawn regarding use of social media (or social networking sites) and depression among adolescents. More research and clinical studies are needed to further our understanding of social media (specifically social networking sites) and depression among adolescents. Summary Poster presentation to highlight limited evidence base for use of social media (specifically social networking sites) and depression among adolescents.

No. 33
WITHDRAWN

No. 34
Diagnostic Criteria for Excited Delirium Syndrome: A Call for Inter-Specialty Consensus

Poster Presenter: Sophia Kiernan
Co-Authors: Julie Owen, M.D., M.B.A., Jessica Sachs, Sarah Elizabeth Slocum, M.D., John Owen, M.D., R.N.

SUMMARY:
Background: As deaths of individuals of color in the custody of law enforcement come to the forefront of conversations about justice in America, one medically-oriented term makes repeated appearances: “excited delirium.” Although implicated in both the cases of Elijah McClain and George Floyd, Excited Delirium Syndrome (ExDS) does not appear in the DSM-5, nor does it have consistent, inter-specialty consensus-based diagnostic criteria. Studies propose various lists of symptoms, many of which overlap with known diagnostic features of both PCP and stimulant intoxication. If ExDS is to be used in field/pre-hospital settings as a basis for administering medications or the applying physical force/restraint, then inter-specialty, consensus-based, delineated diagnostic criteria are necessary. **Methods**: A search of PubMed was performed for articles published in English between January 1, 1990 and August 30, 2020. Search terms used were “excited delirium.” Studies that defined symptoms or suggested diagnostic criteria for excited delirium were reviewed and compared. **Results**: Of the top five characteristics of ExDS, three of them overlap with the DSM-defined symptoms of PCP intoxication. Seven of the remaining thirteen demonstrate overlap with PCP intoxication, stimulant intoxication, or both. Overall, the described features of excited delirium seem generally subjective and not clearly clinically defined or distinguished from other defined syndromes. **Conclusion**: In order to provide safe, effective treatment, ExDS must be clearly defined by diagnostic criteria, and the diagnosis should be made by a trained medical professional. The symptoms must be well defined, measurable, and distinguishable from other mental status changes or causative illnesses. This will provide all medical disciplines, including Emergency Medical Services, with improved ability to diagnose and treat individuals safely and effectively.

No. 35
Getting Unstuck: The Potential of Billing Codes to Overcome Ambiguity in Psychiatric Diagnosis

Poster Presenter: Thomas James Kershaw, M.D.

SUMMARY:
When documenting an encounter with a patient, the ICD 10 CM code system is used in documenting the foci of the encounter and diagnoses/issues addressed. These codes are organized by general categories through a beginning letter with more numbers and letters added as they become more specific. These codes can have different lengths from between 3 to 7 characters depending on what modifiers are used to allow for easy communication of factors that affect an individual condition's needs. Different categories of pathology tend to have different amounts of available specifiers for each diagnosis. One such example is how the 2 character code for fracture of shoulder and upper arm (S42) can be expanded to a 3 character one to specify a fracture of the shaft of the humerus (S42.3) and up to a 6 character one for Greenstick fracture of shaft of humerus of the right arm (S42.311), which still leaves the possibility of adding one more character to specify whether it is the first encounter or if not how the fracture is healing. Due to the complexity of the human mind and behavior as well as the different combinations of signs and symptoms possible for each diagnosis in the DSM, Psychiatry would be expected to also have many such specifiers, but this is often not the case. The code for Borderline Personality Disorder, defined in DSM 5 as a diagnosis made by the presence of at least 5 of 9 criteria, is F60.2, but does not have any further specifiers that can be added on. This means that this one code has 256 different meanings just within the combinations of specific symptoms, many of which have far different management needs for the patients coded as if they were the same. One possible way to combat this is through utilizing R codes, which are codes given to specific signs, symptoms, or findings. Of more than 130 of said codes likely to be relevant for individuals with Psychiatric disorders, the DSM 5 currently lists 8. In this poster, we discuss how these codes can be effectively used and their potential positive impact on patient care and how those working in or with the field of Psychiatry think about mental illness.

No. 36

Substance Induced Psychotic Disorder in the Setting of Natural Supplement Use and Thyroid Disease: A Case Report

Poster Presenter: Ron M. Israel, D.O.
Lead Author: Jessica V. Kroin, M.D., M.S.
Co-Authors: Neha Bapatla, Ivan Pagan Colon, M.D., Kristy A. Fisher, M.D.

SUMMARY:
The patient is a 44 year old female, with past medical history of a thyroid nodule and no reported significant past psychiatric history, who presented involuntarily to the psychiatric inpatient unit due to bizarre and paranoid behavior. The patient presented with manic-like symptoms, including elevated mood, hyperverbal speech with tangential thought process and a flight of ideas. The patient also exhibited anxiety and paranoid delusions of "a girl I met keeps cutting my hair" and "she follows me everywhere" for the past 2 months. The patient endorses history of a thyroid nodule removal 7 years ago as well as a recent diagnosis of recurring thyroid nodule 5 months ago, for which the patient was advised to start medication. The patient reports self-medicating with a natural remedy known as the "Thyroid Energy Supplement," which contains Guggul extract [Commiphora mukul], Ashwagandha [Withania somnifera]) and algae, which the patient assumed to equate to the required levothyroxine recommended by her endocrinologist. Upon admission, the urine toxicology was negative, thyroid stimulating hormone (TSH) was significantly reduced (0.035), and thyroxine (T4) was within normal limits (1.02). Ultrasound (US) imaging was remarkable for multiple heterogeneous, isoechoic, and anechoic mixed solid and cystic nodules. Endocrinology was consulted with recommendations to immediately cease supplementation with the herbal remedy and to initiate 50mcg of LT4. The patient was instructed to obtain a repeat TSH level in 4-6 weeks with ongoing US surveillance of the thyroid in the outpatient setting. The patient was initiated on depakene for mood stabilization and risperidone for thought process. In this poster, we discuss a case of substance-induced psychotic disorder in the setting of natural supplementation in lieu of medication compliance in a patient with an underlying thyroid disease. This case depicts the

importance of ascertaining a thorough history and obtaining the appropriate thyroid status in patients with a suspected psychotic disorder. Additionally, it illustrates the significance of the consideration of hyper- or hypo- thyroidism within the differential diagnoses in suspected cases of new onset psychosis. Furthermore, this case illustrates the use of combination therapy, including levothyroxine, antipsychotics, and a mood stabilizer as the preferred option in such situations.

No. 37

Interrupting the School-to-Prison Pipeline

Poster Presenter: Amanie Salem, D.O., M.P.H.
Co-Authors: Ajay Nair, Alicia Barnes, D.O.

SUMMARY:

Background: In the 1990's, the "zero tolerance policy" was adopted to impose strict punishment for breaking a rule at school, regardless of extenuating circumstances. Originally, this policy was designed to handle serious offenses (specifically substance use), but it gradually broadened to include disruptive behaviors that might have been previously handled by school staff. Ultimately, the policy shifted the responsibility of school discipline from schools to the juvenile justice system, a phenomenon called "the school-to-prison pipeline." Methods: A review of literature was conducted using combinations of the terms "psychiatry," "mental health," "school," and "school-to-prison pipeline." Conclusion: Zero-tolerance policies have failed to improve school safety or student behavior and have also resulted in a disproportionate number of children with mental disorders ending up in the juvenile justice system. 14-20 perecent of children in the United States experience a mental health disorder with some level of functional impairment every year, with less than half receiving treatment or having access to appropriate mental health services. Ninety percent of students are in public schools that fail to meet professional mental health standards. The school-to-prison pipeline captures a large number of children with underlying (and often undiagnosed or misdiagnosed) mental health and substance use disorders. Nearly three-quarters of students with special education needs were suspended or expelled, and children with Autism Spectrum Disorder and co-morbid ADHD as well as students identified as having "emotional disturbance" had especially high rates of harsher discipline. Additionally, there has been a disproportionate tendency of minors and young adults from disadvantaged backgrounds to become incarcerated because of these harsh school and municipal policies. Black students represent 31 percent of school-related arrests and are three times more likely than white students to be suspended or expelled. Future directions should include discussions around universal pre-kindergarten, and models for change that include accelerating reform of the juvenile justice systems by using experiences of states and communities to help create sustainable, effective, and research-based reform models. Efforts include collaboration with schools, law enforcement, and behavioral health; training for staff (trauma disorders is key); availability of responders as an alternative to law environment; and revised school protocols to allow for mental health response for chlidren with behavioral symptoms.

No. 38

Psychiatric Disorders in Hispanic Populations at the U.S. Border Compared to Non-Border Hispanic Populations: A Literature Review

Poster Presenter: Alexander El Sehamy, M.D.
Co-Author: Michele Pato, M.D.

SUMMARY:

Background: The United States 2019 Census reveals that 18.5% of the population of the United States identifies as "Hispanic or Latino", the second most populous racial group after "White". This population faces multiple psychosocial stressors during the immigration process including detention, physical hardship, violence, acculturation, and discrimination. These traumatic experiences have been linked to increased rates of mental illness and substance use disorders. Some experts postulate that a close connection to familiar culture can be a mitigating factor for mental illness in Hispanics, yet it appears that the stress of acculturation (and possibly epigenetic factors) might also play a significant role. In a politically and culturally dynamic society, it is imperative that we understand the nuances

affecting this population in order to provide appropriate mental health care. **Methods**: A literature search was done in PubMed using these keywords (Hispanic, mental illness, psychiatric, DSM, border, depression, anxiety, PTSD, psychosis, substance use, alcohol). **Results**: Four studies were identified that compared groups of Mexican immigrants living on the border versus off the border. Review of the data suggests that alcohol use may be less harmful to the mental health of Mexican-American men than women, however, increased rates of alcohol abuse amongst men can lead to violence, drunk driving, and incarceration. **Conclusion**: This poster reveals the relatively sparse literature studying the prevalence of mood and substance use disorders across groups of Hispanics by geographic location. The review suggests that the association between alcohol use and depression amongst Mexican-Americans is nuanced and more research in this area is needed to inform clinical practice as issues of racism and discrimination continue to permeate our society.

No. 39

To Sulfate or Not to Sulfate: Is FeSO4 325mg the Ideal Choice for Anemia in Patients With Chronic Mental Illnesses?

Poster Presenter: Shuchi Khosla, M.D.

SUMMARY:

Iron deficiency is postulated as the most common cause of anemia in the US. An NIH manuscript describes the causes of Iron deficiency anemia in the US to include psychiatric illnesses among other causes, the correlation being that people with severe persistent mental illness are more likely to have dietary deficiency of Iron. With access to primary care often a problem for psychiatric patients, psychiatrists may want to treat co-morbid disorders like iron deficiency anemias. A Turkish cross sectional study concluded that the frequency of anemia is greater among patients with chronic mental illnesses as compared to the general population, with the largest percentage being among patients with psychotic disorders.A recent clinical trial demonstrated that dosages of elemental iron greater than 40 mg upregulates hepcidin production for 24 hours, paradoxically decreasing iron absorption.The results signify that the current gold standard of iron supplementation might not be optimized for efficacy. Mechanistically, ferrous sulfate results in the production of ferrous ions in the intestine generating reactive oxygen species causing DNA damage and GI mucosal destruction.Systematic reviews reveal that ferrous sulfate (even in a modified slow release form) causes significant GI distress in adults in all investigated population groups. The potential GI symptoms that ferrous sulfate can cause may make it difficult for patients to take their psychiatric medications increasing already high non-adherence rates. This increases challenges in the treatment of mental illnesses for the psychiatric provider.Alternate forms of iron supplementation have been researched. These include iron chelated to various amino acid and glycoprotein complexes. Ferrous Bis Glycinate, Ferrous gluconate and Ferrous succinate are among the most commonly available cost-effective options both within formularies and over the counter. Biochemically, it is postulated that chelation allows for slower release of ferrous ions, increasing absorption. Enhanced absorption decreases the amount of iron available for generation of reactive oxygen species. This could potentially result in less mucosal damage and improved tolerability when compared to ferrous sulfate. This theory has evidentiary support. In a comparative study, Ferrous gluconate and Ferrous succinate were both found to be better than Ferrous sulfate in improving RBC counts and hematocrit in iron deficient mice. A randomized control trial among Mexican children found iron bis-glycinate comparable to ferrous sulfate in increasing ferritin stores. A systematic review, demonstrated fewer adverse effects and improved tolerability of ferrous bis-glycinate, ferrous gluconate and ferrous succinate when compared to ferrous sulfate. There is potential for a more thorough evaluation of the alternate forms of iron supplementation. However, the existing research actively supports chelated iron compounds as potentially safe and efficacious.

No. 40

WITHDRAWN

No. 41
Jail-Based Competency Restoration Programs: Opportunity and Challenge in Unsettled Times
Poster Presenter: Denise Batuuka, M.D.

SUMMARY:
Jail-based competency restoration programs (JBCR) have been adapted by various states for a number of reasons. In 2016, states including Arizona, California, Colorado, Florida, Georgia, Louisiana, Tennessee, Texas, and Virginia had initiated these programs. State differences in eligibility criteria distinguish many of these programs, while the extent of services varies as well. Some states for example have JBCR for persons with less severe mental illness, while others provide full scale programs where individuals are jailed until they are either found competent or unrestorable. Others have partial programs where defendants are jailed while taking competency classes until they are placed in inpatient programs for more restoration of competency and/or for treatment for mental illness. Advantages of JBCR have been identified as improved and timely mental health care, reduction in malingering, reduction in court and jail time, reduction of time spent by the judicial system itself, and reduction in state costs for health care and referral to state hospitals. Opponents of these programs argue that JBCR programs are not focused on the wellbeing of the defendant, but rather on the purposes of the judicial system. One's psychiatric needs are secondary to the restoration of competence. Indeed, restoration could include involuntary medicines administration for that purpose. There are conflicting opinions on how the relevant landmark cases Washington v. Harper and Sell vs. United States can be applied to administer involuntary medication. Critics argue that jail is not a therapeutic environment for mental health care and likely increases victimization and deterioration of ill patients. Jails commonly offer fewer mental health services than hospitals or clinics. Overall, no consensus is available for the use of JBCR programs. Defendants with cognitive and mental health problems may best be diverted before arrest and prosecution especially when charges are minor. Most clients spend a significant amount of time in jail before transfer to a state hospital. Therefore, the expansion of mental health resources in jail appears intuitive. On the other hand, future initiatives are likely to expand mental health resources in the community, including more outpatient treatment rather than more psychiatric beds in state hospitals. This alternative could be more plausible especially now given the restrictions caused by the current COVID-19 pandemic whose virus is easily transmittable in closed spaces like jails and hospitals.

No. 42
Covid-19: The Pandemic's Effect on Sexual Behavior
Poster Presenter: Andrea Guerrero, M.D.
Co-Authors: Chun Man Tong, M.D., Ana Claudia Zacarkim Pinheiro dos Santos, M.D., Mary E. Kelleher, M.D.

SUMMARY:
Introduction: Coronavirus disease 2019 (COVID-19) is caused by the infection of severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) and has been responsible for more than 180.000 deaths in the US and more than 850.000 deaths worldwide. Many of the cases involved healthy individuals that were affected by a wide range of symptoms going from a common cold to serious complication like acute respiratory distress syndrome (ARDS) and fatal thrombotic events. Mental health experts have already weight in on how stress can negatively impact sexuality and quality of life. In this review, we aim to sumirize existing literature on the effect of COVID-19 pandemic on sexual behavior. Methods: A PubMed literature review was performed searching using "COVID-19" AND "sexuality" and related terms as keywords on available titles and abstracts. 131 results returned as of 9/2/2020. We summarize the literature associated with the effect of the COVID-19 pandemic on sexual behavior Results: A relatively large number of participants reported a significant reduction in alcohol-related sexual consequences and risky sexual behavior. Research hypothesized the stay-at-home order and increased parental supervision might be the cause. COVID-19 also caused disruption in reproductive health services such as prenatal and postnatal care, safe childbirth, safe abortion, contraception and the management of sexually transmitted infections. Interestingly, an Italian study showed that in a clinic for preventive health, the

visits were reduced by less than half and the most common chief complain shifted from symptoms of sexually transmitted disease (STD) to screening of STD. Masturbation has been reported to increase in some studies, and male sex workers were reported to have a decreased in number of clients.   Conclusion: The social and physical isolation caused by this world-wide virus has important effects on sexual behavior that are heterogeneous depending on the group studied. This must be taken into consideration when making recommendations on maintaining sexual health and addressing reproductive health deficits during this pandemic.

No. 43

Social, Supportive and Health Care Barriers in a Transgender Individual: A Case Report, Literature Review and NJ Resource Guide

Poster Presenter: Grace Sungun Ro, B.S.
Co-Author: Anna J. Sheen, B.S.

SUMMARY:

Background: The transgender population is one of the most underserved, vulnerable populations. The process of transitioning includes behavioral health evaluations, hormone therapy, and a yearlong span of living as the identified gender prior to permanent surgical procedures.1 This is a sensitive and critical period, requiring ample support and resources for success. Unfortunately, one in five transgender youth experiences homelessness.2 They face additional barriers upon leaving their home. According to the United States Transgender Survey (USTS) 2017 survey, 23% of respondents did not seek medical care due to fear of mistreatment as a transgender person.3 This case report presents a 19-year-old transgender female with a significant history of personal and social conflicts due to gender dysphoria. Specific barriers are explored and available resources in the greater New Jersey area are provided in the discussion section.   Case Presentation: This is a case study of a 19-year-old Hispanic transgender female with seizure disorder, tuberous sclerosis, bipolar 2 disorder and cluster B traits. She decided to transition from male to female at age 16 but lacked substantial support or resources to receive therapy sessions prior to hormone therapy. She reported that her family did not accept or support her sexual identity. The patient was brought to the psychiatric emergency department from a local homeless shelter for voicing obsessive thoughts to sexually assault a staff member out of frustration. She was involuntarily admitted to the inpatient psychiatric unit. Upon further discussion, the patient reported ongoing stressors such as unemployment, homelessness, loss of a solid support system and lack of insurance. During the hospitalization, a family meeting was arranged and a substance abuse counseling group was provided. The patient was encouraged to participate in group and supportive therapy. She was discharged to an LGBTQ-specialized homeless shelter and encouraged to attend outpatient therapy. She showed behavioral improvement and was agreeable with the plan.   Discussion: The transgender patient in this case report had significant medical and psychiatric issues, in addition to numerous social barriers that resulted in inadequate care and attention for gender dysphoria. A lack of financial and supportive stability can ultimately lead to difficulty establishing housing, occupation and autonomy. The U.S. government has begun to address these issues at the federal and state level, but it is crucial for the entire team including healthcare providers, researchers, policy makers and advocates to share their expertise to best provide for this underserved population.

No. 44

Charles Bonnet Syndrome and the Importance of Treating the Underlying Vision Problem of Macular Degeneration

Poster Presenter: Rachel Kossack, M.D.
Co-Authors: Rene Compean, M.D., Aminder Gill

SUMMARY:

Charles Bonnet Syndrome (CBS) is a condition that people suffer from when they lose some or all of their vision. The hallucinations are not associated with any hearing issues, any mental health problem or dementia. These hallucinations may be of simple repeated patterns of lines, dots or other geometric shapes and complex type that involves animals, insects, events, and people dressed in costume from earlier times or imaginary creatures like a dragon. Although CBS is not well understood, it is thought to be associated with the brain continuing to construe

images, even in their absence. Many underlying diseases such as macular degeneration are associated with CBS, and corrected vision in some diseases like cataracts may resolve the hallucinations in CBS. Here, in this case report, we are focusing on the importance of ophthalmological issues such as macular degeneration that may be related to visual hallucinations compared to some other possible mental illness such as acute or drug-induced psychosis and manic episode of bipolar disorder.

No. 45

Lewy Body Dementia, Atypical Presentation: A Case Presentation

Poster Presenter: Ghulam Sajjad Khan, M.D.
Co-Authors: Patrick Oczkos, M.D., Rajesh Gaddam, M.D.

SUMMARY:
Lewy Body Dementia (LBD) is the joint presentation of Dementia and Parkinson's Disease (PD). It can be challenging to diagnose a patient with LBD especially when the presentation can be extremely variable from person to person. Patients with LBD can present with a variety of abnormalities including cognitive, neuropsychiatric, sleep, motor and autonomic symptoms . Because of the high variability of the condition, it is important to be able to piece together the diagnosis before diagnosing separate entities. We present a patient who is a 91-year old male with a history of dementia and depression which seem to be two separate entities but are later tied together to become the diagnosis of Lewy Body Dementia. Later, we were able to connect all the pieces together to diagnosis the patient with LBD. Our patient was stabilized with Seroquel, Ativan, Depakote, and Haldol. He was eventually well enough to be discharged to a nursing home soon after. Case: Here we present the case of a 91-year-old Caucasian male suffering from depression and dementia. The patient was brought in due to physical aggression and agitation, The patient has a history of Major Neurocognitive Disorder and unspecified depressive disorder, which were diagnosed in 2018. These were the characteristics that were taken into account while making the determination of LBD.CT scan of the head and the Labs were negative for any brain injury or concussion at that time. For the past 6 weeks the patient had been demonstrating irritable behavior, verbal aggression and experiencing visual hallucinations. connect the visual hallucinations along with the dementia problems is vital to suggest at the diagnosis of LBD. The patient was diagnosed with Lewy Body dementia. A confirmatory test for this disorder is a brain biopsy, which is rarely performed due to its invasive nature. In this case, a brain biopsy was not performed. The clinical diagnosis was made via clinical presentation. His regular medications Donepezil for his dementia and fluoxetine for his depression were continued. Conclusion: cases of LBD are diagnosed with clinical presentation. Another captivating feature in our case was the clinical presentation of the patient. He was diagnosed with dementia 7 years ago and was now having visual hallucinations. LBD typically presents with early visual hallucinations and gait problems, and later with more pronounced dementia, whereas our patient was diagnosed with dementia first which was followed by visual hallucinations, which was unique.

No. 46

Indications for Ketamine to Mitigate Suicidal Ideation and Depression in the Submarine Force While Underway

Poster Presenter: Gina Bertinette Capalbo, D.O.

SUMMARY:
Submarines are a division of the United States Navy undersea warfare community providing intel, detection of mines and foreign vessels, and protection of surface vessels and land supports. This is a community that prides itself on being undetected, the silent service, and can realistically spend months subsurface with the only rate-limiting factor being food. Subsurface times means minimal interactions with outside entities, long shift hours, no natural sunlight, and close confined spaces. Therefore, it is no surprise that mental health issues, especially depression, play a significant role in the submarine community. Major Depressive Disorder and suicidal ideation are not only devastating to the submarine community morale, but have severe consequences underway. The major consequence is a Medical Evacuations (MEDAVAC) or Brief Stop for

Personnel/Provisions (BSO) that can compromise the safety of the individual and crew, jeopardize the mission, is expensive, and results in loss of staffing. Currently, there is no fast-acting treatment that can be employed underway to mitigate suicidal ideation and depressive symptoms. Ketamine has attracted extensive spotlight as a potential rapid-acting anti-depressant. This poster will propose a novel idea of administering Ketamine to depressed and suicidal submariners while underway. The application of Ketamine in the submarine fleet may allow for a delay in MEDEVAC/ BSP, reduce necessity for one-to-one watch, and return the individual back to duty while underway with stability of symptoms. This poster will also highlight potential adverse consequences and ways the fleet can mitigate these outcomes.

No. 47

Antipsychotics, Dysphagia, Aspiration Pneumonia, Bowel Obstruction and Related Surgeries in Adults With Severe Developmental Disabilities

Poster Presenter: Jessica Hellings, M.D.
Co-Authors: Saras C. Singh, Sham Singh, M.D.

SUMMARY:

Background: Dysphagia, aspiration pneumonia and bowel obstruction are serious side effects of antipsychotic medications. The FDA recently increased warnings for clozapine producing constipation and bowel obstruction, however both typical and atypical antipsychotics can produce such problems, especially in high doses. Individuals with severe developmental disabilities including cerebral palsy or minimally verbal status appear more prone to such side effects, but published information is sparse. **Methods**: We extracted cases from our IRB-approved Neuropsychiatry Clinical Database with a history of dysphagia, aspiration pneumonia and/or bowel obstruction. Data extracted includes age, race, gender, intellectual disability (ID) level, minimally verbal status, history of dysphagia/aspiration pneumonia/ bowel obstruction/surgeries for these including ostomy placement and feeding details. Antipsychotic medications and dosing were extracted from time of presentation and following any dosing reductions, and outcomes of such problems and feeding improvements. **Results**: Thirteen adults met symptom inclusion criteria: 7 males, 6 females. Median age was 59 years, range 29-69 years, all but 2 were < 65 years. Two were African American and 11 Caucasian. One had borderline intellectual functioning and spastic quadriplegia; ID was moderate in 1, severe in 7, and profound in 4. All but 4 were minimally verbal. Nine of 13 (69.2%) had dysphagia, of which 8 had a history of aspiration pneumonia (61.5%). Five of 13 (38.5%) had a bowel obstruction history. Of the 13 cases, 7 (53.8%) had prior surgery for bowel resections/ ostomy placement. All 13 received moderate or high dose antipsychotics: olanzapine in 4: 40mg, 40 mg, 30mg and 25mg daily; clozapine in 3: 750mg (plus paroxetine 20mg), 400mg and 375mg daily; quetiapine in 3: 800mg (plus paroxetine 30mg), 600mg, 400mg daily; and risperidone in 1: 8 mg daily. Two received olanzapine plus a selective serotonin reuptake inhibitor (SSRI) inhibiting CYP2D6, increasing antipsychotic dose: olanzapine 10mg and fluoxetine 80mg daily; olanzapine 20mg and sertraline 150mg daily. Some cases in whom the antipsychotic and/or SSRI was tapered down gradually had improved swallowing on repeat video swallow and restoration of normal feeding or less thickened liquids (n=2) or G-tube removal (n=1). In other cases, guardians were not willing for medications to be tapered. In one case the subject described fear of eating again. **Conclusions**: Individuals with severe developmental disabilities including those with cerebral palsy or who are minimally verbal receiving high dose antipsychotics are prone to dysphagia, aspiration pneumonia, bowel obstruction and surgeries including at a young age. Subsequent parenteral feeding removes pleasure of eating and drinking normally. Gradual taper of such medications, including of any CYP2D6-inhibiting SSRIs may improve normal feeding outcomes. High doses of antipsychotics should be avoided in such individuals.

No. 48
WITHDRAWN

No. 49
WITHDRAWN

No. 50

Interventions for Building Community Readiness to Prevent Negative Mental Health Outcomes in Youth: A Systematic Review

Poster Presenter: Sara Elizabeth Jones
Co-Authors: Arthur De Oliveira Correa, Eric C. Brown, Ph.D.

SUMMARY:

Background: Community readiness is a term used to describe a community's knowledge of a given issue, perceived ownership of that issue, commitment to improving that issue, and the availability of resources to take action regarding the issue. A high level of community readiness is essential to the success of community-based preventive interventions. Accordingly, we undertook this systematic review in order to better understand what interventions are in use for increasing a community's readiness to prevent negative mental health outcomes in youth. Methods: Searches were conducted in PubMed and EBSCOHost. Studies were included that focused on prevention, targeted mental health outcomes in children and youth (0-24 years) and intervened on community readiness. The prevention of youth substance use and misuse was considered a mental health intervention due to the well-documented relationship between early age of first substance use and increased risk of developing a substance use disorder. Data were extracted and reconciled by the first and second authors. Results: This process yielded 15 studies utilizing 12 different interventions. The majority of studies focused on the prevention of youth substance misuse, but 2 studies focused specifically on preventing youth suicide. The most commonly utilized intervention was Communities That Care (CTC). Only 1 study specifically sought to increase readiness amongst community youth, while the other studies focused on increasing readiness amongst adult stakeholders. Efforts employed in the examined interventions included increasing community awareness of an issue, improving collaboration between community sectors, training community leaders, and enhancing the professional capacity of mental health providers to address youth issues. Conclusions: Our results indicate that there are a variety of interventions available for community psychiatrists to help build community readiness to prevent negative mental health outcomes in youth. The available interventions are focused on substance misuse and suicide, which indicates that there may be a need for the development of interventions to increase community readiness to prevent other mental health outcomes, such as eating disorders and anxiety disorders.

No. 51

Successful Clozapine Treatment of Vocal Tics in a Schizophrenic Patient

Poster Presenter: Gulshan Begum, M.D.
Co-Authors: Stanley O. Nkemjika, M.D., M.P.H., Pradilka N. Drunalini Perera, M.D., Olaniyi Olayinka, M.D., M.P.H., Tolu Olupona, M.D.

SUMMARY:

Typical and atypical antipsychotics have been documented in literature as the most effective pharmacological treatment for tics thus far. Additionally, evidence in literature has shown that typical and atypical antipsychotics are effective for the treatment of tic disorders in patients who are diagnosed with schizophrenia and other psychiatric illnesses. Risperidone, Aripiprazole, and Olanzapine, and have been documented as being effective for motor tics, particularly in Tourette syndrome. However, antipsychotic agents such as Quetiapine, Aripiprazole and Olanzapine have been documented in research findings to induce tic-like symptoms. Despite the level of evidence with regards to antipsychotics, there is no published literature on Clozapine-based treatment for persistent vocal tics in schizophrenia. Rather, most published studies have demonstrated the anti-aggressive properties of Clozapine in schizophrenia. Additionally, persistent vocal tics and other specified tic disorders based on DSM 5 in a patient with schizophrenia and the responsiveness to antipsychotics have rarely been studied. Hence, we present a case of an adult-onset persistent vocal tics in a schizophrenic patient without prior personal and family history of Tic disorder who presented to our emergency department with the symptoms of repetitive loud vocalization which mimicked bark like sound. The patient was also noted to have agitation and aggression. The patient was started on Risperidone oral treatment and subsequently Invega

Sustena. Patient showed no improvement with his vocal tics and showed minimal improvement of psychotic symptoms. Subsequently treatment was augmented with Clozapine titration protocol. Patient's tic symptoms showed excellent response to Clozapine augmentation therapy. Patient's vocal tics, aggression and impulsivity were well controlled with gradual titration of Clozapine over about 4 weeks of hospital stay. Patient was treated successfully with Risperidone, augmented with Clozapine. He was symptom-free, well-functioning, and ready for discharge to the community with this treatment regimen. We suggest that Clozapine augmentation therapy as a possible treatment of a persistent vocal tics, other specified tic disorder, in schizophrenic patients who are refractory to atypical antipsychotic such as Risperidone.

No. 52

The Impact of Long Acting Injectable Antipsychotics on Rates of Rehospitalization in Schizophrenia Patients, When Compared to Oral Antipsychotics

Poster Presenter: Neil Mehta
Co-Authors: Adam Goldenberg, M.D., Mousa Botros, M.D.

SUMMARY:

Background: Antipsychotic medications are the mainstay of treatment for Schizophrenia, a severe and chronic psychiatric illness with an associated course of remissions and relapses of symptoms. Long Acting Injectable (LAI) antipsychotics remain an attractive choice among clinicians for use in patients with a history of non-adherence to oral antipsychotics. However, it remains a challenge to compare the rehospitalization rates (RHR) of schizophrenia patients on LAI antipsychotics versus patients on oral antipsychotics due to the lack of well-centralized data. Methods: We reviewed studies on the six LAI antipsychotics used within the United States and their impact on rehospitalization rates in schizophrenia patients when compared to oral antipsychotics. Results: A retrospective cohort study on 3,768 Medicaid patients found those receiving paliperidone LAI had significantly reduced RHR compared to patients on oral antipsychotics (AOR = 0.53, 95% CI = 0.30-0.94, p = 0.031). This study noticed no significant reduction in RHR of patients using first generation LAI antipsychotics vs. oral antipsychotics. A Taiwanese cohort study of 14,610 patients examined one-year RHR of schizophrenia patients and found haloperidol LAI reduced RHR compared to oral haloperidol (22.5% vs 26.5% RHR). A Finnish cohort study of 62,250 patients found that FGA LAIs decreased RHR by 21% compared to FGA orals (46% vs. 67% RHR). SGA LAIs decreased RHR by 12% respectively when compared to oral SGA medications (45% vs. 57% RHR). A randomized trial of 369 schizophrenia patients in the Veteran Affair's system compared LAI risperidone vs. oral antipsychotic medications. This study found no significant difference in RHR between the groups and even noted adverse events with LAI risperidone compared to oral medications. An open-label, mirror-image study assessed RHR of patients switched from oral antipsychotic treatments to once-monthly aripiprazole 400mg LAI. This study found a significant reduction in RHR using aripiprazole LAI vs. oral antipsychotics at both a three month period (2.7% LAI vs. 27.1% oral RHR, $p < 0.0001$) and six-month period (8.8% LAI vs. 38.1% oral RHR, $p < 0.0001$). Conclusion: Our literature review demonstrates evidence of comparable or decreased rehospitalization rates (RHR) with LAI antipsychotics compared to oral antipsychotics. Different study designs yield discrepancies in data on RHR, with some showing positive benefits while others note no significant difference. In our review, we will highlight the benefits of LAIs and address the inconsistencies between study designs and results, including the lack of randomized controlled trials and potential confounding factors. Future studies are needed to better assess the efficacy of LAI antipsychotics on reducing RHR. LAI antipsychotics are at the very least equivalent or superior to their oral counterparts in reducing rehospitalization rates and remain an ideal option for patients with schizophrenia.

No. 53

Therapeutic Potential of CBD in Schizophrenia

Poster Presenter: Katherine Woo, M.D.
Co-Author: Steven Gunther

SUMMARY:
BACKGROUND: Cannabis use is common among schizophrenics. Studies suggest cannabis use increases risk of psychosis among the vulnerable and worsens outcomes of schizophrenia. The "self-medication" hypothesis proposes that schizophrenics may use cannabis to mitigate symptoms of their disease, particularly anxiety, social isolation, and amotivation (Awad & Vorugati, 2015). Current treatment, the "antipsychotics," do not effectively treat the negative symptoms and cognitive impairments associated with schizophrenia. Unlike THC, CBD is a major component of cannabis that does not have psychoactive properties, acting as a partial agonist of cannabinoid receptors with low affinity (Manseau & Goff, 2015). METHODS: This literature review assesses the therapeutic potential of CBD for schizophrenia. Several search engines including PubMed, Google Scholar, ScienceDirect were used for this literature review. Articles in this review included randomized control trials and systematic reviews. RESULTS: Prior studies have shown that CBD counteracts the effects of THC, reducing positive psychotic symptoms as well as attenuating memory impairments and paranoia (Englund et al., 2013). CBD also exhibits neuroprotective/anti-inflammatory effects (Hermann & Schneider, 2012). Chronic cannabis use likely causes neurotoxicity in the prefrontal cortex, measured by lower levels of N-acetylaspartic acid in the brain (Herman et al., 2007). However, cannabis users who used cannabis containing higher CBD:THC ratios had greater levels of N-acetylaspartic acid in the putamen/globus pallidus region as well as larger hippocampal volumes (Herman & Schneider, 2012). A double-blind crossover study comparing CBD vs. placebo in healthy subjects with ketamine induced psychosis observed reduction in symptoms in the CBD group, particularly de-personalization (Hallak et al., 2011). A double-blind RCT comparing effects of CBD vs. the antipsychotic amisulpride in acute schizophrenic psychosis saw reduction in positive and negative symptoms in both groups; the CBD group had less EPS, weight gain, and prolactin elevation (Leweke et al., 2012). The study also observed increased anandamide levels in the CBD group, which inversely correlate with severity of psychosis (Leweke et al., 2012). Another double-blind RCT observed reduction in symptom severity in CBD as augmentative therapy to an antipsychotic (McGuire et al., 2018). CONCLUSION: Current literature sheds positive outlook on potential therapeutic use of CBD for treatment of schizophrenia by targeting both positive and negative symptoms as well as exhibiting anti-inflammatory/neuroprotective properties. It is generally well tolerated, without the adverse side effects of antipsychotics. Despite the deleterious effects of cannabis use in schizophrenia, further investigation of the therapeutic potential of CBD is warranted.

No. 54
A Review of 24,892 Psychiatric Provider's Online Patient Reviews
Poster Presenter: Nicholas Stavros Shaffer
Co-Author: Nikhil Dhawan, M.D.

SUMMARY:
Background: Online physician rating websites are an increasingly popular medium for patients to provide reviews and feedback, as well as obtain information about physicians. There have been few studies on what factors significantly impact psychiatrist ratings. The aim of this study is to analyze various dimensions on Healthgrades.com, a popular healthcare provider rating database, to determine what factors correlate with average psychiatric provider ratings in order to improve patient satisfaction. Methods: Data were collected on 24,892 psychiatric providers using Healthgrades and US census statistics. Factors such as medical degree, wait times, gender, age, ethnicity, years practiced, and malpractice, among others, were compared to online ratings using Pearson correlation and ANOVA analysis. Results: Longer wait times were associated with the strongest negative correlation on physician rating (pc = -0.519, $p<0.01$). Additional variables suggested a weaker relationship to provider Healthgrades rating. A small negative correlation was found in providers with common last names among self-identified Asians (pc = -0.095, $p<0.01$). Conclusion: This study suggests patients perceive longer wait times as the largest contributing factor when rating their psychiatrist online. Surprisingly, no significance was found when examining other physician factors such as ethnicity, gender, or age.

These data suggest patients do not value these factors as strongly when finding or rating their mental health providers. Further study is needed to determine what factors influence foreign graduate ratings and mid-level providers over US medical graduates.

No. 55

Remaining Connected: Electronic Survey and Virtual Interventions for Quality Improvement in La County Mental Health Center During Covid-19 Pandemic

Poster Presenter: Christina Guest, M.D.
Co-Authors: Elena Ortiz-Portillo, M.D., Michael Couse, Yeun Lim

SUMMARY:
Ms. D is a 25 year old Hispanic female with a recent diagnosis of Bipolar type I. Her first manic episode occurred right before her graduation from college, which is now, unfortunately, a blur of a memory in between two psychiatric hospitalizations. Ms. D has continued to struggle with her new diagnosis and how this will affect her life. Part of Ms. D's way of coping with this new diagnosis was participating in groups, spending time with her support system,and engaging in the mental health community to learn more about her diagnosis. Once the stay at home orders went in place during the COVID-19 pandemic, Ms. D became more depressed and lonely. The sudden loss of social encounters and support, as well as continued therapeutic activities, such as groups within the clinic, was difficult for Ms. D's processing of this new diagnosis. As illustrated in this brief case, the social distancing restrictions in place from the COVID-19 pandemic, albeit public health necessities, have resulted in some negative impacts in patient's mental health. Some of the most prominent mental health outcomes due to the pandemic have been increase in fear, anxiety and panic (Mukhtar, S.), but there has also been an increase in depression, isolation and risk of suicide (Sher, L.). These concerns regarding the mental health impact of the COVID-19 pandemic and its many restrictions, in particular isolation/quarantining, in the general population will require interventions to address psychosocial needs (Torales, et.al), especially among those with pre-existing mental illness, healthcare workers and those who have survived COVID-19 (Sher, L.). This poster includes a review of the literature on the mental health impact of the COVID-19 pandemic, followed by a description and discussion of ways to incorporate quality improvement projects within a mental health clinic to adjust care to be compliant with the new restrictions of the COVID-19 pandemic's social distancing requirements. In efforts to remain compliant with the social distancing guidelines we utilized an electronic survey to send to patients via text message. We evaluated current symptomatology, barriers and benefits of transitioning to telepsychiatry and patient preferences for opportunities for improvement within the clinic. Specifically, this survey has a focus on ways to transition groups, psychoeducation and further patient support to be socially distanced and/or digital. Additionally, this poster reviews how to incorporate quality improvement in patient care during a period of transition, such as the COVID-19 pandemic, as well as some examples of innovative ways to provide treatment and support in a socially distanced fashion.

No. 56

Meditate the Jitters Away! Using Patanjali Yoga to Manage Stress and Anxiety

Poster Presenter: Shuchi Khosla, M.D.
Co-Author: John Alexander Baker, M.D.

SUMMARY:
Studies have shown that immigrants from Asia, Latin America, and Africa use mental health services at lower rates than nonimmigrants, despite an equal or greater need. Despite increased risks for mental health problems, East Asian immigrant women have the lowest overall service-utilization rates of any cultural group in the United States. The major factors associated with underutilization of mental health services among immigrant populations are postulated to be cultural and religious.There have been many attempts over the years to address the socio-cultural barriers to psychiatric diagnoses and care. There is need to develop culturally acceptable educational materials to psycho educate immigrant populations. A workshop on Using Patanjali Yog to Manage stress and anxiety presented at Arya Mahasammelan 2019, a yoga and meditation conference is one such intervention.Statistically,

millennials are currently the most anxious and stressed generation globally to date. As one traverses their way through the ashrams of life, each brings forth its own challenges. From Brahmacharya to Vanprasth, increased worldly involvement results inevitably in increased stress. Work, relationships, finances, politics and academics are some of the most frequently cited stressors. From a mental health perspective, chronic stress drives many psychiatric disorders, particularly anxiety and depression. Stress management is unequivocally the most urgent global health need of our times. The workshop focussed on understanding anxiety. This included an overview of what anxiety looks like, factors that contribute to it and the mechanisms by which it causes impairment in functioning. Among the many tools that have been developed for management of anxiety, mindfulness has the most promising body of research. As Maharishi Dayanand Saraswati voiced, looking towards the Vedas to help shape the future is not a novel idea. It is with this purpose that we took another look at Yog at its inception, the principles of Patanjali Yog Sutras through the lens of mindfulness. Examined the construct of each of the four padas (Samadhi, Sadhan, Vibhuti and Kevalya). Looked at all the components of Ashtanga Patanjali Yog- Yam, Niyam, Asan, Pranayam, Pratyahar, Dharna, Dhyan and Samadhi. The workshop intended to teach, demonstrate and practice with the audience how to use mindfulness focused yogic practice to "still the mind". Empowering the audience to use this practice for prevention and management of their own anxiety and stress and to use it to help others. As we continued our journey towards "Krunvanto Vishwam Aryam"

No. 57

Adapting the Student-Run Clinic Model to Help Address LGBTQ Mental Health Disparities in New York City

Poster Presenter: Constance Zhou
Co-Authors: Matthew Wickersham, Jessica Spellun, M.D., Jessica Zonana, M.D.

SUMMARY:

The Weill Cornell Medicine (WCM) Wellness?Qlinic?is a free, student-run mental health clinic serving the LGBTQ population of New York City, regardless of insurance status.?Studies show that LGBT populations disproportionately endure more health disparities than their heterosexual peers, including increased rates of depression, anxiety, suicidality and substance use (1,2,3). Culturally responsive care, including the use of preferred pronouns and limiting assumptions about patients' gender and sexual orientation, still need to be integrated into the daily practice of medical students, residents, and attending physicians. However, despite increasing evidence and awareness of these issues, patients continue to report negative experiences with providers that discourage them from seeking care (4,5), thus contributing to worse mental health outcomes. The WCM Wellness?Qlinic?aims to address these concerns by providing culturally responsive, LGBTQ-specific mental health care in an affirming environment for all patients identifying as LGBTQ, while also creating a clinical training site for mental health care providers from multiple disciplines. The clinic currently offers individual therapy, medication management, and DBT-based group therapy to its patients. The WCM Wellness?Qlinic?continues to expand its current capacity by increasing its volunteer workforce, adapting its workflow, and developing new clinical programming in order to better serve its unique patient population.

No. 58

Empowering High School Students to Design, Administer, and Evaluate a Mental Health Survey for Youth

Poster Presenter: Phillip Yang, M.A.
Co-Authors: Bridget Sumner, B.S., Jake Neill, Jennifer Todd, J.D., R.N., Kristen Plastino, M.D.

SUMMARY:

Background: Every year, nearly 1 in 5 adolescents in the United States experience a severe mental health disorder. The impacts of mental illness are severe, with suicide recently becoming the second leading cause of death for those 10-24 years of age. Community-engaged research is impactful as it empowers individuals within a community to engage in the research process. Notably, in an underserved neighborhood in Los Angeles, depression metrics

within the community were significantly reduced by promoting community conversations, integrating community ideas into research, and paying the community for their work. However, community-engaged research projects are limited, especially among youth populations. In this study, high school students are empowered as young investigators to design, administer, and evaluate a mental health survey for youth. Methods: Nineteen high school students were recruited from the UT Teen Health Youth Leadership Council (YLC), an organization for high schoolers. The young investigators represent 10 high schools across San Antonio, TX. Throughout 8 meetings over 3 months, the young investigators designed the mental health survey and administration protocol. The principal investigator and a research staff member designed structured meetings to encourage discussion and empower student voice. Prior to each meeting, the young investigators engaged in prework to prepare for the discussions. The meetings started with a project overview, teambuilding, and an introduction to research and mental health. Next, the research team designed and revised the survey objectives and questions over the span of 6 meetings. In the last meeting, the research team designed the survey administration protocol for their respective high schools. Additionally, a Community Advisory Board composed of three adolescent mental health professionals from the community provided guidance and survey feedback. By the end of 2020, the surveys will be administered in 10 high schools. By March of 2021, the survey data will be analyzed and disseminated. Results: In the first survey draft, the young investigators designed 28 survey objectives with 236 questions. The five objectives most frequently chosen were: 1. Physical Health, 2. Parent Background, 3. Environment, 4. School Performance, and 5. Sexuality. The final survey has 20 objectives with 148 questions. Through focus groups, the survey has been projected to take 20-35 minutes to complete. Conclusion: The community-engaged research method promotes equity in community voice by empowering high school age young investigators to utilize their interest into the scientific process. Importantly, the youth voice speaks to the current and unique challenges concerning youth mental health, especially in 2020 with the impacts of COVID-19. The young investigators are educated as leaders and scientists while positively impacting their communities. This project is supported by the Institute for Integration of Medicine & Science.

No. 59

"The Voices Stopped but I Gained Weight!": A Retrospective Study Looking at the Impact of Atypical Antipsychotics on Cardiometabolic Markers

Poster Presenter: Arun George Prasad, M.D.
Co-Authors: Ingrid Haza, M.D., Nicholas Jose Dumlao, M.D.

SUMMARY:

Introduction: Notable side effects of second-antipsychotic medications include increased risk of weight gain, elevation in lipid values, and increased insulin resistance, leading to increased susceptibility to diabetes. These risk factors in patients with psychotic disorders have increased cardiovascular mortality as well as reduced life expectancy. Our community mental health clinic is located in an underserved urban community and has a census of over 3300 patients. Roughly 50% of our patients are prescribed at least one antipsychotic medication. A resident run performance improvement project was initiated at the hospital to ensure annual monitoring of cardiometabolic factors. This is utilized on the Electronic Metabolic Records (EMR) by placing a hard stop where providers cannot proceed with further prescriptions till values have been entered. Our study intends to look at the differential impact of atypical antipsychotics on the cardiometabolic profile of patients following up at our clinic. Materials and Methods: A performance initiative project targeting cardiometabolic monitoring began in 2013 in our hospital. A retrospective chart review was carried out to collect baseline data of cardiometabolic markers (average BMI, HbA1C, fasting glucose, lipid panel values) in 2018 and again collected in 2019. Data was collected on Excel and was analysed with statistical software. IRB Approval was obtained Results: Multiple patients were found to have elevated cardiometabolic markers. Patients on Quetiapine and Olanzapine were found to have higher elevations in cardiometabolic markers than other antipsychotics. Conversely some

antipsychotics were found to have lowered the cardiometabolic markers after a year. Discussion: This study looked at the impact of antipsychotics on cardiometabolic markers. Some patients who were on Quietiapine or Olanzapine were switched to other medications and were noted to have an improvement in the markers. Further research on a longitudinal timeline may reveal further insights into the impact of second generation antipsychotics on the cardiometabolic profile of patients.

No. 60

The Shortcomings in AOT in Adeqautely Treating Patients With Severe Mental Illness

Poster Presenter: Zaki Ahmad, M.D.

SUMMARY:

Background: Patients with Severe mental illness (SMI) are prone to non-compliance with their treatment in the community and can therefore, engage in violent or criminal behavior which can subsequently endanger not only their life but also that of others. In order to ensure the psychiatric pts.' adherence with treatment in the community after their discharge from inpatient psychiatric unit, "Kendra's Law" was passed in the state of New York, under which courts can mandate pts. to outpatient psychiatric treatment with or without their will. Such outpatient commitment has shown a reduced risk of arrest in people with mental illness (1) and has the dual benefit of preserving individual liberties in the light of mandated treatment (2). Similarly, pts. with SMI are prone to non-compliance with their treatment. Long-acting injectable (LAIs) were developed in an effort to guarantee delivery of prescribed medication thereby improving treatment outcomes and reducing the risk of relapse due to non-compliance (3). Case: Pt. is a 40 year old African-Hispanic man, single, domiciled, living by himself, currently unemployed, with a psychiatric history of Schizophrenia and cocaine, alcohol and cannabis use d/o, with multiple psychiatric hospitalizations, currently on AOT, and no significant medical history, who follows up at the psychiatric OPD. He is only on Invega 6mg PO QDay which he is very unlikely to be regularly taking based on his mother's and care coordinator's report, persistence of his psychotic symptoms, his insistence on reducing the dose and rejecting his mental diagnosis. He used to be on Invega sustenna inj. for a brief time but got himself off of it and is now not willing to restart the monthly inj. His non-compliance with oral meds and the need for a LAI has been conveyed numerous times to his AOT team but to no avail. Pt.'s mother has been complaining about his aggression in the community towards her, other family and people on the street and in the neighborhood. He remains hostile, paranoid, irritable and aggressive. Discussion: AOT mandates pts. to follow up with outpatient psychiatrists and is granted for six months to one year and can be renewed multiple times or the pt. can graduate from it as well. However, it does not mandate the pts. to be receiving certain treatment like antipsychotics and the pts. may be seeing their psychiatrists but not taking their psych meds at the same time which counters the whole goal of AOT in the first place. Conclusion: It is concluded that pts. with SMI including Schizophrenia and non-complaint with oral meds should be on LAI to prevent decompensation and ensure their treatment compliance and stability in the community. Additionally, the role of AOT should not only be to ensure pts.' compliance with psychiatric appointments but also with psychiatric treatment including LAI if the need may be even if it has to be mandated by the court like the enrollment in AOT itself.

No. 61

Traumatic Based Injury Related Schizophrenia in an Individual Without Family History

Poster Presenter: Stanley O. Nkemjika, M.D., M.P.H.
Co-Authors: Ayodele Atolagbe, Ayodeji Jolayemi, M.D., Tolu Olupona, M.D.

SUMMARY:

Traumatic based injury (TBI) related mental disorder has been hypothesized in the literature before 1969 as the etiology of schizophrenia has been described as a complex of multiple genetic factors and interacting non-genetic factor influence. Most research on non-genetic factors has focused on the period from conception through childhood. Thus far, there is no evidence suggestive of schizophrenic features for individuals without family history of mental health disorder following TBI in adulthood.

Hence, we present this case report of an individual who sustained TBI following physical assault in adulthood which led to development of psychotic features. We describe a 55-year-old African American male with a previous history of schizophrenia who was admitted to an inpatient psychiatric hospital due to medication non-compliance. He was first diagnosed of "paranoid schizophrenia" about two months after head trauma sustained from physical assault by the police at the age of 28 years, which resulted to meningitis management. On arriving to the ED, the evaluating team noted an agitated, uncooperative man, notably loud and had severe religious pre-occupation. Patient had no family history of mental illness. Though there are scientific reports suggesting association between TBI and schizophrenia, most of the links are either based on pre-teen exposure to TBI or positive family history of mental illness. This case explores the development of schizophrenia symptoms in an adult patient with no known family psychiatric history of schizophrenia post TBI.

No. 62
WITHDRAWN

No. 63
Sex and the Covid: The Pandemic's Effect on Sexual Life

Poster Presenter: Chun Man Tong, M.D.
Co-Authors: Andrea Guerrero, M.D., Petros Levounis, M.D., Prerana Suresh Kurtkoti, M.D., Philip Wong, M.D.

SUMMARY:

Introduction: Coronavirus disease 2019 (COVID-19) is caused by the infection of severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) and has been responsible for more than 180.000 deaths in the US and more than 850.000 deaths worldwide. Many of the cases involved healthy individuals that were affected by a wide range of symptoms, going from a common cold to fatal complications. Stress levels have been persistently high during the COVID-19 pandemic. Mental health experts have already weight in on how stress and isolation affect sexual life. In this abstract, we aim to review the existing literature on the effect of COVID-19 pandemic on sexual life. Methods: A PubMed literature review was performed searching using "COVID-19" AND "sexuality" and related terms as keywords on available titles and abstracts. 131 results returned as of 9/2/2020. We will summarize the literature associated with the effect of the COVID-19 pandemic in sexual life. Results: Many studies reported decreased sexual desire and frequency of sexual intercourse with the onset of COVID-19 pandemic in different parts of the world. In particular, an Italian study (n=89) showed that COVID-19 negatively influenced the sexual function and quality of life of reproductive-age women who live with their sexual partners but work outside home. Another study by Hamermesh, found that happiness of married individuals could have been slightly increased as the result of additional time spent with a spouse, this was not true for single individuals. Conclusion: The social and physical isolation caused by the COVID-19 pandemic has heterogenous effect in sexuality, affecting the quality of life of some groups but increasing happiness in others. Decreased sexual activity and satisfaction between partners and sometimes increased in masturbation were some of the notable effects. Decreased personal freedom, impoverished mental health, and lack of sexual partners seem to be strong contributors to the negative changes in sexual behavior.

No. 64
WITHDRAWN

No. 65
Social Media as a Double-Edged Sword for Mental Health in Times of Covid

Poster Presenter: Anna J. Sheen, B.S.
Co-Authors: Philip Wong, M.D., Faisal Kagadkar

SUMMARY:

Objectives: In order to limit the spread of the novel coronavirus disease (COVID-19), virtually every country has undergone significant cultural changes in the way that socialization is conducted. Social distancing has led to the rise of stay-at-home orders and business and school closures and a subsequent increase in usage of internet services such as social media. This literature review examines COVID-19 related changes in the role of social media and both

its positive and negative implications on mental health. Methodology A search of Google Scholar and PubMed electronic databases was conducted using search terms including “COVID-19”, “social media”, “mental health”, “depression”, “anxiety”, “facebook”, “tik tok”, “instagram”, in various permutations. We selected 7 of the 49 initial search results that pertained to the effects of social media use on mental health during the COVID-19 pandemic to perform our narrative review. Results Many studies have shown significantly increased social media use in adult and pediatric populations in several different countries. Concerns regarding the mental health impact of both the increased usage and changes in the content itself have been raised - including increased anxiety, loneliness, false information, upward social comparison, and envy. Exposure to these stressors is additionally exacerbated by the isolation of physical quarantine itself. However, social media in the time of COVID-19 has also adapted to play a newly enhanced role in education, socialization, and medical services. This has allowed for a wider dissemination of mental health services and public health information over platforms like Facebook and Tik Tok. Additionally, maintaining social connectivity and interaction with others has been well-established as beneficial and made significantly easier by an increase in positive features on social media such as support groups, positive hashtags, and video and text chatting. The phenomenon of solidarity and spreading positivity are beneficial trends that have emerged on various platforms seen in trends such as hashtag campaigns like #happyathome on TikTok, online multiplayer games aimed at creating connection, and sharing of creative homemade masks on Instagram. Conclusion In light of these changes, the impact of social media should be regarded carefully on an individual basis to determine impact on mental health. In addition, due to the limited amount of studies, more research and clinical studies should be conducted to further elucidate the complexities of online socialization, especially in times of COVID. Providers should be aware of this rapidly shifting role of social media in order to better understand and educate their patients.

No. 66

Telepsychiatry During Covid-19 and Beyond: The Interphase of Digital Medicine and Mental Health

Poster Presenter: Aiman Tohid, M.D., M.P.H.
Co-Authors: Faiza Khan, M.D., Darakhshan Adam, M.D., M.B.B.S., Tooba Qadir, M.D., Kiran Khalid

SUMMARY:

Background:Tele psychiatry includes videoconferencing, online groups, phone apps, text messaging, and e-mails. It has been discovered that telemedicine was beneficial in previous outbreaks as well, including SARS-CoV, MERS-CoV. Due to the recent situations, the telemedicine system is predicted to skyrocket in popularity. Someadvantages of telepsychiatry include reduced risk of infection, avoidance of the transit systems, reduced amount of time spent in the waiting room areas, and increased health care access to the underserved populations. Telepsychiatry follows the instruction of social distancing, prevents disruptions of care, and expands the outcomes of public health. However, the growth of tele psychiatry has been obstructed due to several barriers including, lack of internet in remote settings, lack of familiarity of technology use, reimbursement concerns, limited clinical diagnostic capabilities for many medical conditions, inadequate patient-doctor rapport, etc. Methods: We conducted a literature review of 30 articles and chose 5 for this poster. First two articles utilized literature review. Third article described an outpatient child and adolescent department healthcare providers’ in Washington’s transition to providing services from a home based telemental health during COVID-19 pandemic. The last two articles utilized systematic review/meta-analysis. Results: The results of the first study showed that telepsychiatry increases access to mental health care but it has also created many barriers like privacy concerns, technological issues, and low reimbursements. Telemedicine has been deemed safe and helpful during previous global outbreaks. The third study noted that the shift of healthcare to the virtual side has presented several challenges: limited training of providers, administrative issues and in providing high quality care. The results of the fourth study revealed that providing tele-mental health care during a pandemic is vital in continuity of mental health care to all. Fifth study described that

telemental health is effective and safe during the pandemic. Conclusion: This pandemic is most likely to shift healthcare to the virtual side. There are numerous benefits of telepsychiatry. It helps reduce the risk of infection amongst healthcare workers and patients. Staying at home and seeking medical assistance through a video call keeps you away from the transit systems. Avoiding the waiting room area allows you to stay safe from the crowd. This system also helps in providing increased health care access to the underserved populations. Some of the disadvantages of tele psychiatry include, loss of personal patient contact, patients feeling uncomfortable during video calls, challenges of cultural gaps, privacy protection (HIPAA compliance), disturbance or background noises, concerns regarding procuring safety of patients, lack of internet in remote settings, lack of familiarity of technology use, reimbursement concerns, etc.

No. 67

Socially Distant, Shared Trauma

Poster Presenter: Sade' Diahann Frazier, D.O., M.S.
Co-Authors: Etuajie Oiyemhonlan Halbert, D.O., M.S., Gloria Osuruaka, M.D., Saba Afzal, M.D., Danielle Hairston, M.D.

SUMMARY:

Background: Since March 2020, the majority of social interactions have gone virtual, by necessity. With this transition, social media use has increased, leading to increased exposure to viral videos and photographs of Black death. The documentation and display of Black death is not new. However, as the media has evolved, we have progressed from photos of Emmett Till in Jet magazine to several videos recounting the final moments of Eric Garner, Michael Brown, Tamir Rice, and George Floyd to name only a few. These traumatic events are occurring and while they are not happening to friends or family, as the DSM criteria of "Learning that the traumatic event occurred to a close family member or close friend", they are members of our community and by extension our brothers and sisters. The collective trauma experienced by witnessing these viral videos and images of black death are similar to the traumas experienced during 9/11 by those witnessing the terrorist attack unfold on television and through subsequent media coverage. As disturbing as these images of black death may be, and the subsequent trauma they can cause, the current DSM criteria does not include exposure to traumatic events on social media for diagnosis of Posttraumatic stress disorder (PTSD). Currently, there are not enough studies on the exposure to violence in social media. **Methods**: In our poster, we will do a literature review of the risk of developing PTSD secondary to exposure to traumatic events via the media. We will also do a literature review to determine if current PTSD criteria should be revised. We will then analyze the impact of structural racism on the disproportionate exposure to Black death in the media. **Results**: Exposure to traumatic images are linked to mental-health symptoms and impaired functioning. Additionally, exposure to unsettling media of members of one's own racial/ethnic group are associated with poor mental health. Repeated exposure to traumatic images increased the likelihood of developing probable PTSD. **Conclusion**: While a correlation study, conducted by Berryman, et.al, about use of social media did not find social media use predictive of poor mental health outcomes, their study was looking at social media use and increased suicidality, not PTSD. The literature concerning exposure to trauma in the media, specifically social media, found poor mental health outcomes with severity dependent on the number of exposures. There is more research that can be conducted on this area of trauma exposure.

No. 68

The Impact of Music During a Global Pandemic: A Review of Virtual Music Media

Poster Presenter: Grace Sungun Ro, B.S.
Co-Authors: John Palmieri, B.S., Douglas Opler, M.D.

SUMMARY:

Intro: The World Health Organization (WHO) officially announced the COVID-19 outbreak on January 5, 2020. This has caused stressful changes in daily life, including decreases in social interaction due to distancing. Music is known to elicit positive emotional and physical responses. Given the social nature of multi-performer collaborations and the palliative effects of music, we hypothesized that

viewers would seek virtual music collaborations involving multiple performers to combat the stress of social isolation. We sought to quantify to what degree virtual musical performances had grown during the early months of the COVID-19 crisis in response to the stress of imposed isolation. Methods: Given COVID-19's global impact, data was extracted from a global media platform. A YouTube search was conducted on May 4, 2020 using the search string "virtual + cover + concert" of videos posted from January to May 4, 2020. Videos meeting inclusion criteria were analyzed by date, views, number of performers (1, 2-9, 10+) and content description. Results: 286 videos were extracted. There was an exponential increase in views of virtual music covers and concerts following the exponential rise in global COVID-19 cases. Mean number of views was highest for videos with 2-9 performers. Median number of views was highest in groups with 10+ performers. Virtual concerts were published by individuals of all ages and skill levels, including popular celebrities, classically trained musicians, school choirs, acapella groups and more. Discussion: Results of this study show that people have sought to overcome the physical obstacle of isolation and quarantine during the COVID-19 crisis through virtual musical experiences. The exponential increase in views hints towards the efficacy of virtual musical connection to this end. Although YouTube has existed for years as a platform to share all types of content, COVID-19 has led to a growing need to connect through music. Interestingly, individuals of all levels of training and backgrounds have shared their performances, which provides an encouraging message that music is a universal language. As a limitation of the study, it cannot be ruled out that the increase in views may be due to an increased use of online platforms for entertainment overall. Virtual musical collaborations may be uniquely positioned to provide relief via music and assist in combating feelings of isolation during quarantine. Conclusions: This study demonstrates the public appeal of virtual music in a time of stress such as the COVID-19 crisis, although it remains unclear how effectively virtual music provides relief. The data show that virtual music is being actively searched for and utilized. Future research should include assessing the efficacy of virtual music projects in relieving distress for both participating musicians and listeners, and exploring how this might compare to participation and exposure to more traditional forms of musical engagement.

No. 69

Improving Depression Screening in HIV Positive Pregnant Women

Poster Presenter: Darmant Bhullar, M.D.
Co-Authors: Sasidhar Gunturu, M.D., Mena Mirhom, M.D.

SUMMARY:
Depression is a common complication of pregnancy and the postpartum period. Up to 70% percent of women report depressive symptoms during their pregnancy, and approximately 10-16% meet full criteria for major depressive disorder. Women with a history of perinatal or non-perinatal major depression are likely to relapse during pregnancy. Research shows that exposure to untreated depression and stress can have negative consequences on the birth outcome and child development. If treatment is not initiated, it can also lead to mothers' utilizing poor coping mechanisms such as poor compliance with prenatal care like missing appointments and decreased prenatal vitamins, increased use of illicit substances, and poor nutrition. Suicidal ideation can also be elevated in this population. Given the harmful effects of this disease on both the mother and child, it is essential that all pregnant patients be screened for depression. Literature review did not reflect many studies that focus on depression screening in this population, let alone in pregnant patients with Human Immunodeficiency Virus (HIV). Our study focuses on the impact the mandatory screening tool had on the incidence of depression screening in pregnant HIV patients.

No. 70

WITHDRAWN

No. 71

Appreciative Inquiry to Improve Psychiatry Residency Supervision

Poster Presenter: Jenny E. Lee, M.D.
Co-Authors: Donna T. Chen, M.D., Ihuoma O. Njoku, M.D.

SUMMARY:
In graduate medical education, supervision is a vital component of residency training, but little research guides this practice1-3. One study found that the expectations between residents and their attending supervisors had differing expectations in the outpatient setting, and this led to a mismatch between what was taught versus the educational needs of the residents.2 In both medicine and medical education, a problem-solving approach guides much research asking “what is going wrong.” Appreciative inquiry (AI) focuses on the opposite and asks “what is going well” in a situation.4 By doing this, AI aims to use questions to help envision and build a future around what works, rather than trying to fix what does not. AI as a research method consists of four phases: discover, dream, design, deploy. Originating as an organizational change method, this approach to informing change has been used across multiple sectors, including in medical education.4,5 Adopting an AI approach, we designed a study aimed at improving supervision in psychiatry residency programs. A pilot, feasibility study demonstrated that we could gather brief narratives or stories from psychiatry residents describing either exemplary or inspiring moments from their experiences in supervision with faculty utilizing two open-ended questions developed following AI precepts (1) Please tell us about an inspiring, or otherwise exemplary, experience you have had during supervision as part of your residency to date. What about this experience made it inspiring or otherwise exemplary? and (2) What do you think it was about the people and the environment that made this moment possible? Please indicate if the supervision was provided by a resident, attending, or other faculty member. These questions asked residents to explore experiences they have had at any point in their training as a method of gathering stories to help understand what relational styles and supervision types contribute to positive and inspiring supervision. Our initial findings suggest that residents submit stories sufficient for theme analysis and cover domains of content and process. The next step collects stories from multiple institutions. We will ascertain general themes that emerge from qualitative analysis of the full set of stories submitted and disseminate our findings with examples from the stories. To our knowledge, this is the first qualitative study using appreciative inquiry to investigate supervision in psychiatric residency programs.

No. 72
WITHDRAWN

No. 73
Characteristics of Psychiatry Residency Program Directors: A Review of Trends and Implications

Poster Presenter: Ayesha Kar
Co-Authors: Gurjot Kaur Malhi, M.D., Anita S. Kablinger, M.D.

SUMMARY:
Introduction: Residency program directors organize and promote the graduate medical education of residents, while facilitating their professional, ethical, and personal development. Currently, attendings who are doctors of osteopathic medicine, women, and/or Black, indigenous, people of color (BIPOC) make up a minority of program directors and chairs of departments across multiple specialities. This under-representation continues despite the increased number of osteopathic programs, increased number of these individuals attending medical school, participating in psychiatry residency, and joining academic centers. Characterizing the demographic and educational profile of program directors in psychiatry residencies has not been done, and will provide valuable insight into the current standing of the field. This data may suggest that there are areas in which academic psychiatry can continue to improve and push for institutional efforts to recruit and promote attendings who are diverse and under-represented in medicine. Methods: We looked at data from Fellowship and Residency Electronic Interactive Database (FREIDA), residency program and psychiatry department websites to collect information on the program, program director, and department chair. The data we collected includes: size of the program, type of program (university, community, military, or hybrid), gender, number and type of degree(s), and academic appointments. As a disclaimer, we did not survey program directors about their gender and gender results are based on

findings from FREIDA and department websites; we did not collect ethnicity information for the same reason. Results: There were a total of 261 programs, 44.1% (115) were university programs, 17.6% (46) were community, and 36.0% (94) were hybrid community-university programs. 41.8% (109) of the program directors were women, and 52.8% (152) were men; of which 89.7% (234) were doctors of medicine (MD), and 13% (34) had multiple degrees. We found 212 programs with listed department chairs, of which 80.2% (170) were men, 19.8% (42) were women, majority of whom (93.9% - 199) were MDs, and 23.1% (49) had multiple degrees, where PhD was the most common (19). 56.6% of department chairs hired a program director of the same gender, while 43.4% (92) did not, p=0.6. Conclusion: From our current data analysis, it is clear that males and those with MD degrees make up the majority of both program directors and department chairs in psychiatry. We did not see a significant difference in the gender of program directors, even when categorized by type of program (university, community, hybrid, other). As the field of psychiatry continues to expand, there is an increasing need for diversity in leadership positions. Although our analysis did not look at ethnicity of program directors and department chairs, further research may delineate disparities in representation in this regard as well.

No. 74
WITHDRAWN

No. 75
Examining Paid Maternity Leave Policies in United States Psychiatry Residency Programs
Poster Presenter: Rachel L. Dillinger, M.D.
Co-Author: Marissa A. Flaherty, M.D.

SUMMARY:
Objective: Data on the financial, physical, and mental health benefits of paid maternity leave for mothers and infants is abundant. Data on the make-up of current maternity leave policies in United States psychiatry residency programs is not. This survey of program directors was undertaken to assess the components of their policies and their perceived impact of maternity leave on trainees, co-residents, and programs. Methods: An anonymous 19-question survey was emailed to U.S. psychiatric residency program directors. Questions included demographics for respondents and their programs, composition of maternity leave including paid and unpaid components, and the perception of effects of maternity leave on trainees, co-residents, and programs (with optional free text elaboration). Results: Of 49 respondents, 21 (42.8%) indicated their program offered paid leave (spanning 2-12 weeks) independent of the vacation, sick days, and short-term disability that comprised other programs paid maternity leave policies. 38 programs (77.5%) required residents use their vacation time as part of maternity leave; 37 programs (75.5%) required use of sick days. Most respondents (48/49, 98%) rated the impact of an individuals overall training as neutral to strongly positive, citing benefits like improved empathy, compassion, and patience. Respondents shared ways their programs increased leave and aided reentry, from electives to telepsychiatry. Conclusions: Psychiatric residency coincides with prime reproductive years for women planning both families and career trajectories. Programs and institutions can craft policies to align with decades of research supporting paid maternity leave, and in doing so further enhance the skills and careers of female trainees.

No. 76
Impact of Covid-19 on Psychiatry Medical Student Education and Healthcare Delivery Perspective of a Smaller Size Psychiatry Department
Poster Presenter: Ashish K. Sarangi, M.D.

SUMMARY:
The global coronavirus (COVID-19) pandemic significantly impacted every aspect of personal and professional life in almost every area of industry imaginable. Healthcare delivery and medical student education was especially affected and required medical schools and programs to come up with innovative ways to sustain teaching and learning during these unprecedented times. Medical students faced uncertainty, anxiety and fear regarding curriculum changes, ability to perform well on board tests and evaluations during the pandemic.The lack of face to face learning, opportunity to interact with

residents and attendings as well as difficulty in evaluating medical students are only some of the challenges faced during the pandemic. Medical student education historically has been an apprenticeship and this model has worked well to ensure the development of future physicians. This model of learning has been hard to replicate by utilizing other modes of learning such as live streaming lectures or posting recorded sessions on social media platforms such as YouTube. The COVID-19 pandemic has taught medical schools and psychiatry departments across the United States how to utilize resources available to ensure ongoing medical student education while at the same time delivering quality care to patients, maintaining patient privacy and confidentiality and mitigating risk of spread of the virus. This paper reflects the various innovative ways our residency program adapted and developed resources to maintain excellent service delivery to patients while ensuring medical student education on their psychiatry rotation. Some of the ways included utilizing telemedicine technology applications such as Zoom, development of a COVID-19 curriculum and maintaining constant communication and mentorship with residents and attending physicians. Other changes and difficulties faced during the pandemic are as follow: Here are some changes that happened. Abrupt interruption of clinical rotation for period 5 Other rotations moved to online education. Psychiatry did it for one week then proceeded with Telemed. Students had to take screen shot of there completed online activity for us to have record to verify. There was not really an easily accessible psychiatry online activity as opposed to Aquifier for Pediatrics and Family Medicine. Had to review expectation of student participation in Telemedicine and develop student agreement/acknowledgement. Had to abruptly move to Zoom for didactic. Rotation 6 started with Telemedicine. Returned for last 4 weeks in person. OSCE was on a Sim type of zoom. Rotation 5 and 6 pass/fail. Separate and apart from challenges faced to medical students, the department of Psychiatry also had to quickly adapt to oncoming government policies regarding wearing of masks, stay at home orders as well as keep track of reimbursement policies from CMS for use of telemedicine. Despite the challenges, the department faired well and was able to fulfill its missions.

No. 77
Innovative Ways of Teaching Psychopharmacology to Residents

Poster Presenter: David Mauricio Martinez Garza, M.D.
Co-Author: Zelde Espinel, M.D.

SUMMARY:
In-training examination performance data suggest that psychiatry residents are not being adequately trained in psychopharmacology (PP). In a paper by Glick et al. (2007) three sets of problems were identified as primary causes: large passive lecture formats, overemphasis on treatment algorithms and insufficient emphasis on emerging neuroscience discoveries. The ACNP and ASCP have offered multiple suggestions for pedagogical improvement, such as the flip-classroom model, which are yet to be adopted at-large by residency programs. We hypothesize that one of the reasons why learning PP is challenging is due to emphasis being placed on ad nauseam lists of FDA indications, side effects, interactions, dosing strategies, and complex algorithms, making it difficult to integrate and conceptualize the drug effects on neurotransmission. Furthermore, there is an ever-growing list of over one hundred psychotropic agents, yet there are only a handful of action sites for them, with 75% of drugs acting on a transporter, a receptor, or an enzyme. We believe that focusing on these targets instead, and understanding the anatomical infrastructure and chemical substrates of neurotransmission paired with their downstream effects, will bridge the gap between basic PP and clinical psychiatry. For that reason, we propose an innovative way of teaching PP. In a pilot test with the PGY-2 class at University of Miami during a series of lectures on antidepressant medications, we broke up the class into three groups. Each team received a complete set of shapes representing a variety of mechanisms of action (SERT, 5-HT3, CYP3A4, etc…) and a large colored cardboard circle representing the drug, to which they could affix the shapes (with Velcro). The activity leader announced the name of a drug and teams had one minute to place the shapes

to match the correct drug action mechanisms. When time was called teams were evaluated for completeness and correctness of matching the drug. We repeated this for a variety of antidepressants and had brief reviews of the drugs' specific receptor profiles, underscoring individual therapeutic actions and side effects, as well as possible drug interactions. Residents evaluated the activity very positively, highlighting that it was an entertaining and useful way to learn and translate complex concepts of PP. Residents stated they would like to repeat this activity with other types of agents, such as antipsychotic and mood stabilizing agents. We believe activities such as this would enhance education and should be incorporated in residency curriculums. In our poster we will present quantitative data supporting this complementary teaching method, alongside pictures and the materials used for it.

No. 78
Just Keep Teaching: An Inpatient Psychiatric Service Goes Virtual During the Pandemic
Poster Presenter: Rana Jawish, M.D.

SUMMARY:
COVID19 has fundamentally disrupted the delivery of healthcare, and while telemedicine is an established practice, inpatient psychiatric care has been slow to embrace this change. During the pandemic, the authors identified an urgent need to disrupt the delivery of psychiatric care for the safety of their patients and trainees. At the University of Minnesota, the authors developed a novel protocol for residents and undergraduate medical learners to deliver care to the inpatient psychiatric service remotely. They describe the development, implementation, and reception of a virtual care and education model in the inpatient psychiatric setting that has not been achieved at other graduate medical institutions. The authors utilized a survey to measure trainee perspectives on the effectiveness of their virtual care and education model. The survey results highlighted the benefits and challenges experienced. The authors argue that telepsychiatry will be an essential aspect of future psychiatric care and that further training in telemedicine during residency is essential.

No. 79
Lessons Learned From PsychEd, an Educational Psychiatry Podcast
Poster Presenter: Nikhita Alisha Singhal, M.D.
Co-Authors: Sabrina Agnihotri, M.D., Ph.D., Sarah Hanafi, M.D., B.Sc., Aarti Rana, M.D., Bruce Fage, M.D.

SUMMARY:
Background: Podcasts are an educational resource that have garnered popularity amongst medical learners, with early studies suggesting they can be as effective as in-person didactic lectures. Despite their growth in other medical specialties, educators in psychiatry have been slower to adopt this mode of delivery as a teaching tool. As such, there are few psychiatry podcasts targeting learners and no published studies on the use of podcasts in psychiatry training. PsychEd is a psychiatry education podcast created in 2015 by residents at the University of Toronto for other medical learners. It is one of the first podcasts of its kind in the field of psychiatry and has grown to have a worldwide audience of over 1,500 regular subscribers. Recently, listeners of the podcast were surveyed to better understand the impact of this resource. Methods: The purpose of this mixed-methods study was to evaluate the podcast for its quality and effectiveness as an educational resource for learners. Participants were recruited through advertisements within the podcast episodes to ensure the sample included active listeners. We sought to characterize user demographics, motivations, and experiences through a two-step approach: (1) a mixed qualitative and quantitative online survey with 13 questions, and (2) semi-structured phone interviews with a random selection of survey respondents. The interviews were transcribed and coded for emergent themes using a grounded-theory model. Results: We obtained a total of 97 survey responses, representing 7% of our current estimated number of podcast subscribers. 99% of respondents completed the survey and 53% agreed to be contacted for a follow-up phone interview, with 9 interviews being conducted. While medical learners (40%) comprise the majority of PsychEd listeners, our audience also includes practicing physicians (4%) as well as a high

proportion of allied health professionals and learners in addition to service users. Listeners identified relevant content, opportunity for effective review, enjoyable delivery, and Canadian content as key reasons for listening to PsychEd. Conclusion: PsychEd is an open-source educational tool with broad appeal for both undergraduate and postgraduate trainees, as well as allied mental health professionals. As such, podcasts may represent an opportunity for shared interprofessional curricula. Our findings support existing literature on the benefits of podcasts in medical education. Perceived strengths include the availability of Canadian and learner-driven content; opportunities to further general knowledge and psychiatric clinical skills; and in-depth coverage of mental health topics. Our findings represent some of the first research in this area and begin to answer some fundamental questions about the educational goals and types of content that draw psychiatry learners to podcasts.

No. 80

Lithium for Ultra-Rapid Cycling Bipolar Disorder and Comorbid Eating Disorder: A Case Report

Poster Presenter: Javeria Sahib Din, M.D.
Co-Authors: Manoj Puthiyathu, M.D., Sabiha Akter

SUMMARY:

Ultra-rapid cycling in bipolar disorder is presented with very brief cycles of mood episodes lasting for days. Lithium, a key-player in bipolar disorder pharmacotherapy, was also found as the core therapy of rapid cycling. This present report describes a case of a young adult having a bipolar disorder with ultra-rapid cycling with a past medical history of an eating disorder. The present case patient was a young female brought by the police after self-cutting with a razor leaving several superficial cuts on her left forearm. She reported having depressive symptoms of intermittent sad mood. She was eventually diagnosed with Bipolar I disorder with most recent severe episodes of depression. In addition, she had a history of binge episodes of food and alcohol for two years leading to several blackouts. She was treated with a combination of Lithium and medication for both mania and depression prevention. In light of this case report, it is concluded that ultra-rapid cycling can be acknowledged as a severe presentation of bipolar disorder, significantly affecting the case's quotidian life and long-term prognosis and demanding complicated and particular treatment approaches.

No. 81

Losing Patients to Suicide: Role of Residency Programs in Ensuring Resident Well-Being

Poster Presenter: Hira Ayub Silat, M.D.
Co-Author: Jane Gagliardi, M.D., M.H.S.

SUMMARY:

Patient suicide can be a profoundly difficult experience for psychiatry residents. A systematic review (Puttagunta et al, 2014) indicates that between 31-69% of psychiatry residents report having had a patient commit suicide. This poster discusses two clinical cases of patient suicides, their impact on trainees, and the interventions by the residency program to provide support. Findings from the literature are discussed. Patient suicide can lead to grief, shame and self-blame among trainees. (Chemtob 1988.) Research suggests that curricular trainings regarding dealing with patient suicide can improve awareness within residents. (Prabhakar et al 2014.) However, there is limited data on other effective measures for processing patient suicide. Future directions for research include assessing the effectiveness of care team meetings and debriefing opportunities after a patient suicide on resident well-being.

No. 82

Peer Review of Follow-Up Note: A QI Project

Poster Presenter: Waqas Yasin, M.B.B.S.
Co-Author: Andrew R. Kordus, D.O.

SUMMARY:

Appropriate documentation is of high significance in medicine. Medical records and documentation have multiple implications. With advancement in electronic medical records and its wider use, significance of popper documentation has become more evident as it can be used for transfer of care, collateral information, billing, and medico legal purposes. The quality and quantity of notes written

by medical providers vary from person to person. The role of adequate documentation in mental health is even more paramount and critical as it requires more detailed evaluation & assessment. Multiple aspects should be considered when psychiatric note. To assess and improve the quality of the follow-up notes written by second year residents a small quality improvement project was designed. As a part of this project follow-up notes written by second year residents were randomly selected and reviewed by other second year residents. The notes were assessed and scored on a checklist which was compiled by the residents under the supervision of Program Director. The checklist consisted of billing code justified by documentation, appropriate number of elements in mental status exam, clearly listed presenting problems, interim history (mood, suicidal ideation, sleep, anxiety, AODA, social history, psychotropic history, pertinent information related to chief complaint, and medical history), complains/diagnoses mentioned in plan, appropriate labs, assessment consisted with history of present illness, planned consistent with diagnosis, safety concerns addressed in plan, and grammatical/dictation errors in the note. Each of these parameters were assigned a specific score and based on the presence of each factor the note was scored. During the first round each resident reviewed one follow-up note from the other 3 residents and a total of 12 notes were reviewed. Based on the deficiencies of each note as per the checklist a feedback was given to the residents in order to improve the highlighted areas in the follow-up notes. 4 weeks later we reviewed the follow-up notes again to observe if the deficiencies which were highlighted initially have been addressed.

No. 83
WITHDRAWN

No. 84
Psychiatric Manifestations in Covid-19 Positive Patients: A Literature Review
Poster Presenter: Rachael Brothers, D.O.
Co-Author: Sharmin Kamrun

SUMMARY:
Primary manifestations of COVID-19 are mainly respiratory, cardiac, and neurological (1) but its impact on the central nervous system (CNS) and mental health outcomes still remains ill-defined. Most literatures discussed psychiatric sign symptoms combinedly as neuropsychiatric manifestations. However, recent studies reported Covid - 19 impacts on mental health ranging from exaggeration of pre-existing psyhciatric problems to onset of brand new psychotic symptoms including stress, anxiety, depression, adjustment disorder, suicidal ideation, organic hallucinosis, manic disorder, etc.(2). For instance, one study reported psychiatric problems associated with COVID patients were anxiety related disorders (4.6%), mood disorders (3.8%),suicidal ideations (0.2%) and < 1% emotional state symptoms and signs(3). The first case of Covid 19 associated psychosis had no previous history of mental illness (4). Another case series of 10 SAR CoV-2 positive cases found five patients with adjustment disorder, two with organic hallucinosis, two with organic manic disorder and one with no diagnosis (1). One patient with history of Catatonic Schizophrenia was hospitalized with severe psychosis within 7 days of receiving inpatient treatment for COVID pneumonia (5). Another case presented with new onset, acute mania and behavioral disruption on the background of headache, dry cough and fever (6). Overall, SARS Co-V-2 positve patients presenting psychotic symptoms in the acute phase pose a great challenge for the clinicians as it may lead to non-compliance with infection control measures. In this article, we conducted a review of several studies, case series, and case reports to summarize the knowledge on acute psychiatric presentations in COVID patients. Our aim is to educate clinicians about the common psychiatric problems in COVID patients and help them in prompt recognition and early management.

No. 85
Psychiatric Medical Education in the Age of Covid-19: The Penn State Health Experience
Poster Presenter: Emma Batchelder
Co-Authors: Usman Hameed, M.D., Luke David Piper, M.D., Taranjeet Singh Jolly, M.D.

SUMMARY:
The rapid outbreak of the novel human severe acute respiratory syndrome coronavirus 2, ultimately leading to the COVID19 pandemic has spurred numerous changes in healthcare systems and psychiatric medical education. Medical schools across the country have suspended on-site clinical experiences for students, including those in clinical clerkships, in favor of virtual learning modalities so as to ensure learner safety. These changes arose at a critical time in which medical students must prepare for examinations, participate in career exploration, and engage in residency transitions. The Penn State Department of Psychiatry and Behavioral Health and affiliated College of Medicine have taken steps to ensure patient, provider, and learner safety, while striving to provide meaningful learning experiences, including altering clinical training experiences, providing virtual learning and advising, and encouraging participation in student-lead COVID response initiative. In this presentation, we discuss approaches and experiences of our psychiatry department in its educational initiatives for third- and fourth-year medical students; summarize the issues faced by medical students, faculty, and resident educators; and reflect on departmental responses.

No. 86
WITHDRAWN

No. 87
Psychosis in a Patient With Lyme Disease
Poster Presenter: Javeria Sahib Din, M.D.
Co-Author: Rushikesh Vyas, M.D.

SUMMARY:
Lyme disease (LD) is caused by the spirochete, Borrelia burgdorferi (Bb). This infection is a global health concern and is associated with numerous cardiologic, dermatologic, rheumatologic, neurologic, and psychiatric manifestations.[1] We present a case that highlights the diagnosis and treatment of a patient with the unique presentation of mania and psychosis in the setting of previously treated LD. There have been cases reported in the past of patients presenting with both mood disorders with or without psychosis and psychotic disorders without mood symptoms.[2] This case also highlights the difficulties associated with assessing the evolving presentation of this patient to arrive at the correct diagnosis as well as selecting the appropriate treatment regimen for her illness.[4] Several research articles published previously reviews the correlation of LD with psychiatric manifestations. This is a unique case which supplements to the literature that psychosis can occur in a patient years after the treatment of LD. Clinicians working in the endemic, high-risk areas should consider LD as a differential diagnosis for any atypical or new onset psychiatric presentation.

No. 88
Right Information at the Right Time for the Right Learner: Knowledge Management Challenges and Solutions in a Military Psychiatry Residency Program
Poster Presenter: Thanh T. Nguyen, M.D.
Co-Author: Emily Shohfi

SUMMARY:
Background: Learners in graduate medical programs face challenges due to informational overload in their day-to-day. They lack cohesive access to the right information at the right time. Knowledge can be defined as Justified True Belief. Learners, therefore, must conclude a valid belief after interacting with timely information. The alternative is obsolete information that lacks fidelity. Methods: The National Capital Consortium Military Psychiatry Residency, a large program with 56 residents, recognized their Knowledge Management (KM) system was lacking and could be improved. Residents and their leadership brainstormed to overcome barriers to information access and overload. Process: One resident is assigned to be a Knowledge Management Officer (KMO) to oversee the organization of residency-related information. Guidance was elicited from a Medical Librarian with formal education in Information Sciences. Tools: A Website Portal was established for the residency, containing subject gateways and indexing to allow an end-user to quickly locate and access information. These gateways spanned divergent subjects and areas of interest within the Psychiatry specialty. Additionally, a LibGuides portal was

created, where materials could be posted and updated as follow up to noon conference didactics, also archived for later access. Smart electronic Apps for academic pursuits were introduced to the group. Finallly, use of Medhub, an electronic residency management and collaboration program, was also maximized. Organization: Each of the post-graduate level classes was organized, with one resident being the class KMO. Important knowledge deemed to possess value for the entire organization is routed to the KMO to be indexed on the Website Portal. Constant education, buy-in attempts, and a sense of excitement were created by following Kotter''s Change Model. Multiple outcomes were measured related to this change. Results: Website traffic and usage was monitored and quantified for both the Website and LibGuides Portal. Additionally, the residency's ability to meet the ACGME requirements were measured pre- and post-intervention. Resident opinion and satisfaction were elucidated using survey data. Qualitative outcomes also described include a reduction in repetitive actions and duplication, standardization, and ease-of-access to prior and new information. These findings will be reported in the poster as the outcome, process, and balancing measures. Conclusions: Residency programs, like most other organizations, produce and possess information and knowledge difficult to management. Deliberate systems and processes are needed to organize and manage knowledge. Incorporating the principles of KM into a residency program allows for ease of information access, reduced work burden, and standardization within a program. Training directors and coordinators need competencies in the basic elements of KM to be successful in leading their organizations.

No. 89

See It, Teach It, Know It: Using Peer-to-Peer Instruction to Deliver an Integrated Neuroscience Curriculum

Poster Presenter: Sean Lowell Wilkes, M.D., M.Sc.
Co-Authors: Anton Power, M.D., Rachel M. Sullivan, M.D.

SUMMARY:

BACKGROUND Neuroscience is a required subject in United States psychiatry residency programs. The breadth and depth of knowledge required of psychiatry residents is considerable, and thus high-yield approaches to teaching and ensuring retention of neuroscience knowledge are of great interest. Peer-to-peer and near-peer teaching, in which seniors teach their juniors within the same educational track, have been shown to facilitate learning by creating an environment of social and cognitive congruence. Additionally, the act of teaching one's peers helps to reinforce and solidify the knowledge one has learned, thereby improving retention. The objectives of this curriculum are to 1) Develop in resident psychiatrists expertise in the neurobiology of emotion and behavior, functional neuroanatomy, and select topics in neuropsychiatry in order to inform their clinical practice in the treatment of psychiatric and neurological disorders and 2) Utilize peer-to-peer and near-peer teaching to enhance learning. METHODS: The neuroscience curriculum at this military residency program is delivered on a two-year cycle in twenty 45-minute lectures. The primary target audience is PGY2 and PGY3 residents. Each lecture, along with its associated learning objectives, is assigned to a resident who is then required to work with a faculty member to develop a 45-minute lecture or seminar designed ensure learners will achieve the objectives assigned. Additionally, they are asked to incorporate online resources provided by the National Neuroscience Curriculum Initiative, as well as questions taken from past PRITE exams in order to assess learning. RESULTS: Outcomes measured include resident performance on brief assessments following each neuroscience lecture as well as performance in the neuroscience sub-category on their annual PRITE in-training exams. Brief assessments are derived from questions taken from previous PRITE exams as well as questions developed to specifically assess the objectives established for each lecture topic. Feedback is also elicited from residents via anonymous surveys before and following completion of the curriculum on their interest in neuroscience, confidence in their neuroscience knowledge, and the perceived importance of neuroscience in the practice of psychiatry, as well as on their learning style and learning environment preferences. DISCUSSION: Neuroscience has increasingly become a core subject of required study for U.S. psychiatry residents,

prompting the development of myriad new and innovative approaches to teaching this broad and dense area of clinical practice and research. Here, we offer a novel approach that combines the resources afforded by the National Neuroscience Curriculum Initiative with the advantages of peer-to-peer and near-peer teaching to create an integrated, resident-led, faculty-supervised neuroscience education program that enhances learning by involving residents in the teaching process.

No. 90
WITHDRAWN

No. 91
WITHDRAWN

No. 92
Virtual Interviewing Psychiatry Residency Candidates in the Covid-19 Era: Lessons Learned and Recommendations
Poster Presenter: Shailesh Jain, M.D.
Co-Authors: Mudasar Hassan, M.D., Mingxu Zhang

SUMMARY:
Introduction: The necessity to limit travel and social contact during this COVID-19 pandemic has stirred apprehensions among the psychiatry residency and fellowship programs across the nation. This process of applicant selection for the candidates is intense and demanding on time and resources, not to mention the program directors'' immense responsibility to find the ''right'' candidate for their respective programs. The process of candidate selection involves juggling many different residency programs and candidate variables. The fact that a new constraining factor of being limited to interviewing applicants only by video may sound very daunting and complicated. We intend to share our program''s experience of virtual interviews of candidate selection, lessons learned, and directions for improving the process. We hope our experience will help our colleagues with this process. Methods: We interviewed about 70 candidates for the six psychiatry residency positions we had for the 2019 - 2020 academic year. We used the Zoom platform to conduct the applicant interviews. However, several other platforms, including but not limited to Skype, Google Meet, and Microsoft Meet. Our university-wide subscription of Zoom allays us any extra cost. Our selection committee selected candidates through the ERAS. We then invited the applicants by email and offered them available times with a specific Zoom link. The Zoom program has a Microsoft Outlook extension application that allows a host to send email invites with a zoom link from the Outlook calendar. We sent a weblink to highlight best practices to conduct an online interview for the applicants with tips for camera position, lightening, dress code, and background type. Some candidates preferred to test run the zoom link with our staff, which was encouraged; this ensured no last-minute hindrance during the live interview process. Results: We got positive feedback from most candidates irrespective of the match results. We asked them later if virtual interviewing was a factor in not matching to our program or suggestions to improve the process. We found that the majority were accepting and comfortable with the use of technology. AAMC now has virtual interview guidelines for program directors1. We plan to implement those guidelines to make the interview process more efficient. We also plan to stick to the AAMC guided best practice guidelines for program directors in interviewing candidates 1 Conclusion: The recent pandemic may have propelled us many years ahead in accepting the virtual technology for the recruitment process for residency and fellowship. Being in a geographically isolated and underserved region, we, for the first time, we''re able to attract quality candidates from all parts of the world. The cost-saving and the better efficiency inherent in the virtual interviewing process seem to be the most attractive aspects.

No. 93
Improving Care for Patient With Autism Spectrum Disorder (ASD) and Related Disorders on Inpatient Psychiatric Units
Poster Presenter: Michelle Luana Zaydlin, M.D.
Co-Authors: Raul Poulsen, M.D., Dennis Valerstain, M.D., Rikera Taylor, Michelle Miller

SUMMARY:
Children with Autism Spectrum Disorder are up to six times more likely to be hospitalized in a psychiatric

unit compared to their neurotypical peers (McGuire et al., 2015). However, children with ASD likely develop and maintain behaviors necessitating hospitalization due to a culmination of several factors which often are not addressed on generalized inpatient psychiatric units. With evidence-based pharmacotherapy, staff education and developmentally appropriate therapeutic intervention children with ASD can be appropriately cared for in inpatient units (Kuriakose, etl. al., 2018). Still, barriers to providing adequate care for this population continue to exist, often due to lack of awareness and training of inpatient staff. A survey was conducted at a rural community hospital whose child and adolescent inpatient psychiatric units serves patients with a variety of mental illnesses and psychiatric emergencies. The survey was distributed to all residents and fellows in the residency training program at the hospital as well as nursing and mental health technicians who regularly provided care on the inpatient child and adolescent psychiatric unit. The goal of this survey was to understand baseline experience and comfort in working with children with ASD and to identify barriers to providing care for this population during hospitalization. A total of 48 responses were collected, the majority (72%) of responders were residents in the psychiatry training program. Of all respondents only 16.6% reported that they strongly agreed with the statement that they felt comfortable working with children with ASD on the inpatient unit and only 8% reported that they strongly agreed with the statement "I feel confident in my ability to use nonpharmacologic interventions to deescalate a child with ASD". When asked to identify the most challenging aspects of working with children with ASD on the inpatient unit responses frequently included lack of a specific therapeutic space for children with different needs, inability to communicate and identify triggers for individual patients and lack of knowledge in nonpharmacologic approaches for de-escalation. Through identifying these challenges and addressing these barriers future education and trainings can be tailored to improve care of children with ASD and related disorders on inpatient psychiatric units.

No. 94

First Break Manic Episode in a 52 Year Old With End Stage Thyroid Cancer: A Case Report

Poster Presenter: Sharon Udemba
Co-Authors: Ashley Fuchs, M.D., Robert Arnold, Shahan Sibtain, M.D.

SUMMARY:

Can thyroid cancer and sarcoidosis precipitate late onset bipolar disorder in an elderly patient? This was a question we pondered when we were presented with a very interesting case in the Emergency department. Bipolar disorder is a chronic disorder of mood which leads to episodes of either elevated mood (mania) or depression in a sizable number of adults in the community (1%) (5). Bipolar disorder may be divided into two distinct subtypes, the late onset bipolar (LOB) and the early onset bipolar (EOB) groups. LOB patients tend to have a milder illness in terms of manic severity, but they have higher medical and neurological burden. They also have lower familial burden of bipolar (5). A manic episode, which is seen in bipolar, is defined as a period of abnormally and persistently elevated, expansive or irritable mood and abnormally and persistently increased energy, lasting at least 1 week and present most of the day, nearly every day with significant impairment in social or occupational functioning. Symptoms include decreased need for sleep, increase in goal directed activities, flight of ideas or racing thoughts, psychomotor agitation and talkativeness or pressured speech. This case is about a 52-year-old African American female with who developed late onset mania with delusions and was brought into the ED due to week-long manic symptoms with suicidal and homicidal threat during verbal and physical altercations with her husband. Our case became even more interesting when the patient reported end-stage terminal thyroid cancer with possible diagnosis of sarcoidosis of the lung. One percent of patients with sarcoidosis develop psychosis (1). There is a subset of patients with malignancy that could precipitate symptoms of mania and even bipolar disorder due to metastasis or paraneoplastic syndromes (6). Our patient was admitted involuntarily and was started on medications to stabilize her mood while we started a workup on her in order to rule out medical conditions as a cause of her mania. Our lab findings

and other investigations showed that her thyroid panel was within normal limits and her chest x-ray and head CT scan negative for any acute findings or metastasis. In evaluating this patient, there are several factors to consider which could have precipitated her late onset mania. This case emphasizes the importance of full and comprehensive medical work-up as a way to rule out other possible causes of mania and psychosis in an attempt to administer appropriate treatment and management of patients with new onset bipolar disorder.

No. 95

Religious Beliefs and Psychosis

Poster Presenter: Ashley Fuchs, M.D.
Co-Author: Jawad Manzoor, M.D.

SUMMARY:
Psychotic disorder is defined as having abnormalities in one or more of the following domains: delusions, hallucinations, disorganized thinking, grossly disorganized or abnormal motor behavior, and negative symptoms. Social, marital, or work problems can result from the delusional beliefs of delusional disorder. These individuals may have factual insight but often lack true insight (8). The lifetime prevalence of delusional disorder is around 0.2%, and most frequent subtype is persecutory (9). An individual's cultural and religious background must be considered in evaluating the possible presence of delusional disorder (10). The content of delusions also varies across cultural context. The dilemma this case presented was how do we go about distinguishing between strongly held religious beliefs from psychosis.   This case is about 54-year-old women who presented with inability to care for herself in the context of persecutory and religious delusions. However, she did not exhibit the classical signs of psychosis. It was not until the patient exhibit full blow psychosis that she was treated with antipsychotics. She responded well. Her psychosis improved and she was discharged. What this case emphasizes is that we need to maintain a high index of suspicion of psychosis in order to prevent unnecessary suffering and associated cost.

No. 96

Seasonality in Bipolar Manic/Depressive Cycling

Poster Presenter: Rachael Brothers, D.O.
Co-Author: Sabiha Akter

SUMMARY:
People with bipolar disorder (BD) have extreme emotional states, which occur at different times, called mood episodes, including manic or depressive states. We have observed some seasonal patterns (SP) in admission rates, mood relapses, and symptom fluctuations of bipolar patients. Seasonality is one of the main characteristics of the patients with mood disorders. Unfortunately, very few studies investigate clinical association of seasonality in BDs. We tried to find out the effect of seasonality on different states of BDs. We used different articles to gather information about the topic, where we found that manic episodes are more common in spring and summer, while depressive episodes detected in early winter. Some studies revealed that sunlight exposure plays an important role in the affective recurrence in BD. Sunlight exposure is positively associated with the admission rate of bipolar mania and negatively associated with depression admission. Besides seasonal variation, another factor involving circadian-related gene alteration in the bipolar patients could play an important role. Among people with bipolar I and bipolar II disorder, seasonality is more pronounced in bipolar II patients. The studies reported so far, the female gender is remarkably associated with seasonality in the bipolar II group, while some recent studies show no sex differences. One study revealed that manic patients of younger age are vulnerable to seasonality than older groups; however, no age dependent seasonal effect could be noticed for depressive episodes. We need to have more comparable observational studies to understand better mechanism and effects of seasonality on different phases of BD.

No. 97

Educational Module on ADHD: Neuroscience Simplified

Poster Presenter: Pallavi Tatapudy, M.D.
Co-Authors: Carlos Hallo, M.D., Chris Karampahtsis, M.D., M.P.H.

SUMMARY:
While Attention-Deficit/Hyperactivity Disorder (ADHD) neuroscience literature has substantially increased in recent years, the information remains disjointed, fragmented, and difficult to digest. Explaining ADHD in the context of its underlying neurocircuitry may provide the foundation for a new platform to educate trainees, patients, families, and school staff to improve patient outcomes. We aim to share a novel conceptualization of ADHD that distills the neuroscience and pathophysiology of ADHD to basic networks and nuclei – the task-positive, task-negative, and reward networks. 48 medical students completed pre-tests, viewed the 19-minute-long evidence-based video module with graphical explanations, and filled out post-tests to assess clinical knowledge, and the perceived value of a neuroscience platform in the understanding of ADHD and comfort in utilizing this information in patient care. Data analysis revealed that medical students reported the “Educational Module on ADHD: Neuroscience Simplified” as a useful learning tool leading to enhanced absorption of the neurobiological basis of ADHD and increased comfort in using this approach for educational purposes to apply in clinical settings. Results suggest that our module which correlates the criteria for ADHD outlined in the Diagnostic and Statistical Manual-5 (DSM-5) with the corresponding neurocircuitry in the brain is a valuable learning alternative for medical trainees with the potential to reduce the stigma around ADHD and provide resources resulting in timely diagnosis and appropriate interventions.

No. 98

How to Have “The Talk”: Teaching Ways to Discuss Anti-Black Racism for Asian American Children and Parents

Poster Presenter: Alan Lee
Lead Author: Eunice Yuen, M.D., Ph.D.
Co-Authors: Kara B. Beck, Herman L. Peng, Steven Sust, M.D.

SUMMARY:
Yale Compassionate Home, Action Together (CHATogether) is a group focusing on teaching coping skills through theater to Asian American children and parents as an intervention to promote mental wellness. This serves as a way to learn these skills in a community where mental illness is stigmatized. This method is influenced by Boal and Rohd’s work on Theater of the Oppressed.1-3 Rohd’s method has a facilitator who helps create a skit of a community problem.3 The skit is performed, and the audience stops the skit at various points to act out different approaches to the problem until a realistic solution is found.3 CHATogether follows a similar format: acting out a skit depicting a problem, having a moderator step in, and then acting out the scenario again using skills learned from moderation. Programs using theater have been used on a wide range of topics such as medical school education, teaching college students skills to fight sexual assault, and colorectal screening in Alaskan Natives.3-5 CHATogether applies the theater method using Youtube and other social media as a medium and addressing the topic of anti-Black racism through a series of videos. The videos aim to increase equity in these unsettled times and work against the impact of structural racism on our patients and colleagues by teaching skills that fight racism at the micro, personal level, which support the fight against structural racism by creating an environment where racism is less acceptable.6 These videos seek to reduce the impact of racism as experienced on a personal level and therefore promote mental wellness. There are three videos in the series. The first reviews current sociological research on effective anti-racist actions, then dives into a skit based on a real-life example of a failure to stand up to racism. The next two feature skits where Asian American children talk to parents about Black Lives Matters with the end goal of improving communication while standing up to racism from parents. Shorter videos and flash cards derived from the longer Youtube series are posted on Facebook, Instagram, and TikTok. These focus on teaching viewers specific, concrete coping skills. From preliminary feedback, audiences report our program helps develop a virtual support platform to discuss anti-racism topics, such as bystander response in facing racism, intercultural empathy and managing differential viewpoints with parents. Quantitative data on viewership from social media also reflects engagement of our audience, yet

more longitudinal tracking is warranted. In the future, this model can potentially be used as a form of community education to address a wide range of issues such as racism, parent-child conflict, etc., and awaits further validation on feasibility and efficacy. Possible psychological measures include the Asian American Racism-Related Stress Inventory (AARSI) to preliminarily assess viewers' experiences of racism and potentially inform future content creation.

No. 99

Nutmeg-Induced Psychosis: A Case Report

Poster Presenter: Matthew DeLuca, M.S.
Co-Authors: Ashley Fuchs, M.D., Michelle Thorpe, M.D., Adam Westrick

SUMMARY:
We relay the case of a 17-year-old African-American male with no past psychiatric history who was brought to the emergency department by his parents due to worsening bizarre behaviors, impulsivity and displays of grandiosity. The patient endorsed frequent recreational usage of nutmeg over the last 6 months. Nutmeg's potential to cause psychosis, and/or delirium has been widely theorized to be due to a metabolite myristicin. The use of nutmeg to achieve an accessible low-cost alternative to recreational drug use has been demonstrated since the early 1900's, with nutmeg usage dating back to the 1500's. A new resurgence of nutmeg use among teenagers has occurred due to a #NutmegChallenge, which gained traction through social media. Given the reported association between nutmeg consumption and psychosis, we considered the role of nutmeg and its metabolites in this patient's presentation of acute mania with psychotic features. In this case report we will examine the new resurgence among teenagers in use of nutmeg as a recreational drug , and its potential effects on this adolescents' psychiatric manifestations.

No. 100

Impact of Video Psychoeducation on the Perception and Knowledge of Electroconvulsive Therapy in Patients and Their Family Members

Poster Presenter: Manuel Ricardo Barojas Alvarez, M.D.
Co-Authors: Ariadna Mondragon, M.D., Reinhard Janssen Aguilar, M.D., Kevin Alan García Esparza, M.D.

SUMMARY:
Background: ECT is underutilized, as the stigmatized view of the treatment persists both in the general population, the media and even in the general medical field, where little is known about its current usefulness. Objective: The aim of this work is to improve the perception of ECT in patients and their relatives through the use of audiovisual material where simulation of the procedure is observed. Before and after, the spanish version of "ECT Perceptions and Knowledge Scale" (Tsai J et al; 2019) was applied. Methods: Descriptive statistical data were obtained, Chi-square was used to probe statistical significance between groups. Results: Of a total of 295 surveys, patients' relatives represented 56.27% (n:166) while patients represented 43.73% (n:129), the age ranges from 36 to 59 years represented the majority of relatives and patients 38.73% (n:64) and 43.75% (n:56) respectively. In all sample high school education predominated. Patients and relatives of patients with neurological disorders represented the majority of respondents 51.41% (n:85%) and 46% (n:60%), while psychiatric disorders represented only 23.94% (n:40) and 33.04% (n:43) respectively. There was an improvement in the perception and knowledge of ECT in 17 of 18 items due to the video, except in the item: "ECT is used to control or punish patients". Post-video, the number of positive responses increased in all groups to the question: "If I were depressed, I would try ECT" with a value of $p= <0.05$. Conclusions: This resource changes the perspective and knowledge of ECT. The majority of the sample does not believe that therapy is used as a punishment or to control patients, although this item does not present statistically significant post-video changes. However, this part could be emphasized in next videos.

No. 101

Case Report: Suicidal Ideation in Transgender Youth

Poster Presenter: Alex Lucci, M.S.
Co-Authors: Ashley Fuchs, M.D., Michelle Thorpe, M.D.

SUMMARY:
It is well documented that transgender patients are more at risk for suicidal ideation compared to the general population. Recent data indicated that 82% of transgender individuals have considered killing themselves and 40% have attempted suicide, with suicidality highest among transgender youth.i A meta-synthesis undertaken on published gray transgender suicidality literature to determine the average rate of suicidal ideation and attempts in this population showed that across 42 studies an average of 55% of respondents ideated about and 29% attempted suicide in their lifetimes.ii At the time of publication of their meta-synthesis, those averages were, respectively, 51% and 11% times that of the general public. iii Other studies have shown that suicide ideation, attempts, and deaths significantly burden this population and require improved understanding and prevention efforts.iv Often times, associated factors identified in these studies include high rates of depression, anxiety and substance abuse.

No. 102
The Effectiveness of Cognitive Behavioral Therapy Interventions on Depression and Anxiety Symptoms in Patients With or Without Co-Morbidities
Poster Presenter: Sarah H. Hollander, M.D.
Co-Authors: Rushikesh Vyas, M.D., Prathila Nair, M.D.

SUMMARY:
Depression and anxiety are commonly occurring and disabling mental health disorders worldwide. The management of these conditions is mainly focused on utilizing pharmacotherapy as first-line treatment. However, there is growing body of evidence showing that the combination of Cognitive Behavior Therapy (CBT)and pharmacotherapy has been very effective in treating depression and anxiety. The main strategies implemented in CBT are active, problem-focused, and collaborative where clinicians help patient to identify, evaluate, and modify cognitive distortions or otherwise unhelpful thinking associated with emotional distress. The purpose of this study is reviewing CBT as an equally effective treatment for depression and anxiety in comparison to pharmacotherapy. A comprehensive review of literature using databases, such as PubMed, NCBI, and Google Scholar was conducted. Different age groups, with or without co-morbidities treated with both pharmacotherapy and CBT for depre ssion and anxiety were part of the review. Our review concluded that CBT is equally effective treatment or a beneficial supplemental treatment for depression and anxiety in any age group, with or without other co-morbidities, and especially for pregnant women. However, more research should be conducted to implement this technique in current treatment guidelines.

No. 103
Are There Sufficient Bilingual Psychiatry Trainees to Serve Hispanic Patients Seeking Psychotherapy in Spanish?
Poster Presenter: Christian S. Monsalve
Co-Author: Cheryl A. Kennedy, M.D.

SUMMARY:
Background: The therapeutic relationship between a physician and Hispanic patient with limited English proficiency presents unique challenges. Generally, there is a demand for bilingual physicians that far outpaces the supply. Among all medical specialties, this discrepancy is perhaps most consequential in Psychiatry. Furthermore, within Psychiatry, the matter of language concordance is most significant in psychotherapy given its emotionally charged nature, the important subtleties of communication, and the need for cultural competence. This is important because compared to Non-Hispanic Whites, Hispanics are almost twice as likely to prefer counseling over medications for the treatment of depression. What do the future generations of psychiatric-psychotherapists look like? In 2019, among 1,621 ERAS applicants to psychiatry residency, only 111 (6.8%) were of Hispanic origin. For various reasons, this does not imply the same percentage of applicants are fluent in Spanish. Methods: In September 2020, the APA Psychotherapy Caucus will host a Virtual Residency Fair for students seeking strong psychotherapy training. All 260 program directors were contacted through the American Association of Directors of Psychiatry Residency Training. Results: Only 37/260

(14.2%) programs expressed strong psychotherapy training opportunities and availability for the proposed dates by the registration deadline. Of the 37 registered programs, 26 (70.3%) stated that Spanish would be an asset to their program. However, only 29/281 (10.3%) of registered students applying to psychiatry residency this cycle stated they had fluency in Spanish. Conclusion: There are at least three potential opportunities to increase the number of Spanish speaking psychiatrists practicing psychotherapy in the U.S. Language: the Waco (Texas) Family Medicine Residency Program has a Spanish language track aimed at equipping residents to better serve the unique needs of Hispanic patients. Psychiatry programs may consider adopting a similar opportunity. Recruitment: different bodies within organized psychiatry such as the APA and AAAP have attempted to recruit more students from underrepresented groups into the field. However, even if more Hispanics were recruited, it would not guarantee fluency in Spanish. Nor, would it promise that these students would be attracted to psychotherapy. This highlights a potential future opportunity for collaboration between the APA Psychotherapy Caucus, APA Hispanic Caucus, and the American Academy of Psychoanalysis and Dynamic Psychiatry. Pro-Bono: understanding the economic capacity of the average immigrant, offering pro-bono (or drastically reduced cost) psychotherapy may partially serve to meet patient needs. However, this is not a service that can be mandated, nor will it solve the capacity problem. Psychiatrists should not abandon psychotherapy. To do so would further exacerbate unmet needs of various Hispanic immigrant patients of limited English proficiency.

No. 104

From Unseen to Seen: Creating a Curriculum in Structural Competency for Psychiatric Residents at Mount Sinai Beth Israel

Poster Presenter: Rachael Holbreich, M.D.
Co-Authors: Carmen Casasnovas, Ronald Sutton, Kenneth Bryan Ashley, M.D.

SUMMARY:

Background: First year psychiatry residents are beginning their careers as physicians during a time in which ongoing social and racial injustices are at the forefront of the public eye. The role of physicians in times of social upheaval can be difficult to navigate, particularly for new physicians.1,4 Residency training provides a crucial foundation of knowledge that new physicians rely on to meet patient needs.In recent decades, there has been a growth in scientific research that identifies multiple ways in which socioeconomic, political, and racial factors can negatively affect health.5 Subsequently, medical education began integrating cultural competency curriculums to provide physicians with tools to address these disparities in a clinical setting. However, cultural competency often fails to address the upstream systems that create and maintain health care disparities observed at an individual level.2 Examples of these systems include, but are not limited to, education, policing policies, housing restrictions, and food distribution. If clinicians are to impact health care disparities, they must be knowledgeable of the structural forces that maintain these health inequalities. Thus, medical training has begun to shift from cultural to structural competency. However, there remains a lack of specific guidelines detailing the integral components of a curriculum on structural competency. Methods: We offer a detailed structural competency curriculum for first year psychiatry residents that could be adapted to other residency training programs. This seminar encompases 15 one hour sessions that run throughout the PGY1 year. Content follows a three-tiered approach: (1) exploring provider bias, recognizing the role of structures, discussing the history of racism in medicine, and developinging language to discuss structural factors; (2) restructuring clinical formulation through the lens provided by tier one; (3) adapting this knowledge beyond the clinical setting to understand the role clinicians play in systemic change to promote health care equity on a systemic and individual level.3 Conclusion: We will provide medical training programs with an example of a curriculum in structural competency to promote the implementation of similar curricula as a means of promoting health equity

No. 105
Seats at the Table: Establishing an Embedded Diversity, Equity, and Inclusion Chair Within Residencies
Poster Presenter: Rachel H. Han, M.D.
Co-Author: Jon K. Lindefjeld, M.D.

SUMMARY:
The term "diversity" has become a lightning rod and is almost inseparable from "political correctness," another concept that is often villainized and misunderstood. In a discipline where understanding cultural context and the social determinants of health is vital, visceral sentiments about diversity must be set aside to allow space for better understanding. Psychiatry residency programs exhibit significant differences from program-to-program, with a large variety in resident demographics and patient population served. That said, areas of improvement for minority inclusion and better cultural sensitivity remain. To borrow the words of former APA Chair Dr. Altha Stewart when addressing the APA on its 175th session, "Promoting diversity, equity, and inclusion is everybody's work, not just that of our minority and underrepresented members" (1). Additionally, in recent years, the Liaison Committee on Medical Education (LCME), the Accreditation Council for Graduate Medical Education (ACGME), and the Joint Commission all have added several accreditation standards to promote institutions' work on diversity, equity, and inclusion (DEI), and the social contract gives clinician-educators the responsibility to advocate for DEI (2-4). In seeking opportunities to strive for these elements, Psychiatry residency programs across the country are deliberately instating a Chief Resident for DEI (5). Such a position can strengthen residencies by focusing on recruitment, increasing bias awareness through education, and bettering clinical skills by coordinating clinical rotations in areas underrepresented by mental health providers. Furthermore, this position allows for best-practice exchange between residencies by establishing a point of contact for outreach and discussion. In this poster, we seek to showcase how this role came to fruition, what the goals are, and the road ahead. We hope to spark discussion on best practices.

No. 106
Evaluating the Implementation of the Montreal Jewish General Hospital Psychiatric Emergency Handover Project
Poster Presenter: Jonathan Lafontaine, M.D., Ph.D.
Co-Authors: Nicola Casacalenda, M.D., Michel Perreault, Ph.D., Vincent Laliberte, M.D.

SUMMARY:
INTRO: In the healthcare setting, handover refers to the transfer of information, care and responsibility for patients from one professional to another. It is used in multiple medical contexts, but it is of particular importance in the emergency room where shift changes happen two to three times a day. A poor transfer of information during handover between physicians may lead to more medical errors and lawsuits. Despite the negative consequences of poor handovers, only a few high-quality studies have been conducted to identify best practices. The I-PASS model was developed in order to standardize the handover process. I-PASS is a mnemonic tool which stands for Illness severity; Patient summary; Action list; Situation awareness and contingency planning; Synthesis by receiver. Psychiatrists, nurses and residents at the Montreal Jewish General Hospital (JGH) psychiatric emergency were trained and the I-PASS handover model was then implemented. METHOD: 31 psychiatrists, nurses and residents working at the JGH psychiatric emergency participated in a training session. A pre-training questionnaire was first filled by participants to examine the current status of handovers at the JGH psychiatric emergency. After the training, a second questionnaire was sent to measure the perceived quality of the handover training session, as well as benefits and challenges of the I-PASS handover model prior to its implementation. Finally, following the implementation, 2 focus groups were held to collect feedback from participants. Content analysis was performed to classify all statements into different categories and themes. RESULTS: Pre-implementation: 95% of participants reported that handover occurred at every shift change but 75% said that the information was incomplete. After the training, the most significant anticipated obstacle for implementation was the lack of time to properly fill out the form, especially when it is busy in the emergency. Training was overall much appreciated

and 77% of participants were able to correctly identify all 5 steps of the I-PASS protocol following the training. During the focus groups, post-implementation, participants unanimously acknowledged an improvement in the handover process. Handovers were faster and more direct and provided all key information about patients. It was also noted that the quality of the information was better. It was suggested to adapt the form to remove unnecessary details and include specific key information. The use of a typed format instead of written notes was also recommended. CONCLUSION: Overall, the implementation of the I-PASS handover model at the JGH psychiatric emergency was much appreciated by psychiatrists, nurses and residents. It has resulted in more comprehensive handovers as well as an assurance of key information being transferred.

No. 107
Is There an Eye in Proxy? A Look at What Determines Proxy Competency

Poster Presenter: Kaajal Patel, D.O.
Lead Author: Matthew William Morrison, M.D.
Co-Author: Shixie Jiang, M.D.

SUMMARY:
Objectives: Apply an example discussed to assist in determining the competency or incompetency of a patient's proxy decision maker Recognize factors that determine competency of a patient. Understand how a patient's proxy may approach decision making for the incompetent patient. Determine, as the provider, that your patient is being appropriately advocated for by their proxy. Provide techniques to patients and their families on how to ensure appropriate advocacy for the incompetent patient Abstract: We begin the presentation by providing an interesting patient case of enucleation that occurred during an episode of a patient's active psychosis. The patient, near death and determined to be incompetent, gave his decision-making power to his proxy. However, the proxy was advocating choices for the patient that were considered questionable by the treatment team. Through this case, we will explore how the case was handled by the physicians caring for the patient and the extent to which the proxy was involved in this decision-making process. This example leads into our topic of determining the competency of a patient's proxy. Involvement of a patient in their treatment plan is one of the most essential components of ethical medical care. Therefore, a significant issue arises when a patient becomes incompetent. Patients often designate a proxy decision-maker to continue making medical care decisions for them while they are unable to. This can be a challenging crossroads for physicians when the proxy decision-maker's choices contradict or clash with what may seem to be in the patient's best interests or if there is compelling reason to believe it contradicts substituted judgement for the patient based on the information available. Our session focuses on the components that determine competency of a proxy decision-maker. We begin by exploring what determines incompetency of a patient. Once a proxy is deemed essential for continued care of the patient, we transition to an explanation of the decision-making process that a proxy will go through. This touches on some of the ongoing debates on how a proxy should make decisions for a patient. Examples of such debates include should a proxy use "substituted judgement" or act in the "best interest" for the patient, and should a proxy make decisions in the mindset of the patient's past, present, or future self. These factors are explored, and the audience is given a chance to question what they would do if placed in the same position as a proxy decision-maker. We will provide techniques on how physicians can take then determine if the decisions being made by a patient's proxy are sound. This will touch on the biases physicians may have when working with the patient's decision-maker. Throughout the entire session, we will explore examples of proxy decision making in real patient cases.

No. 108
Transgender Health Psychiatry Grand Rounds

Poster Presenter: Elsa Stoff
Co-Authors: Jesse Krikorian, Gretchen Magnani

SUMMARY:
In the 2015 US Transgender Survey, 33% of respondents reported a negative experience with a healthcare provider due to gender identity in the

prior 12 months. Transgender health education has historically been lacking: educational programs typically focus on either medical or cultural issues, but both are key. The goal of this project is to increase provider knowledge and confidence regarding transgender health by implementing a psychiatry-specific clinical and cultural curriculum in the form of an hour-long grand rounds presentation tailored to specialty and educational experience.   This teaching program has been implemented at Cooper University Hospital Psychiatry grand rounds and Cooper Medical School. Participating students, residents, and attendings (n=68) completed questionnaires about their transgender health knowledge and experience pre- and post-presentation.   Data analysis using McNemar's test and Wilcoxon signed-rank test showed a statistically significant increase in familiarity with transgender health vocabulary and resources. Additionally, participant feedback noted increased comfort and confidence with transgender health.   The transgender community is a vulnerable population, and mental health for this population is a rising concern. These results show that a concise transgender health intervention can address clinical and cultural competency with measurable effects on provider knowledge and confidence.

Poster Session 6

No. 1

Positive Effect of Benzodiazepine Use in Geriatric Patients: A Literature Review

Poster Presenter: Hussain Syed
Co-Authors: Ashley Fuchs, M.D., Monica Dhingra, M.D.

SUMMARY:

Benzodiazepines (BZD), such as Lorazepam, are one of the avoided psychotropic medications among the elderly due to common knowledge that they can cause temporary worsening cognitive dysfunction, particularly short term memory loss associated with recall. They are prescribed for a wide array of symptoms including anxiety, especially when related to their cognitive impairment, as well as sleep disorders, when other medication classes fail. The use of BZD has been widely stigmatized for years due to complaints of long term changes in cognition among geriatric patients, particularly in those already presenting with mild cognitive dysfunction. Here we will discuss the positive changes brought on by prescribing BZD and explore various factors that affect cognitive changes within this population. Our analysis found no causal association between BZD use and cognitive decline long term. In other words, benzodiazepine-induced cognitive dysfunction is reversible and the benefits of their use may outweigh the risks associated.

No. 2

Socially Distanced Cultural Formulation Interview Workshops: The Case of a Southern California Academic Medical Center

Poster Presenter: Andrew C. Park, M.D.
Co-Authors: Kevin J. Ing, M.D., Amina Sutherland-Stolting, M.D., Kathryn Bennett, Anju Hurria, M.D.

SUMMARY:

Introduction Culture is an important aspect of identity for many patients, influencing encounters in healthcare. The Cultural Formulation Interview (CFI) was developed to incorporate this dynamic, as several studies noted that barriers to mental health care include disparity and difficulty in diagnosis due to differences in background of clinicians and patients and impact on treatment for individuals.1-3 Training for residents and fellows includes ACGME competencies to "demonstrate sensitivity and responsiveness to a diverse patient population" and "communicate effectively … across a broad range of socioeconomic and cultural backgrounds".4 Similar standards are mandated for medical school training. Current diversity amongst physicians does not reflect the cultural makeup found in the U.S. population. Recent events have renewed attention to chronic disparities amongst minority populations in America and further highlight a need and responsibility of the psychiatric community to address these inequalities. Workshop Description Participants received an orientation lecture for the CFI. A demonstration of the CFI with a standardized patient and psychiatry resident followed. A breakout discussion was led by expert consultants including a doctoral student in critical race theory. The workshop was conducted via video teleconference in

adherence with COVID-19 social distancing mandates. Results Afterward, participants completed a self-assessment of how CFI-based training impacted their confidence in communication and cultural knowledge. As of September 3, 2020, 6 participants participated in the workshop: 4 psychiatrists (66%) and 2 medical students (33%). Participants estimated their amount of cross-cultural training over the past five years as: 2 (33%) less than five hours, 3 (50%) five to ten hours, and 1 (17%) eleven to twenty-five hours. Amongst all participants, 3 (50%) identified their race as white and 3 (50%) identified their race as Asian. Participants evaluated the workshop on a five-point Likert scale (1=strongly disagree to 5=strongly agree). The lowest mean score of 3.8 was given to, "As a result of this training, I have a clearer idea of how to start implementing the Cultural Formulation in my service/program". The highest mean scores of 4.8 were given to overall workshop rating and, "I would like to receive further training on the Cultural Formulation Interview". Discussion Notable characteristics of this cohort include relative racial homogeneity and low amount of prior cross-cultural training. There was also agreement amongst participants on a desire for more cross-cultural training and the CFI in particular. In response to the dearth of cross-cultural training observed, CFI workshops will be implemented as part of the medical student psychiatry clerkship. Social distancing will be observed for the foreseeable future, though more standardized patients and active learning will be enabled after the social distancing mandate is lifted.

No. 3

Collaborative Care Through a Perinatal Lens: Challenges and Opportunities

Poster Presenter: Amelia Wendt, M.D.
Co-Authors: Ramanpreet Toor, M.D., Jennifer Erickson, D.O.

SUMMARY:
Purpose: Collaborative care is a specific form of integrated care that operationalizes the principles of the chronic care model to improve access to evidence-based mental health treatments for primary care patients. Numerous studies have found collaborative care to be effective, but little formal assessment has been done to examine implementation in perinatal populations. The purpose of this poster is to discuss the challenges, opportunities, and resources that are evolving as perinatal collaborative care expands. Methods: To further identify the challenges and opportunities in perinatal collaborative care, a three-week elective was completed at University of Washington sites that have implemented collaborative care. Providers and staff were interviewed regarding their experiences working in collaborative care, with an emphasis on perinatal considerations. Clinical decision-making tools were identified that can support providers when working with perinatal populations. Results: Sites at the University of Washington are currently implementing perinatal collaborative care. Challenges identified included limited data in pregnant and post-postpartum populations to assist in evidence-based care, site of implementation for care (primary care versus obstetric clinic), patients completing an episode of care with their obstetric provider and transitioning back to a primary care provider, ensuring adequate informed consent conversations occur, scheduling difficulties, and billing considerations. Opportunities identified included frequency of clinic visits and patient motivation for change. Clinical decision-making tools identified included: Reprotox, LactMed, MotherToBaby, Postpartum Support International, and MGH Center for Women's Mental Health. Conclusions: Perinatal collaborative care is an expanding area of implementation and research. Perinatal collaborative care comes with a unique set of challenges and considerations. Future steps include continued research in perinatal collaborative care with a focus on long-term outcomes and sustainability.

No. 4

Creation of a Systematic, Reproducible Needs Assessment in Development of a Military Unique Competency Curriculum in a Psychiatric Residency Program

Poster Presenter: Zachary Dace Brooks, D.O.
Lead Author: Sarah C. McLeroy, M.D.
Co-Authors: Mary A. Thomas, M.D., Luke A. White, D.O., M.P.H., Vincent Capaldi

SUMMARY:
Background: The first year of practice after residency as a new attending can be daunting for any psychiatrist. However, military psychiatrists are in a distinctly challenging position. They need to be well-versed in both evidence-based psychiatric practice and intimately familiar with unique military competencies. A military psychiatrist is an officer and serves as a prominent military leader and physician for their unit. They often quickly deploy after residency graduation, and thus gaining vital skills in military specific competencies is critical during the four short years of residency training. **Methods**: Given the unique challenges of training residents as both psychiatrists and military officers, a high need existed for a validated, effective, reproducible military leadership curriculum that could be disseminated to all military psychiatry training programs, which currently produce nearly 50 psychiatrists annually. The first step in achieving this aim was the creation of a Curriculum Needs Assessment. This assessment was created through a combination of examining military officers' readiness objectives in 4 key areas: clinical competencies, administrative competencies, officership competencies, and operational competencies. The assessment was then validated using cognitive interviewing to assess accuracy of question intent and clarity. **Results**: We performed a two-factor analysis on each of 15 proposed curriculum topics. Factors for analysis included residents' perceived confidence in their knowledge and ability to perform each competency based on current training. Data on effectiveness was collected through multiple Plan Do Study Act (PDSA) cycles. **Conclusion**: With the finalized Needs Assessment complete, the next step will be the administration of the assessment, analysis of those results and ultimately the design and implementation of a formal competency-based curriculum. The end-goal of this multi-phase research and quality improvement project is production of a manualized military competencies curriculum which may be implemented in any Department of Defense psychiatry residency program.

No. 5

Initial Implementation of a Reproducible Needs Assessment in Development of a Military Unique Competency Curriculum in a Psychiatric Residency Program

Poster Presenter: Zachary Dace Brooks, D.O.
Lead Author: Sarah C. McLeroy, M.D.
Co-Authors: Luke A. White, D.O., M.P.H., Mary A. Thomas, M.D., Vincent Capaldi

SUMMARY:
Background: Military physicians frequently deploy soon after residency graduation and thus are expected to be well-versed in both current healthcare practices and military regulations. To ensure that the newly graduated military physician is ready to be both a healthcare provider and an officer when they arrive to their unit, military competency topics need to be included in the residency curriculum. This is particularly important for military psychiatrists as they play a key role in determining unit level support and preventive programs, fitness for duty, and medical separations for many service members. This poster builds on a previous project that demonstrated the need for and creation process of a military unique competency curriculum for Department of Defense psychiatry residency programs. **Methods**: After creating a needs assessment based on four domains of military readiness objectives (clinical, administrative, operational, and officership), the next step in developing a military competencies psychiatry curriculum was the administration of the assessment, analysis of the results, and implementation of the results into the development of the curriculum. All current residents and recent graduates from the past 3 classes of the National Capital Consortium Walter Reed National Military Medical Center Psychiatry program were emailed the survey to complete via google forms. Survey results contained no identifiable information, and link access was anonymous and untraceable. There were 60 total respondents comprised of 43 current trainees and 17 recent graduates. Additionally, a separate qualitative survey was distributed to direct physician supervisors of recent graduates, 3 of whom responded in short-essay format. The data was then analyzed with SPSS and examined for trends such as growth in confidence between

trainee levels, and topics consistently with low confidence despite training level. **Results**: Knowledge gaps were identified based on areas in which respondents expressed lowest levels of confidence. The areas most in need of targeted improvement included official military correspondence, military regulations, leading a suicide prevention program, and writing evaluations of both military & civilian subordinates. Using the data provided, the course curriculum and didactics for all 4 years of the residency program were modified and targeted toward their knowledge gaps, and efficacy of this change will be explored in a subsequent report in the greater project. **Conclusion**: With the first administration of the Needs Assessment and analysis of the results, the next step will be to continue development and evolution of curriculum before repeating administration of the assessment and monitoring change. The end-goal of this multi-phase research and quality improvement project is production of a manualized military competency curriculum which may be implemented in any Department of Defense psychiatry residency program.

No. 6

2020-2021 University of Central Florida College of Medicine Curriculum Enhancements on Pain Management and Opioid-Use Disorder

Poster Presenter: Matthew P. Abrams
Co-Authors: Bernard Sarmiento, Magdalena Pasarica, M.D., Denise Kay, Ph.D., Martin Klapheke, M.D.

SUMMARY:
Although the opioid prescribing rate continues to decline nationally as seen in the 2019 AMA Opioid Task Force progress report, opioid-involved overdose death rates continue to rise. The significant mortality rate related to heroin, fentanyl, fentanyl analogs and prescription opioids represent a national emergency. Medical education thus plays a crucial role in training future physicians to be capable of managing both pain and opioid-use disorder. The University of Central Florida (UCF) College of Medicine performed a comprehensive needs assessment of its undergraduate medical curriculum from December 2018 to December 2019. Utilizing the 31 AAMC recommended competencies for assessment and management of pain including substance use disorder treatment options, three independent faculty members found that all four competency domains and all 31 competencies were covered within the UCF curriculum. However, comparing this to the AAMC national standard with 102 reported medical schools, Domain 1, which represents introduction to pain and its multidimensional nature, was not fully addressed in the 1st year UCF curriculum. The national standard shows that 75% of US medical schools cover Domain 1 competencies in their 1st-year curriculum. Additionally, Domain 2 (pain recognition, assessment and measurement) and Domain 4 (the influence of context on pain management) were also not optimally addressed. Using findings from this needs assessment, specific competencies with insufficient coverage were targeted with new and updated sessions that integrated and improved the effectiveness of students' learning and addressed prior gaps in UCF's opioid curriculum. In the 3rd-year curriculum, a total of 26 competencies from all four domains were already employed in three pain and opioid-related sessions. These included a case study session on "Acute and Chronic Pain", a virtual, self-learning module session on "Common Outpatient Pain Presentations", and a simulation session on "Chronic Pain and Substance Use Disorder". A total of 18 sessions were added for 1st, 2nd, 3rd and 4th year curriculums that targeted all 31 recommended competencies. These included one interprofessional simulation session on pain management and opioid abuse and 17 self-learning modules covering the prevention, identification and treatment of opioid use disorder, opioid misuse and substance use disorder. The outcomes of the simulation session were surveyed electronically and the self-learning modules outcomes were measured using formative assessments upon completion. This poster will describe the competencies addressed by the additions and updates to the curriculum and final curricular mapping. It will cover these educational interventions for the purpose of enhancing the training of future physicians in pain management and substance abuse. "The comprehensive needs assessment meaningfully identified areas for targeted curricular changes and this approach could

be used by other institutions looking to study and improve their curriculum for opioid use disorders."

No. 7

Knowledge Surrounding Proper Administration of Antipsychotic Orally Disintegrating Tablets

Poster Presenter: Barry R. Bryant, B.S.
Co-Authors: Heidy Rivera, B.S., Tae Joon Park, B.S.N., Sujin Weinstein, Pharm.D., Paul S. Nestadt, M.D.

SUMMARY:

Background: Orally disintegrating tablets (ODT) are not intended to be absorbed orally but instead must be swallowed.1 Improper administration can result in treatment failure or medication diversion.2 We investigated whether those who administer antipsychotic medications understand important administration technique differences between ODTs, sublingual (SL) medications, and other methods of oral administration. Methods: An anonymous 12-item survey was sent to 158 psychiatric nurses across five inpatient units in a large teaching hospital. Preliminary questions collected demographic data before a series of six questions to assess knowledge surrounding proper administration of ODT antipsychotics. Results: Forty-five nurses completed the survey for a response rate of 28%, and 91% of respondents had greater than one year of experience administering antipsychotics. Only one of the six questions was answered correctly by the majority of respondents. Years of experience was not significantly correlated with accurate answer selection for any of the questions. For the question that asked explicitly about ODT administration, only 27% selected the correct answer while 62% incorrectly reported that ODTs could be administered sublingually. Conclusions: The results of our survey demonstrate that better education is needed concerning the differences between ODT and SL medications to prevent misadministration and its consequences. We propose a plan for incorporating evidence-based patient specific alerts in the electronic medical record, in addition to blended face-to-face and electronic learning for those who administer ODT antipsychotics.3

No. 8

#PsychResChat: Can a Twitter-Based Community Improve Resident Wellbeing and Promote Career Development?

Poster Presenter: Tolulope O. Odebunmi, M.D., M.P.H.
Co-Authors: Christina L. Warner, M.D., Atasha Jordan, M.D., M.B.A., Michael Anthony McClurkin, M.D., M.P.P., Katharine J. Nelson, M.D.

SUMMARY:

Background: Burnout during residency training has been found to be increasingly prevalent. Building a sense of community has been identified as a factor that reduces physician burnout and moral injury. Social groups and networks provide a sense of shared identity among individuals which serve to manage stress. Previous initiatives have been implemented at the institutional and/or program level, but few efforts have been made nationwide to build community within the psychiatry resident physician population. The PsychResChat Twitter account was created by a multi-institutional panel of psychiatry residents with the goal of creating a virtual community via monthly online “chats” centering on pertinent topics impacting resident life. The chat page currently has 1,259 followers composed of psychiatry residents and other members of the international psychiatry Twitter community. **Methods**: The PsychResChat Twitter account was created in August 2019. Social networking was utilized to recruit participants to the Twitter platform. A “chat” is a one-hour, synchronous interaction with participants responding to posted prompts, such as, “What do you think are the greatest barriers to caring for your own health and mental health during your training?” After six bimonthly “chats” participants were asked through to rate the degree to which this chat platform has been instrumental in building their sense of wellbeing and career development. Results were collected via Twitter analytics. **Results**: According to Twitter analytics, 100% (n=31) of respondents indicated that PsychResChat improved their sense of wellbeing and/or community. 71% (n=17) reported that PsychResChat has been helpful in developing new connections in the field of psychiatry and 83% (n=24) reported that PsychResChat has helped them to learn more about

the field of psychiatry. The first chat had 9 participants. Participation in the chats has increased overtime with an average of 20 participants bi-weekly and a monthly average of 87 new followers and 353 unique mentions. **Discussion**: Twitter can be an effective tool for developing virtual community and career development opportunities. During the COVID19 pandemic virtual gathering spaces have been integral in maintaining social and professional connections. Our initiative has demonstrated that a majority of users that are a part of PsychResChat agree that this social media platform has helped to improve their sense of wellbeing, develop community, engage with colleagues internationally, and promote learning in the field of psychiatry. Limitations of this data are that poll respondents were participants who self-selected to engage in this activity. Future directions include continuing to develop a robust network of participants, developing cross-national networking opportunities for early career psychiatrists, and determining the longitudinal impact of online community building on wellness, career development, and clinical outcomes.

No. 9

Building Resiliency Through Mindfulness Training for Healthcare Practitioners

Poster Presenter: Seth J. Kalin, M.D.
Co-Authors: Kevin Freeman, Scott Rodgers

SUMMARY:
Background: Mental health strain on physicians and other healthcare practitioners (HCPs) leads to burnout, decreased job satisfaction, affects patient care, and increases rates of depression and suicide. Mindfulness techniques are well-validated, evidence-based treatments used across a variety of contexts to treat mental health problems, including mental health problems with HCPs. Accordingly, an introductory course on mindfulness was created and offered to HCPs at the University of Mississippi Medical Center (UMMC) to help build resiliency and reduce the burden of burnout. Methods: Over 12 weeks, 5 participants (3 resident physicians and 2 non-physician HCPs) met 10 times for approximately 1.5 hours per meeting. Due to the COVID-19 pandemic, the final four meetings were held over audiovisual technology via the Zoom app. The first meeting, the instructor introduced mindfulness and free resources were provided. The next eight meetings each consisted of learning a new, different meditation technique. The final session was a gratitude reflection and group feedback. The instructor used evidence-based surveys, collected before and after the 10 meetings to measure results. These included the Perceived Stress Scale (PSS), Depression, Anxiety and Stress Scale (DASS-21), Stanford Professional Fulfillment Index (PFI), Mindful Attention and Awareness Scale (MASS) and the Well-Being Index (WBI) with N=5 for all surveys except the PFI which is a physician-specific scale (N=3). Data were expressed for each survey on standard score ranges, and mean changes in scores before and after mindfulness training were averaged for the group and compared statistically via paired t tests. A correlational analysis of sessions attended and magnitude of score change was also conducted. Significance was set at $p \leq 0.05$. Results: Attendance for all sessions ranged from 50-100% with the average being 76%. One participant did not attend the Zoom group meetings. Results showed a statistically significant improvement on the PSS, depression symptoms from the DASS-21 and increase on the MAAS (p''s ≤ 0.05). Stress symptoms on the DASS, the PFI and the WBI results suggested a trend for improvement but were not significant (p''s ranged from 0.082 to 0.794). The anxiety portion of the DASS-21 suggested slight worsening of symptoms without significance ($p > 0.99$). Conclusion: UMMC''s Psychiatry Department introduced a mindfulness training program available to all resident physicians and other HCPs to help build resiliency with the intent of reducing burnout. Evidence-based surveys revealed positive outcomes including a statistically significant reduction in stress and increase in mindful awareness. Future studies will include mindfulness groups with less time commitment to increase access and subject participation.

No. 10

Integrated Therapy for Residents: A Necessary Intervention in Response to Growing Burnout and Suicide Amongst Physicians

Poster Presenter: Akriti Sinha, M.D.

SUMMARY:
Background: One of the most critical and high-profile issues in medicine today is physician burnout and suicide. Tragically, the physician suicide rate has been found to be more than double the rate of that of the general U.S. population, thus affecting 300-400 physicians per year.[1] It has been estimated that 80% of burnout can be attributed to organizational factors, while the other 20% to individual factors.[2] The year 2020 saw the world bracing itself for the coronavirus pandemic. The healthcare system crumbled as hospitals ran out of PPE. Several doctors died from infection or contracted it while transmitting the virus to their family and patients. It is a fact that the COVID-19 pandemic will have mental health consequences on healthcare workers. Pandemic or not, residents deserve a quality mental health care which involves time to recuperate from the burn out and moral injury associated with their training. Methods: 39 of the 41 residents in the program filled a pre-therapy questionnaire that included questions pertaining to supporting the idea of free therapy sessions (up to 6) to be made available for residents, their perception of its benefits to their job performance and role in de-stigmatization of mental health care. 12 residents participated in the study and completed one-hour session of individual therapy with the EAP director from April to June, 2019. Each participant completed a post-therapy questionnaire regarding whether they found the session helpful, if they will be open to participating in up to 6 such sessions in a year, if they supported the idea of 2 "wellness days" each year, and if it was essential to seek permission from the PDs to utilize the "wellness days" under short notice. Results: Of 39 residents, 82% supported the idea of free therapy sessions, 87% thought it will make them a better physician, 85% thought it will reduce the stigma associated with mental illness. Of 12 residents who underwent therapy, 91% thought the session to be helpful, 100% were open to participating in future sessions, 100% supported the idea of 2 personal days a year while 75% supported the idea of taking permission from the PD. Discussion: Physician burn out and suicide can be financially straining to healthcare. In the midst of the COVID-19 pandemic, the challenges of moral injury have magnified. We cannot emphasize enough on establishing a universal program for residents where they can receive appropriate treatment without fearing the licensure consequences or stigma associated with mental health treatment seeking.

No. 11

Making Wellness a (Virtual) Reality: Multimodal Mindfulness Training in Undergraduate Medical Education

Poster Presenter: Jia Pamela Guo, B.S.

SUMMARY:
Background: Burnout among medical professionals now exceeds 50% and begins in undergraduate medical education (1-2). Though instructor-led didactic curriculum using mindfulness-based intervention (MBI) can mitigate medical student burnout and stress (3), this may not be accessible to all and limit opportunities afforded by self-guided training. Multimodal mindfulness trainings may meet this need through individualized learning and flexibility of access. Objective: To compare effects of different modalities for mindfulness-based training on undergraduate healthcare student wellness. Methods: School of Medicine students were recruited to undergo 3 wellness interventions: 1) An instructor-led MBI featuring didactic and experiential learning (Standard); 2) A virtual mindfulness program (Virtual) where students selected free or paid, Web or mobile applications for self-guided use; 3) combination of both (Combo). After 4 weeks of use, self-report surveys assessed the Perceived Stress Scale (PSS), Applied Mindfulness Process Scale (AMPS), Oldenburg Burnout Inventory (OLBI), and Brief Resilience Scale (BRS). Between-group differences were evaluated using analysis of variance. Results: Of 98 completed surveys, there were 9 Standard, 26 Virtual, 13 Combo and 50 Control users. Paired sample T test indicated that virtual app use significantly reduced stress levels, (PSS) $t(38) = 2.915$, $p = .006$ while increasing mindfulness, (AMPS) $t(38) = -3.525$, $p = .001$. Virtual app use had no significant impact on measures for resiliency (BRS) and burnout (OBLI). Two-way ANCOVA revealed significant main effect on virtual app use for PSS, $F(1, 93) = 4.629$, $p = .034$, and significant interaction present between virtual use and standard curriculum participation, $F(1, 93) = 5.219$, $p = .025$. Simple main effects analysis showed

that virtual group had significantly lower stress than non-virtual group when participating in standard curriculum (p = .013), but there were no differences between virtual group and non-virtual group when not participating wellness curriculum (p = .893).   Discussion: To our knowledge, this is the first study to compare a self-guided virtual approach to didactic instructor-led wellness curricula. The results suggest that virtual wellness tools may decrease stress and empower students to apply mindfulness to their daily lives, and that didactic instruction combined with self-guided virtual practice appears optimally effective.   Conclusion: Multimodal approaches can enhance wellness curricula and decrease accessibility barriers. Incorporating virtual and traditional didactic tools for wellness practice may be ideal in a time when many medical schools have reduced in-person instruction time and increased virtual instructional delivery. This study opens the door for further research regarding other multimodal approaches to wellness that can be adapted to both in-person and virtual formats.

No. 12

Moving Forward by Retreating to Wellness

Poster Presenter: Fred Jones-Rosa, M.D.
Co-Authors: Cody Alan Bryant, M.D., Vanessa L. Padilla, M.D.

SUMMARY:

Background: Achieving physician wellness while reducing burnout are two challenges for residency training programs to develop, sustain, and promote (Block, 2016). A 2016 multi-specialty study found that Psychiatry residents fell into the middle of the burnout range at 70%, with General Surgery ranking the highest (89%) and Pathology the lowest (46%) (Holmes, 2016). Many studies have examined methods of promoting wellness through multiple interventions in the residency program curriculum (Eckleberry-Hunt, 2009; Cornelius, 2017). Our institution implements two resident retreats during the academic year meant to foster wellness among residents. This study aims to assess the efficacy of retreats on improving burnout and self-perceived wellness. Methods: We developed a survey using questions based on multiple validated burnout and wellness surveys including the 'Maslach Burnout Inventory,' and "Professional Quality of Life Scale," to measure resident wellness before and after a scheduled all-resident retreat. Each question was assigned a score on a scale of 0-4 ("never" to "always"). Questions were both positively and negatively worded and reverse coding was used to develop a composite wellness score based on answers to the survey. The survey was administered two weeks before and after the resident retreat. Results: Surveys were completed by 52 out of 55 psychiatry residents at our residency program and differences were analyzed using a 2-tailed t-test. Findings on entire-group analysis showed no significant differences between individual questions nor between composite scores for the two surveys. The analysis did show a significant program-wide decrease (negative situations, less often) in the averages of scores that were negatively worded. When analyzing survey data within each year of the residency, however, there were significant decreases in scores on positively worded questions (positive situations, less often) for only PGY-1 and PGY-2 classes. Discussion: Findings from this study demonstrate that the residents showed a significant improvement in responses to negative survey questions after the retreat although overall there were no significant differences between composite scores or between individual survey questions. Among the PGY1 and PGY2 classes, there were significant decreases in positive scores which may be related to their complex training schedule, longer duty hours, and a higher number of on-call shifts. More time during retreats may be required to address adequate wellness strategies for the PGY1 and PGY2 classes. We expect to use these findings to improve future residency retreats, including the upcoming second yearly retreat. Continued analysis may provide further insight into program wellness strategies and contribute to a framework for retreats that may help the program achieve improved wellness for all resident levels.

No. 13

Stress Reduction: Using Mindfulness as a Tool in Resident Education

Poster Presenter: Brandi Karnes, M.D.
Co-Author: Amanda Leigh Helminiak, M.D.

SUMMARY:
Background: There is increasing literature regarding the ramifications and lethality of burnout in residency, with the burnout rate amongst residents predicted to range from 40-80% depending on specialty. Fostering wellness is especially important during periods of change and unpredictability, such as a global pandemic. As the importance of wellness and prevention of burnout becomes more apparent in medicine, more research is needed regarding how to foster wellness through residency program interventions. Purpose: To understand the utility of formal mindfulness education in residency training. Methods: Psychiatry residents of all training years attended a mindfulness workshop with active and interactive learning techniques, including in-session, application-based skills. All residents took a pre and post session stress inventory and evaluated the perceived utility of mindfulness interventions to foster wellness in personal and professional life. Results: Survey data from the sessions will be analyzed and presented, including: Increase in perceived importance of formal mindfulness education Increase in perceived utility of mindfulness for well-being in personal and professional life Acute decrease in stress level across the 60 minute workshop Discussion/Conclusion: This study demonstrated several important facts. One, that residents, regardless of training level, experience a high rate of stress and burnout. Two, that residents under-predict the utility of formal education on wellness principles. Three, that active and interactive workshops not only adhere to adult-learning theory, but can acutely improve resident mental state. We hope these results will influence how programs target and teach wellness principle interventions to foster wellness and decrease burnout for residents.

No. 14

Targeting Resident Well-Being by Improving Quality of Sleep Through Institutional Resources

Poster Presenter: Danielle Tran

SUMMARY:
Background: The rate of resident burnout has been increasing throughout the years, and high rates of burnout amongst physicians in training are reported. Physicians spend 3-7 years of their adulthood in residency. The intensity of training is associated with a significant reduction in well-being markers, such as sleep, exercise, religious activity, family interaction, and an increase in missing significant events. A review of well-being research in residency has shown that among factors such as social relatedness, empathy, autonomy, coping mechanisms, sleep is also a large factor to well-being. Sleep is a big component of resident well-being and the University of Minnesota is not immune to this phenomena. Adults need 7-9 hours of sleep per night to feel their best (as few as 6 hours and as many as 11 hours may be appropriate). With research supporting that sleep improves physical and cognitive performance and skill, it has also been shown that it is not just the volume of sleep but the timing that matters. Having a consistent bedtime and wake-up time results in feeling more well-rested. The Graduate Medical Education Office assesses yearly the well-being of residents at the University of Minnesota. **Results**: The data shows that an increased number of residents are rating their workload as “high” with a decreased number saying it is “just right”. A decreasing percent of residents say their personal health and well-being is “good” or “very good”. An increasing percent say they feel burned out at work and that they feel more calloused towards people since they first started training. Regarding the residency program, a decreasing percentage of residents say their program monitors their wellness and works to decrease burnout among the residents/fellows. As well, a decreasing percent say patient volume and complexity is such that they are able to provide safe patient care on all of their clinical rotations. **Intervention**: We wanted to reduce burnout by offering preventative resources on sleep quality. On Coggle, a UMN resident and fellow health resource map is made available by the Graduate Medical Education Office. It is advertised in emails and weekly newsletters. The map features a continuum of needs, risks, and benefits at where the viewer feels they are at with their wellness. A sleep resource has been created at the “Specific Resources not dependent on level of acuity” branch. **Future Steps**: The Graduate Medical Education Office will continue collecting wellness and quality of life data from residents and fellows through the

University of Minnesota residency program, to monitor for changes, declines, and improvements.

No. 15
WITHDRAWN

No. 16
Treatment Modality of Aggressive Patient With Intellectual Disability
Poster Presenter: Vaibhav Vyas, M.D.
Co-Authors: Tasnova Malek, Rushikesh Vyas, M.D., Mohammed Faizur Rahman, M.D., Mehnaz Waseem, M.D.

SUMMARY:
A significant number of patients with an intellectual disability tend to demonstrate emotion dysregulation characterized by aggressive behavior. Various treatment approaches exist in the reduction of aggression in patients with intellectual disability. The management includes both behavioral therapy and medications. Various medications such as antidepressants(SSRI), second-generation antipsychotics (Risperidone), and mood stabilizers(lithium) are effective to treat aggression. Propranolol which is an adrenergic and serotonergic blocker commonly used in managing aggressive behaviors among individuals with intellectual disability. In addition, antiepileptic medications such as carbamazepine, sodium valproate also preferred in the management of aggression. The psychotropic medication causes more adverse events in patients with intellectual disability compare to the general population. So, the use of various psychotropic drugs in treating aggressive behavior among patients with intellectual disability should be individualized based on a risk-benefit balance. The aim of this study involves reviewing various treatment modalities of the aggressive patient with intellectual disability by conducting a comprehensive review of articles regarding this topic.

No. 17
Comparison Between Haloperidol and Chlorpromazine in the Management of Aggressive Patient
Poster Presenter: Vaibhav Vyas, M.D.
Co-Authors: Tasnova Malek, Mohammed Faizur Rahman, M.D., Prathila Nair, M.D.

SUMMARY:
In comparing first-generation antipsychotic drugs; high potency, haloperidol and low potency, chlorpromazine in the management of aggressive patients, various literary studies suggest different viewpoints regarding their efficacies Haloperidol is the primary management of agitation in comparison to chlorpromazine due to lack of sedation and orthostasis side effects. Haloperidol is an overly potent medication, capable of promoting adequate levels of tranquilization upon intramuscular administration. However, haloperidol exhibits adverse effects of acute dystonic reactions. Administering high doses of intravenous haloperidol can stimulate QT and TdP in regard to the electrocardiogram. Chlorpromazine in cases of rapid tranquilization is not appropriate, based on adverse effects, such as hypersensitivity and discomfort, due to intramuscular injection route. The use of chlorpromazine for rapid tranquilization can potentially lead to cardiovascular disease. Moreover, chlorpromazine can lead to weight gain, poor muscle strength, and seizure The aim of this study involves conducting a comprehensive review of articles regarding this topic.

No. 18
Decreasing Burden of Documentation by Developing the “Smart Phrase” Database for Electronic Medical Records: A Quality Improvement Project
Poster Presenter: Sung Min Ma, M.D.
Co-Authors: Valentina Metsavaht Cara, M.D., Yasin Bez, M.D., Binh Pham, M.D.

SUMMARY:
Background Documentation is a critical component of medical care. A well-written documentation becomes a quintessential asset that contributes to high-quality care. However, for many clinicians, documentation has become a laborious task that usurps time that should be spent in direct patient encounter (1). The burden of documentation is associated with emotional exhaustion, depersonalization, and low sense of personal

accomplishment (2). In an effort to streamline the documentation process and provide it in a manner that provides for succinct yet comprehensive charting, we are developing a database of "smart phrases" that will be incorporated into the electronic medical record (EMR). These smart phrases are easily insertable notes that are pre-written, vetted, and indexed. They were developed with active participation of residents. This allowed us to tap their creativity and motivate their commitment to the process. Clinical faculty helped to guide the process. Methods Having identified inconsistent and extensive documentation across services as a problem in need of quality improvement, we hosted focus groups to identify solutions in which residents could play an active role. Based on focus group findings, we decided to prioritize the development of a library of smart phrases that could be indexed, accessed and inserted into patient's notes through the EMR. This was implemented on a pilot basis with input from residents and clinical supervisors. It is a process that could be refined through continuous iterations, the very essence of quality improvement. We are currently exploring potential collaborations with other institutions that are also seeking solutions to the documentation dilemma. Results We are currently developing this system and we will report on implementation process and evaluation strategies. Conclusions Implementing the "smart phrase" database is an important element in our initiative to increase documentation efficiency.

No. 19

A Brief Review of the Methods of Assessment of the Clinical Judgment and Performance of Psychiatry Residents

Poster Presenter: Benjamin Kay, M.D.
Co-Authors: Michael Able, M.D., Walter J. Sowden, Ph.D.

SUMMARY:

The views expressed in this abstract/manuscript are those of the author(s) and do not reflect the official policy or position of the Department of the Army, Department of Defense, or the US Government." Problem: The various methods for evaluating a psychiatrist's clinical skills and judgment, especially during residency, are poorly understood. Background: In the training of psychiatrists, there are many tools that are used to evaluate their performance. Many of these tools, such as the PRITE exam and board exams, have been shown to be effective in evaluating a clinician's fund of knowledge. However, a psychiatrist's ability to provide adequate care does not only require knowledge, but also good judgment, sound decision-making, emotion regulation, empathy, and a host of other skills. All of these abilities, both cognitive and non-cognitive, are not well-assessed on these written exams1. How to approach the teaching and evaluation of these skills continues to remain a problem for psychiatry residencies, with various methods being utilized. Research question: What does the current research say about various methods of evaluating performance and clinical judgment during psychiatry residency? Methods: We plan on doing a literature review using PubMed to a) identify the various methods used to evaluate performance and clinical judgment during psychiatry residency (i.e. end-of-rotation evaluations, Clinical Skills Exam2, Script Concordance Test3, etc.), b) the efficacy of these methods and c) when these methods may be best utilized. Discussion: Upon the conclusion of this project, we expect to have an account of the different methods currently in use to evaluate psychiatry resident performance and a report of the degree to which these methods have been evaluated. We will also be able to provide some recommendations on best practices for evaluating holistic performance for psychiatrists-in-training during residency. This project has the potential to improve the development and training of psychiatry residents by improving specific feedback for residents and for providing areas of improvement for residency programs as well.

No. 20

A Model for Integrating LGBT Mental Health Education Into Medical School Curricula

Poster Presenter: Sarah Szwed
Lead Author: Jessica Spellun, M.D.
Co-Author: Jessica Zonana, M.D.

SUMMARY:

Lesbian, gay, bisexual, transgender and queer (LGBTQ) individuals face higher rates of mental

health problems compared to heterosexual peers (1). Specifically, gay and bisexual men are four times more likely to attempt suicide than heterosexual men while lesbian and bisexual women are twice as likely to attempt suicide than heterosexual women (2). It has also been reported that up to 41% of transgender or gender non-conforming individuals attempt suicide at some point in their lives (3). However, despite these increased mental health risks in LGBTQ populations, medical students have a limited training and significant gap in education understanding the mental healthcare needs of these marginalized communities (4), with medical students having a median of 5 hours of LGBTQ health education during medical school training in the United States and Canada (5). The Weill Cornell Medicine (WCM) Wellness?Qlinic?is a free, student-run mental health clinic that serves the LGBTQ community of New York City. To empower medical students to be actively participants in the care team, medical students involved with the WCM Wellness?Qlinic?developed an eight-week LGBT mental health curriculum required for all volunteers but open to all medical students to take. This helps bridge an existing gap in conventional medical school curricula that does not adequately teach medical school students about cultural competency and familiarize themselves with LGBT-specific mental health concerns. This curriculum educates medical students about a variety of topics, including applying a biopsychosocial framework to understanding LGBT mental health, with a specific focus on caring for transgender patients, as well as teaching them basic skills in psychiatry. In developing this content, medical students collaborated with residents and attending psychiatrists at New York Presbyterian, as well as community health centers like Callen-Lorde. Learner assessment was gauged using surveys administered after each session to assess the baseline understanding and the learnings taken, in which students demonstrated increased awareness and interest in LGBT-specific health topics, as well as an increased knowledge base to prepare them for clinical interactions. Recently, this curriculum has been transformed to a virtual platform. This will improve access to our curriculum at Weill Cornell Medicine throughout the entire academic year. Moving forward, the WCM Wellness Qlinic hopes to extend this curriculum to other medical institutions to engage more interest in LGBT mental health.

No. 21
Child and Adolescent Inpatient Psychiatry During the Covid-19 Pandemic: A Medical Student's Perspective

Poster Presenter: Jacqueline Tucker
Co-Author: Jasmin G. Lagman, M.D.

SUMMARY:
Along with the rest of the world, a medical student's daily routine was severely impacted due to the Covid-19 pandemic. Three weeks into the start of this year's third year medical school rotations, students were pulled out of clinics, and continued learning via virtual methods. When in-person clinical experiences resumed, a lot had changed. As a third year medical student rotating on an inpatient child and adolescent inpatient psychiatric unit, the impact and challenges of implementing social distancing guidelines in this setting was seen and experienced first-hand. While masks were recommended to be worn at all times, adolescents often became tired of wearing them, and needed constant redirection to put masks on. This was especially seen in patients with attention deficit hyperactivity disorder (ADHD) or disruptive mood dysregulation disorder (DMDD). Additionally, due to wearing a mask myself, I found it difficult to convey emotions and understanding through facial expressions. However, by having this in-person experience, I was able physically to sit next to patients and get to know them on a deeper level by discussing their interests and life goals. Another large change was that in-person visitations were limited to one parent. Patients who do not have a good relationship with their parents wanted friends or other family members to visit. Not being able to have this resource had an emotional impact on patients. Team meetings took place in larger rooms in order to maintain a good distance between care givers. Lastly, family meetings were all virtual. Since patients were often the ones holding the device and talking with their families, it was difficult for me to observe the family and interpret facial expressions, vocal signals, and body language. Services such as therapists, and family based therapies were also able to be provided through virtual methods. Although,

sometimes these programs struggled to be effective for patients who require close and direct treatment. There were many changes and some challenges for adolescent inpatient psychiatric treatment during Covid-19. If physicians, staff, and patients followed social distancing guidelines, communicated clearly, and utilized virtual options, successful treatment was achieved. During the pandemic, the clinical setting changed for medical students. However, during my inpatient psychiatry rotation I was able to successfully learn and apply my medical knowledge, while following social distancing guidelines. Clinical in-person experiences are essential for medical students to connect with patients and practice certain social skills that cannot be mastered through virtual experiences. In this poster we discuss the observed challenges, limitations, and alternative solutions to the child and adolescent inpatient psychiatric care, as well as a medical student's experience during the Covid-19 pandemic.

No. 22

Fostering the Inner Advocate: Effectiveness of a Pilot Advocacy Curriculum in a Psychiatric Residency Program

Poster Presenter: Eric Michael Wagreich, M.D.
Co-Authors: Nadav Hart, Vedang Uttarwar, Isabel Lagomasino, M.D.

SUMMARY:
Background: Advocacy is an integral part of psychiatric practice. While ACGME requirements for psychiatry residents include standards for advocacy, residency programs vary widely in regards to advocacy curricula. Previous studies have illustrated that residents place a high priority on advocacy education but report having insufficient exposure to such learning during training. This study examined the efficacy of a novel advocacy curriculum by providing residents with a feasible, one-session lecture about advocacy in psychiatry. Methods: First- and fourth-year residents were provided a one-hour-lecture by a senior resident with organizational psychiatry experience, describing the various levels of advocacy with particular focus on organized psychiatry. They were asked to complete anonymous pre- and post-lecture surveys via Google Forms using Likert scale items from one-to-five. A control group was created with the subsequent academic year of first- and fourth-year residents, who were at similar levels of training but had not received an advocacy lecture. Results: In the experimental group, pre-lecture data was collected for 20 residents (12 first- and 8 fourth-year) and post-lecture data was collected for 14 residents (9 first- and 5 fourth-year), with 6 (3 from each class) not completing the post-lecture survey. In the control group, baseline data was collected from 11 residents (7 first- and 4 fourth-year residents). Compared to all residents at baseline, following the lecture, residents in the experimental group reported a better understanding of organized psychiatry (+1.9, $p<0.0002$); of how organized psychiatry can help patients (+1.9, $p<0.002$); and of how organized psychiatry interacts with government and systems-based practice (+1.5, $p<0.0002$). They were more likely to feel empowered about how to advocate for the profession of psychiatry (+1.3, $p<0.0003$) and to report that the residency program provided adequate education about how organized psychiatry can serve as a vehicle for advocacy (+1.1, $p<0.00005$). There were no baseline differences between first- and fourth year residents in knowledge and attitudes. Conclusion: A feasible, single lecture can help inform psychiatry residents of the basics of advocacy through organized psychiatry, and can help to improve resident understanding of and attitudes towards advocacy within its various levels, regardless of year of training. Further research can inform whether changes in knowledge and attitudes translate into participation and action, or whether further training is needed to improve engagement.

No. 23

High Prevalence of Anxiety and Depression in Medical Students During Covid-19 Lockdown in Brazil

Poster Presenter: Fabrício P. C. Miskulin
Co-Authors: Mariana Berweth Pereira, Thamires Clair Rodrigues Pereira da Silva, Thaís Perissotto, Paula Nunes

SUMMARY:
Introduction: The COVID-19 pandemic has impacted many spheres of society. To control the

dissemination of SARS-CoV-2, social isolation and closure of public spaces such as universities were implemented. In Brazil, the lockdown started in March of 2020, one month after the beginning of the basic cycle year. The quarantine situation added to medical schools environments which are associated with stressing factors may have compromised students´ mental health[1]. With the new limitations of everyday life during an unknown period, psychiatric disorders such as Depression and Anxiety can be developed or exacerbated [2]. **Objectives**: We aim to compare the prevalence of depressive and anxiety symptoms during the COVID-19 pandemic quarantine in Medical Students in Brazil and to explore potential factors related to the impact on mental health. **Methods**: All students from the first to the sixth year from Jundiai Medical School (Brazil) were invited to virtually respond to the self-administered Hospital Anxiety and Depression Scale (HADS) from March to June of 2020 (during COVID quarantine). This study was based on the HADS subscale for depression (HADS-D) and the subscale for anxiety (HADS-A). Both range from 0 (absence) to 21 points each . The cut-off for screening clinically relevant depressive or anxiety symptoms recommended is 9 in both subscales[3]. The study protocol was approved by the Ethics Committee. For the statistical analysis Chi-Square Test was used for categorical data and Mann-Whitney test was used for comparisons of continuous variables. Correlations were made using Sperman correlation test and binary logistic regression was used on the analysis of the influence of year class and where the students were during the quarantine. **Results**: We had responses from 347 students (51% of the sample). The prevalence of HADS-Depression ≥ 9 (above cut-off) was 36% (n=125) and the prevalence of HADS-Anxiety ≥ 9(above cut-off) was present in 59.7% (n=206). First-year students had greater prevalence of HADS-D≥9 (45.6%) and HADS-A≥9 (71.8%) ($p=0.015$ and $p<0.001$). When genders were compared women had a higher prevalence of HADS-D≥9 (40.2%) than men (27.4%) ($p=0.019$). In HADS-A, women also had higher scores (11.01±3.94) than men (7.52±4.06) ($p<0.001$). After logistic regression, only being first-year of class remained significant ($p=0.008$; OR=1.98) for greater anxiety levels. **Conclusion**: A high prevalence of depression and anxiety during SARS-CoV-2 pandemic was found in Jundiai Medical School students. Those in the first year of college were the most affected in our sample; being in the first year of medical school was associated with higher odds for anxiety and for depression. Regarding gender, the data obtained reaffirm higher scores of anxiety and depression for women. Medical students often have high prevalence of depression and anxiety and other future prospective studies could help understand better how mental health is affected by the consequences of a pandemic.

No. 24

Imposter Syndrome in U.S. Medical Students: A Review of Current Literature

Poster Presenter: Joseph Zhou
Co-Author: Cheryl A. Kennedy, M.D.

SUMMARY:

Introduction Imposter syndrome (IS - also known as imposter phenomenon or imposter-ism) describes a perception when an individual attributes success to external circumstances and doubts their abilities. This thought process creates fraudulent feelings as well as a sense of inadequacy in their field of work. The medical field is particularly susceptible to this phenomenon as recent studies have highlighted significant levels of IS among physicians and physicians-in-training. However, a review has yet to be published that focuses on the prevalence and impact of IS among U.S. medical students. The goal of this study is to capture the medical student experience of IS. Methods Literature search of relevant articles through online databases. Results Seven publications were found that met study criteria. Five studies reported that approximately 30-50% of medical students experience at least ‘frequent’ levels of IS (Clance Imposter Phenomenon Scale score ≥ 60). Four studies found that 10-15% of medical students met the threshold for ‘intense’ levels of IS (CIPS score ≥ 80) with a fifth study observing that nearly a third of first-year medical students recorded ‘intense’ imposter phenomenon scores. Three studies noted that IS was more common in the female medical student population while one study did not find a statistically significant difference between genders. Discussion Review of current literature demonstrates that the prevalence

of IS among U.S. medical students is comparable with rates found in physicians further along in medical training and suggests that medical school may be a foundation upon which imposter feelings develop. The commonality of IS in the medical student experience highlights the need for educators and administrators to develop strategies to address IS among their student populations to mitigate possible negative consequences. For example, IS could be addressed through a strong professionalism course to reinforce the sense of legitimacy in well-trained professionals. Limitations of this study include the limited number of studies focusing on this specific topic as well as the small sample sizes and survey-dependent nature (which yielded variable response rates) of each study. Further studies can be conducted to explore possible differences in IS rates among different demographics of medical students as well as the relationship o f IS with anxiety, depression, and burnout among this population.

No. 25

Knowledge Assessment of Interpretation Services Among Medical Residents

Poster Presenter: Jennifer Gonzalez, M.D.
Co-Authors: Robert Wooten, M.D., Andrew J. Powell, M.D., Dewey McAfee, D.O., Suporn Sukpraprut-Braaten, Ph.D.

SUMMARY:
BACKGROUND Language barriers can result in health inequalities, patient safety risks, increased cost, ineffective resource use, limited access to diagnosis/testing/treatment, and fewer explanations and follow ups.1,2The preferred interpretation method is a professional interpreter as their training ensures word by word interpretation, professionalism, and neutrality/objectivity.1-4Interpretation services can help improve patient care. However, healthcare providers may be underutilizing interpretation services by lack of knowledge on how to access these services.1-4This study aims to assess residents' knowledge of the interpretation services available at a community hospital. METHODS Study Design:Prospective cohort study Study Population: Graduate Medical Education (GME) Residents in emergency medicine, family medicine, internal medicine, and psychiatry programs. Primary Endpoint: Assess residents' knowledge of the interpretation services available at a community hospital. Secondary Endpoint:Assess residents' knowledge of how to access the interpretation services available RESULTS Fifty-four residents participated in the study; emergency medicine (N=17); internal medicine (N=16); family medicine (N=14), and psychiatry (N=7). Twenty-five-percent of the first-year residents reported knowing what interpretation services are available at the training institute. Only 14% of the psychiatry residents reported knowing what interpretation services are available. The psychiatry residents reported having the lowest knowledge on what interpretation services are available and how to access the services compared to the residents from the other programs (p-values are 0.1504 and 0.024, respectively). Sixty-five percent of the emergency medicine residents reported to know what interpretation services are available, and 59% of them know how to access the services. Emergency medicine residents have the highest knowledge of the interpretation services available and how to access them compared to the other programs. CONCLUSION Good communication between patients and medical providers is essential to building rapport, understand the patients' concerns, diagnosing the patients accurately, and explaining the treatment plan. Lack of effective communication can negatively impact the patient-physician relationship and affect patient care, especially among non-English speaking patients seeking psychiatric help. The interpretation services can help improve communicate between patients and physicians and reduce potential misunderstandings. It is critical to educate residents of the importance of using professional interpretation services when communicating with non-English speaking patients. Results from this study will be used to create an educational program that aims to increase resident knowledge of the interpretation services available at the hospital, provide instruction on how to access the services, and increase the utilization of interpretation services.

No. 26

Plugging Into Clinical Education: An Assessment of Telemedicine in the Psychiatry Clerkship Curriculum During the Covid-19 Pandemic

Poster Presenter: Elisabeth A. Dietrich, M.D.
Co-Author: Alexandru E. Trutia, M.D.

SUMMARY:

Amidst the COVID-19 pandemic, medical schools have utilized telemedicine as an alternative means of providing in-depth clinical education while prioritizing safety. Telemedicine offers students opportunities to gain experience in many of the Association of American Medical Colleges' (AAMC's) 13 Core Entrustable Professional Activities (EPAs) for entering residency.1 At Virginia Commonwealth University School of Medicine (VCU SOM), the psychiatry clerkship curriculum has evolved to include telemedicine experiences for third-year medical students. The use of video conferencing for interdisciplinary inpatient rounds has enabled students to collaborate within interprofessional teams, while multi-person video calls have facilitated outpatient experiences with direct supervision by a third-year psychiatry resident. With the integration of telemedicine, VCU SOM students now gain exposure to a wider range of clinical settings, as each student participates in consultation psychiatry, inpatient care, and outpatient clinics during the 4-week rotation. However, decreased in-person training can limit opportunities for students to be directly involved with patients.2 Another challenge stems from the higher density of students. Clerkship cohort size has increased to accommodate for the suspension of clerkships after the AAMC recommendation on March 23, 2020 that students not participate in direct patient care, except in the face of a critical health care workforce need, with any participation on a voluntary basis.3 Given the projected growth of telemedicine over the next decade, the application of telemedicine and other forms of virtual learning could offer a glimpse into the future of medical education.4 These experiences expose students to telemedicine as a means of increasing healthcare accessibility and ultimately improving health equity. Future studies will need to assess the long-term educational impact of the pandemic, as well as the utility of telemedicine in facilitating clinical education.

No. 27

Predictors of Performance on USMLE Step 2 CK

Poster Presenter: Adrian Jacobparayil
Co-Authors: Hisham Ali, Regina Baronia, M.D., Yasin Taha Ibrahim, M.D.

SUMMARY:

Background: In February 2020, the governing bodies of the United States Medical Licensing Exam (USMLE), the Federation of State Medical Board (FSMB) and the National Board of Medical Examiners (NBME), announced the decision to change Step 1 scoring from a three-digit system to pass/fail designation1. It has been theorized that Step 2 CK will now become the numerical standard by which residencies directors can quickly sort through program applicants. The goal of this study is to review prior research and identify significant factors positively and negatively associated with Step 2 CK outcomes. Methods: A systematic literature search was conducted using PubMed, Web of Science, Scopus and ERIC. Key words were a combination of the following: “USMLE”, “Step-2 CK”, “score”, “success”, “predictors”. Inclusion criteria include articles published between 2005-2020. Results: The initial literature search yielded 3,239 articles that were narrowed down to 52 articles. Variables from the articles were split into two broad categories: modifiable and unmodifiable. Modifiable variables can be changed after admission into medical school up to the first Step 2 CK attempt. These variables are further categorized into individual and institutional factors. Individual factors are under the control of the medical student prior to their first attempt at Step 2 CK. Positively correlated factors included Step 1 score, clinical block grades, Comprehensive Clinical Science Self-Assessments (CCSSA), Comprehensive Clinical Science Examination (CCSE), and volunteerism. A near perfect probability of passing Step 2 CK was observed with a CCSE score of 90 or above2. There was also a significant correlation ($r=0.684$, $p \leq 0.0001$) between scoring higher than 208 on Step 1 and passing Step 2 CK on first attempt3. An important negative correlated factor was lag time which is defined as time from the end of clerkship to the first Step 2 CK attempt. Students taking Step 1 after clerkships (lag time~200 days)

performed worse on Step 2 CK compared to students taking Step 1 before clerkships (lag time~100 days)4. Institutional factors are those under the control of the medical school. Factors such as clerkship sequence and pass/fail grading did not correlate with Step 2 CK. Unmodifiable variables include factors prior to admission into medical school. Medical College Admission Test (MCAT) score ($p < 0.01$)5 and undergraduate grade point average (GPA) ($p = 0.01$)5 were positive correlators while age was a negative correlator5. Additionally, women typically had higher Step 2 CK scores than their male peers6. Conclusion: Our findings suggest that continuous learning and academic success throughout medical school has a positive influence on eventual Step 2 CK scoring. The best predictors for Step 2 CK scores are performance in the USMLE practice exams, Step 1, and clinical evaluations.

No. 28

Resident Termination/Transfer of Patient Care at Residency Completion: A Survey of Preparation, Perceived Readiness, and Experiences

Poster Presenter: Chris Ferry
Co-Author: Karim Sedky

SUMMARY:

Senior psychiatry residents must terminate and/or transfer their patients care prior to graduation. This process involves the simultaneous discontinuance of numerous therapeutic relationships over a short period of time. Given that programs are limited in their capacity to provide extensive exposure to care termination during training, residents can feel underprepared to perform these tasks and to confront the emotional burden involved. The objective of this study was to assess the preparation, perceived readiness, and experiences of graduating psychiatry residents following termination/transfer of patient care. A retrospective review of prospectively collected quality improvement surveys was performed. Surveys were administered to graduated psychiatry residents (single institution) to assess preparation, perceived readiness, and experiences during the termination/transfer of patient care prior to graduation. Questions assessed topic areas such as: what aspects of the process are most difficult; did they find a lecture/module series beneficial; how much time/discussion did they alot for preparation; did they consult facult/attendings to disucss specific/difficult cases; how many sessions did they dedicate towards the termination/transfer process. All surveys were collected anonymously with no personally identifiable information. Institutional Review Board (IRB) was obtained prior to retrospective review for research purposes. Descriptive statistics regarding answer/response prevalence was performed.

No. 29

Standardization of CPEP “Buddy Call” Training: A Curriculum Improvement Project

Poster Presenter: Preksha Arora-Hughes, D.O.
Co-Authors: Cynthia Pristach, M.D., Alyssa Norman, M.D.

SUMMARY:

There was no standard protocol to be covered during the “Buddy Call” Comprehensive Psychiatry Emergency Program (CPEP) Training Call Shift at University of Buffalo. This led to inconsistencies in training for first year residents (PGY1) by the senior “Buddy” resident. We created a standardized training protocol for PGY1s in 2019 that was incorporated into the existing “Buddy Call” to help improve the comfort level of working a CPEP call shift. A standardized checklist was created to cover three main topics, these included “CPEP”, “Extended Observation Unit” (EOB) and “Seclusions and Restraints”. These checklists were distributed to the first year residents prior to their first "Buddy Call" shifts. The checklists consisted of various items/basic tasks that required sign offs by senior “Buddy” resident and the first year resident. This year we added a training session for senior “Buddy” residents, a reference binder for easy access during the shift, and “EOB”/“Restraint/Seclusion” scenarios for the “Buddy Call” shift. A pre-Buddy call and post-Buddy call survey was administered to the first year resident class to assess comfortability in various CPEP duties before and after the buddy call shifts. In each survey the PGY1 was asked to rank his level of knowledge/comfort for ten items from “Strongly Disagree” to “Strongly Agree” with a total of four options. A final survey asking for feedback was also

administered. We used the Wilcoxon signed-rank test which is a non-parametric statistical hypothesis test that is used to compare two samples (pre-buddy call and post-buddy call). Our results this year showed statistical significance for 9 out of 10 survey questions. Future directions include measuring knowledge base improvements due to our training.

No. 30
The Patients Beneath White Coats: An Exploration of Medical Student Professional Identity Formation
Poster Presenter: Teddy Gould Goetz, M.S.
Co-Author: Janis Lynne Cutler, M.D.

SUMMARY:
Background: Professional identity formation can be conceptualized as a shift from a focus on achieving personal gratifications to meeting the expectations of a specific profession. This coalescence involves integrating field-specific knowledge into the context of personal identity formed by prior experiences. Thus, student doctors' experiences caring for ill loved ones, and their own experiences as "patients," may impact their professional identity development as a medical provider. This aspect of professional identify formation has not yet been explored. Methods: With a novel anonymous cross-sectional survey-based research study, we explored how experiences as a patient or loved one of patients impact medical student professional identity formation, and whether the medical specialty in which the exposure occurred affects its emotional impact and/or influence on self-conception. Results: We found psychiatry had the most difficult exposures (affecting 50% of participants), which was twice that of the second and third most: hematology/oncology with 25% of participants and neurology with 22% of participants. These specialties were additionally disparately emotionally difficult for students with prior experiences as patients and/or loved ones compared to those who did not have prior experiences (psychiatry: 77% vs. 25%, hematology/oncology: 72% vs. 16%, neurology: 65% vs. 10%). Discussion: This work suggests that additional medical education initiatives—particularly within the fields of psychiatry, hematology/oncology, and neurology—could aid medical students in reconciling their identities as patients/loved ones with their burgeoning professional identities. This study was supported by the Steve Miller Fellowship in Medical Education from Columbia University, Vagelos College of Physicians and Surgeons.

No. 31
Training During Social Distancing: The Effects of Remote Virtual Psychiatric Readiness Curriculum on Military Behavioral Health Providers
Poster Presenter: Maria Allison Rechtin
Co-Authors: John Hirt, D.O., Rohul Amin, M.D.

SUMMARY:
Background: There is inconsistency in the behaviors of US Army mental health providers when assessing fitness for duty. This is likely due to disparate and complex rules and regulations and a lack of formal training for these providers on occupational assessments. This may result in the under- or over-estimation of a military unit's readiness to deploy. To close this gap, we developed a curriculum to train military mental health providers on temporary duty limitations, administrative separations, and medical board referrals based on U.S. Army policies and procedures. Constraints for this curriculum included training that is short in duration, cost-effective, and accessible. Given the global SARS-CoV-2 pandemic, an additional constraint was delivery of such a curriculum virtually. Methods: Kern's six steps of medical curriculum development were used to develop the training. It was implemented virtually and was conducted over the course of two 3-hour training sessions. Evaluation of training objectives was conducted using an electronic survey featuring paired before and after questions to analyze change in perceived confidence among learners. Results: Among the 57 learners, significant immediate improvement in confidence from before to after training was found in recognizing when a U.S. Army Soldier needs a temporary profile ($t(57) = -9.962$, $P < 0.001$, $d = 1.31$), in writing a temporary e-profile ($t(57) = -8.668$, $P < 0.001$, $d = 1.14$), in deciding when it is critical to contact an U.S. Army Soldier's commander ($t(57) = -6.876$, $P < 0.001$, $d = 0.90$), in executing administrative separation ($t(57) = -13.342$, $P < 0.001$, $d = 1.75$), in deciding when an U.S. Army Soldier is at medical retention determination point

(MRDP) (t(57) = -9.805, P < 0.001, d = 1.29), and in referring a U.S. Army Soldier to medical board (t(57) = -8.192, P < 0.001, d = 1.08). 100 % of learners recommended this training for others. Other outcomes will also be reported in the poster. Conclusions: This is the first virtually delivered training on this topic to our knowledge with positive outcomes. This can be replicated across the military health enterprise with the ability of high-quality effective training for military medical providers to improve adherence to U.S. Army policies and procedures and to improve military readiness.

No. 32

Transition From Intern Year to PGY2: Comfort of Psychiatry Residents

Poster Presenter: Christina L. Warner, M.D.
Co-Authors: Tolulope O. Odebunmi, M.D., M.P.H., Lora Wichser

SUMMARY:

Background: The transition from intern year (PGY1) to second year (PGY2) is often anxiety provoking as residents face new responsibilities of leadership, teaching, and independence. Many residents feel unprepared for this new role.1,2 Prior work has evaluated the efficacy of orientation sessions for internal and family medicine residents during this transition. However, little has been published on orientation activities in psychiatry residencies. Our program currently provides a half-day orientation prior to the PGY2 transition. Interns in our program are responsible for managing the inpatient psychiatry teams and complete call shifts with PGY2 supervision. In addition to, supervision responsibilities PGY2s complete 24-hour call shifts and have more teaching responsibilities. To measure the efficacy of our transitional orientation we surveyed current residents regarding their comfort levels starting PGY2. Methods: Using the Qualtrics platform we surveyed new PGY2 residents three weeks after completion of orientation. Residents were asked to self-report their comfort levels using a 5-point Likert scale (“1” being uncomfortable and “5” being comfortable). The survey consisted of 9 questions derived from the ACGME Psychiatry Milestone categories. Residents also provided qualitative feedback on what interventions effected their preparedness levels. This survey was anonymous and determined to be exempt by the institutional IRB. Results: All PGY2s in the program responded to this survey (n=8). Residents indicated high levels of comfort for communicating effectively with patients ($\bar{x}$= 4.57) and admitting new patients ($\bar{x}$ = 4.25) while indicating lower levels of comfort for acting autonomously on 24-hour call shifts ($\bar{x}$ = 2.33) and managing medication changes ($\bar{x}$ = 3.13). Average self-reported comfort across all 9 queried tasks was 3.6. The residents reported that clear guidelines for who to call when they needed help improved their preparedness. They indicated that further exposure to specific PGY2 tasks (e.g. cross-cover) as well as further review of psychiatric emergencies (e.g. withdrawal) would have helped them to feel more prepared to enter PGY2. Discussion: Overall our residents indicated neutral levels of comfort with the PGY2 transition. They indicated the least amount of comfort with tasks they did not directly participate in as interns, such as 24-hour call. Limitations of this data include utilization of self-reported comfort levels and potential variation in baseline comfort levels which was not measured. Future directions for this work include increasing exposure of interns to cross-cover responsibilities, revising our orientation system to better address resident needs, as well as evaluating the scope of transitional orientation sessions in U.S. ACGME psychiatry residency programs. Comfort levels will also be measured before and after future interventions to account for variations in baseline levels.

No. 33

Women Leading Healthy Change: A Reciprocal Learning Experience for Women in the Sex Trade and Medical Students

Poster Presenter: Lindsey C. Weber, B.A.
Co-Authors: Joanna C. Ortega, M.P.H., Charity K. Muraya, B.S., Rachel Robitz, M.D.

SUMMARY:

Introduction: Individuals involved in the sex trade can serve as effective peer educators and have shown potential as educators of health professions trainees, but they are rarely utilized as the latter. We revised a curriculum used previously to provide a

unique service-learning experience for medical students and peer health education for women in the sex trade. We aim to show the reproducibility of this program design in a new city and context as well as the effectiveness of our curriculum in teaching and empowering women in the sex trade and medical students alike. **Methods:** Medical students partnered with a local community organization to implement a 10-week, interactive course on physical and mental health for women in the sex trade. The course was co-led by a medical student and a woman who had utilized the community partner's services. Participants completed pre- and post-surveys gauging their knowledge of the material, confidence with the material, and comfort with self-adv ocacy. Co-leaders completed surveys and semi-structured interviews to assess the impact of the course on their leadership skills and confidence. Results: Ten women participated in the course. Participants demonstrated increased knowledge in physical and mental health topics and reported being more comfortable speaking with healthcare providers and advocating for themselves in a healthcare setting. Co-leaders developed leadership skills and the confidence to take on outside leadership opportunities. The medical student co-leader reported having a better understanding of addiction and being more prepared to work with patients with substance use disorders. **Discussion:** This mutual learning experience, successfully expanded to a new setting, provided a local underserved community with a valuable health education opportunity. It also helped medical students understand the barriers women in the sex trade face when seeking healthcare and how physicians can better meet these patients' need s.

No. 34

New Onset Psychosis Associated With Persistent Hypertension and Unspecified Abdominal Mass: A Case Report

Poster Presenter: Rachael Brothers, D.O.
Co-Author: Sabiha Akter

SUMMARY:

Previous reports suggested that evidence of a new systemic condition present before the onset of psychotic illness can be an additional risk factor for later mental illness and associated morbidity. A 54 year old African American female with a past medical history of hypertension was admitted to the hospital. The patient developed new-onset psychotic symptoms and was brought to the emergency department by police due to grossly disorganized behavior. Also, imaging revealed the presence of uterine leiomyoma. Early identification of patients at high risk for psychosis and reducing the duration of untreated psychosis are significant measures in decreasing the influence of mental illness in vulnerable populations.

No. 35

Post Partum Psychosis in Patient With Kikuchi Fujimoto Disease: A Case Report

Poster Presenter: Rachael Brothers, D.O.

SUMMARY:

A 29 year old African American female with no past psychiatric history, but a pre-existing diagnosis of Kikuchi Fujimoto Disease, was brought to the Emergency Room with symptoms consistent of Post-Partum Psychosis. The patient had a history of prednisone being prescribed in the past and gave birth to her firstborn on June 10th, 2020. Approximately one week later, her OBGYN perceived the patient to be suffering from mild postpartum depression and prescribed Zoloft (dose unknown) of which the patient was noncompliant. On July 8th, 2020 the patient's husband reported a one week duration of disorganized bizarre behavior with persecutory delusions, religious preoccupation, and internal preoccupation. The patient's husband confirmed no harm to the baby or herself, however, she had disorganized thought process and behavior. Prior to being admitted to the hospital, the patient was found to be disorganized, irritated, and agitated requiring the use of IM medications and restraints. This case presents the most severe form of pregnancy related psychiatric illness: Postpartum Psychosis as well as an underlying rare autoimmune disorder.

No. 36

Connection and Cohesion in Uncertain Times: Rethinking Networking in the Era of Covid

Poster Presenter: Pallavi Joshi, D.O., M.A.

Co-Authors: Jose P. Vito, M.D., Christina M. Girgis, M.D., Daniel Y. Cho, M.D.

SUMMARY:

Professional networking in medicine is important for refining career goals, building strategic long term relationships and gaining a larger perspective on the healthcare industry. In our continually evolving healthcare system, networking is a crucial tool for psychiatrists in developing their professional identity and advancing within the field. Networking has traditionally succeeded from face-to-face meetings and conferences. However, social distancing measures to prevent the spread of CoViD-19 have put a pause on these conventional networking methods. Although social gatherings and professional meetings may slowly resume over the coming months, there will likely be limits on meeting sizes, and physicians may be reluctant to attend large gatherings. While certainly not novel, online methods of networking have traditionally been considered unconventional. However, these remarkable approaches to networking and socialization in the context of social distancing, warrant exploration and consideration. There are several venues for virtual networking, each with their own pros and cons. In this poster, we will review the relative advantages and disadvantages of emerging modalities, such as virtual conferences, video meetings and their platforms and listservs. We will also review the various social media platforms. FInally, we provide evidence-based tips for networking in a virtual world. We are entering an unprecedented time in history in which social distancing is crucial for saving lives. With the CoVid-19 pandemic, many are staying at home. In response, we have adapted and virtual networking will be more important than ever in keeping us connected as we push forward. We need to think outside of the box for the new normal of networking.

No. 37

Virtual Rotations: An Innovative Approach for Psychiatric Clinical Education

Poster Presenter: Candus Nicole Ford, M.D.
Co-Authors: Andrew J. Keam, M.D., Michael Able, M.D., Aaron Wolfgang, John Robert Magera, M.D.

SUMMARY:

Problem The COVID-19 pandemic has resulted in an increased demand for proficient medical professionals while disrupting academic medical centers' (AMCs) ability to provide their standardized education. Amid rising COVID-19 cases and expanding national efforts to encourage social distancing, the Association of American Medical Colleges encouraged AMCs to suspend direct patient contact responsibilities for medical students. This recommendation may inadvertently result in students receiving substandard medical education. Approach The Tripler Army Medical Center (TAMC) psychiatry residency program created an opportunity for fourth-year medical students to rotate with the inpatient ward and consult/liaison service via virtual platforms in lieu of their in-person audition rotation. General guidelines for medical students include coordination of daily schedules, case discussions regarding their patients before and after each encounter, conducting patient interviews, and writing de-identified notes. These guidelines allow for a four-week audition rotation with flexibility for students to actively participate in patient care via virtual means despite differing geographic locations or while adhering to a 14-day quarantine requirement prior to proceeding with a 14-day in-person clerkship experience. Outcomes After obtaining qualitative verbal feedback from involved medical students, residents, staff clinicians, and ancillary staff, the general consensus was that having medical students join the team in-person was preferred. However, there appeared to be more advantages than disadvantages when using virtual platforms. Identified advantages included increased accessibility of the medical student, decreased idle time for the medical student, and increased safety from an infection standpoint. Identified disadvantages included technological difficulties, increased need for concise communication, and inability to include medical students in acute events (acute agitation, suicide attempts, interpersonal discord, etc.). Informal anecdotal evidence revealed that more advantages were reported by teams who felt greater comfort with virtual platforms. Whereas, more disadvantages were reported by teams who felt less comfort with the virtual platforms. Next Step The use of virtual means as a method for

incorporating medical students into the psychiatry inpatient teams has been integrated into TAMC's daily routine. This method of using virtual platforms may serve as a useful model for other programs to continue integrating medical students into their care teams and to continue providing medical education. Next steps include expanding the guidelines to incorporate third-year psychiatry clerkship medical students, identifying other specialties which may benefit from a similar protocol, and considering the integration of virtual rotations into the medical education core curriculum.

No. 38
WITHDRAWN

No. 39
Uncovering the Bruises: Improving Psychiatry Trainees' Competency in Identifying and Managing Patients Affected by Domestic Violence
Poster Presenter: Julienne Capria, M.D.
Co-Author: Robert Gregory, M.D.

SUMMARY:
Background: Domestic violence (intimate partner violence, or IPV) is a prevalent but under-recognized problem among psychiatric patients, and a major risk factor for mental illness, addiction, and suicide. Although the USPSTF recommends routine screening for IPV among women of reproductive age, the ACGME does not offer standardized requirements or guidelines for IPV training in psychiatry residency programs. This study examined the effects of a 60-minute training session on psychiatry interns' knowledge of and attitudes toward IPV, as well as competency in identifying and managing patients affected by IPV. Methods: Interns in a psychiatry residency program completed a survey before and after receiving a 60-minute IPV training session. Pre-test questions addressed knowledge and attitudes related to IPV, including common myths and misconceptions, which were among the content later covered by the training session. The post-test measured changes in attitudes toward IPV and anticipated changes in patient management, along with trainees' level of interest in further training. The pre-test, training, and post-test were all administered during orientation before the interns started their clinical rotations. Results: All 13 interns (5 female, 8 male) completed the pre-test, and 12 (5 female, 7 male) completed the post-test. Pre-test data showed that 46% of interns had received no IPV training in medical school; 38% did not feel confident in recognizing signs of abuse; 85% did not know what to do if a patient disclosed ongoing abuse; 69% were discussing IPV with a patient less than once a month; 100% expected to benefit from IPV training; and 85% wanted written resources on IPV available in clinical settings. Post-test data showed that 67% of interns felt more understanding toward domestic abuse victims; 67% believed that the training would significantly change their management of patients; 75% felt more comfortable discussing IPV; 83% felt more confident in recognizing signs of abuse; 92% knew what to do if a patient disclosed ongoing abuse; 83% felt more confident in their individual ability to make a difference in patients'' lives by discussing IPV; 67% would include questions about domestic abuse in their standard patient interviews; and 75% wanted more IPV training. Additionally, 100% of interns found the training useful, wanted IPV training to be included in the residency curriculum, and wanted written resources on IPV available in clinical settings. Conclusion: Medical schools and residency programs often provide no direct training in IPV despite its prevalence and devastating impact on mental health. This study demonstrated that even 1 hour of training can make a significant difference in residents' understanding, confidence, and competency in managing patients whose lives have been affected by IPV

No. 40
Dystonia Due to Methamphetamine Use: A Review
Poster Presenter: Harsimrat Dhaliwal
Co-Authors: Karlyle G. Bistas, M.D., Hema Mekala, M.D., Kaushal Shah, M.D., M.P.H., Limei Yang, M.D.

SUMMARY:
Methamphetamine is a commonly abused drug that can be smoked, snorted, orally ingested or injected. Abuse of methamphetamine can lead to psychiatric symptoms such as irritability, anxiety, mood disturbances, psychosis, and movement disorders such as tardive dystonia. The method by which

methamphetamines could lead to tardive dystonia is termed the reverse tolerance phenomenon. Methamphetamines increase the stimulation and transmission of dopaminergic neurons, which leads to activation of the postsynaptic receptors. These postsynaptic receptors are hypersensitive to dopamine due to the blockade of dopamine transmission by antipsychotics. Another mechanism by which methamphetamines increase dopamine is by competitively inhibiting the reuptake of dopamine and also by phosphorylation of the dopamine transporter which leads to internalization of the receptor. This internalization results in increased amounts of dopamine in the cytosol leading to dystonia. Even though it is a rare complication, it is not uncommon and is often overlooked or misinterpreted as side effects from other drugs. In this poster, we will be discussing the pathway for methamphetamine-induced dystonia and the other treatment options from the literature available so far.

No. 41
WITHDRAWN

No. 42
Technology During Pandemics: A Literature Review on Ecoloogical Momentary Assessments
Poster Presenter: Shalini Dutta
Co-Author: Panagiota Korenis, M.D.

SUMMARY:
Introduction: Ecological Momentary Assessment (EMA), a term coined in 1994 by Stone and Schiffman, is a modality by which participants can record their symptoms, triggers and thoughts in real time. This data is recorded electronically through the use of smartphones, tablets, and smartwatches as subjects live their daily lives. EMA can be thought of as an electronic diary by which a subject can respond to alerts by entering their observations several times throughout the day. These assessments involve different discrete methodologies such as interpersonal interaction diaries, ambulatory physiological monitoring, and collection of medication compliance data. EMA was developed to counteract the recall bias and inter-evaluator discrepancies that can occur during regularly scheduled outpatient appointments. Literature Review: A literature review was done using EMA as the search criteria. Davidson et al discussed the use of EMA in suicidality through the use of paper journals, personal digital assistants and cellphones. The paper outlined two sampling schemes; event-based sampling which asks participants to respond to questions each time they experienced a behavior and time-based sampling which asks for responses at a set period of time. Bell et al, 2017 reviewed the application of EMA in treatment of psychotic disorders and reviewed current literature. Schueller et al, 2017 analyzed the use of EMA for depression and anxiety providing mechanisms, study designs and therapeutic measures that can be incorporated for design of an EMA for depression and anxiety. Smith et al 2019 reviewed EMA in the assessment of eating disorders (ED) by looking at realms of type, frequency and temporal sequencing of ED symptoms in natural environment. The use of EMA for child and adolescent patients using mobile based utilization was researched by Heron et al., 2017. Using these modalities children and adolescents may have improved reporting of pain, treatment adherence, sleep and disease symptoms. Raugh et al 2019 studied EMA for psychophysiological assessments. EMA was used for monitoring of EKG, Blood pressure, EEG, electroculography, electromyography and other variables. Discussion: There are multiple advantages and disadvantages to EMA. Advantages include participants avoiding recall bias and providing real time assessments. Treatment is not dependent on respondent's bias and immediate interventions can be enacted. EMA also allows a remote alert to providers and can be used for research. Disadvantages of EMA include it being dependent on equipment, technology and network connectivity. There is a risk of attrition as well as possible redundancy. There is a need for detailed study modeling. EMA requires motivation on the part of the participant to respond and participate regularly. Additionally, encryption is necessary to safeguard such sensitive data. More research is required investigating the benefits of this method.

No. 43

A Retrospective Study of the Adjunct Use of Gabapentin With Benzodiazepines for the Treatment of Benzodiazepine Withdrawal

Poster Presenter: Edison Leung, M.D., Ph.D.
Co-Authors: Hanjing Wu, M.D., Ayse Dalsu Baris, Joe Espinoza, Catherine Chang

SUMMARY:

Background: Gabapentin, an anticonvulsant and neuropathic pain medication, is often used to treat anxiety. Anxiety is also a common symptom associated with benzodiazepine withdrawal. Treatment of the withdrawal symptoms traditionally has been with usage of short term benzodiazepines. However, benzodiazepines come with risk of addiction and other unfavorable side effects. Therefore, finding alternative agents for the treatment of the benzodiazepines withdrawal is needed. Gabapentin is a much more favorable medication than benzodiazepines as the abuse potential is lower. In addition, gabapentin may reduce symptoms of alcohol withdrawal and alcohol cravings (Muncie et al 2013, Berlin et al 2015). Given that alcohol and benzodiazepines are commonly abused together and both affect the GABAergic pathway, using gabapentin, which also increases the GABA turnover in the brain, as an adjunct for the treatment of benzodiazepine withdrawal is plausible and promising. However, this proposal has never been formally evaluated. Methods: this retrospective study we investigated whether gabapentin as an adjunct treatment reduces the withdrawal symptoms and benzodiazepine dependence in patients treated with benzodiazepines withdrawal and concomitantly were given gabapentin for anxiety or neuropathic pain. We screened the patient records retrospectively from a large inpatient psychiatric hospital with annual admission numbers of 8000-9000 and identified 10 patients who met the inclusion criteria in a period of 4 weeks. Observational data of the acute withdrawal symptoms were measured by CIWAs score. Other patient demographics including gender, race, medications, medical problems, length of stay, and number of readmissions were recorded. Results: Ten patients from December 2019 to January 2020 were found to meet criteria of being treated both with gabapentin and benzodiazepines for withdrawal Discussion: Previous studies have shown using gabapentin at a total daily dose of 600-1800 mg reduces the withdrawal symptoms of alcohol (Myrick et al, 2009, Mason et al 2014). This is the first retrospective study to observe the conjunctive use of benzodiazepines and gabapentin in treating benzodiazepine withdrawal. We found the combination of gabapentin and benzodiazepines is safe as no complications were reported during this study. Total daily dose of gabapentin at a range of 600-1800 mg appears valuable in treating benzodiazepine withdrawal as there was a reduction of withdrawal symptoms. The shortcoming of this study is that there is no benzodiazepine or gabapentin only control group as this study was not designed as an interventional study. Therefore, further studies comparing combined use of benzodiazepine and gabapentin versus use of benzodiazepines alone is warranted to further clarify this observation.

No. 44

Assessing the Efficacy of Safe Consumption Sites

Poster Presenter: Elsa Stoff
Co-Author: Karim Sedky

SUMMARY:

In 2017, there were 70,273 deaths due to drug overdoses, which was a 9.6% increase from 2016. It is important for healthcare systems to consider how to minimize drug overdose-related deaths. The US has mobilized some harm reduction strategies, such as needle exchange programs and needle disposal locations. Syringe services programs such as these have been linked to a 50% reduction in HIV and HCV. Some other countries have adopted the harm reduction strategy of opening facilities where people can go to use substances under the supervision of staff with emergency medical training, known as Safe Consumption Sites (SCS's) or Supervised Injection Facilities. The goal of these sites is to decrease overdose related mortality and morbidity by providing sterile equipment, training clients in safer use, and providing educated staff that can respond to basic medical needs, such as administering Narcan. The first SCS opened in Berne, Switzerland in June 1986, and there are centers

across Europe and in Canada and Australia. Currently, there are no SCS's in the US. Therefore, this review of the literature assesses the efficacy of SCS's in sites outside of the US. We also address how current harm reduction efforts in the United States that are similar to SCS's

No. 45

Characteristics of E-Cigarette Use Among Adult Cigarette Smokers With Schizophrenia/Schizoaffective Disorder

Poster Presenter: Jordan Andrew Wong, M.D.
Co-Author: Mary F. Brunette, M.D.

SUMMARY:

Background: Electronic cigarette (e-cig) use is common among adult smokers: 19.0% of recent cigarette quitters and 11.5% of current smokers reported recent e-cig use. Research also suggests that individuals with mental health conditions are more likely to use e-cigs. While there is growing research describing e-cig characteristics amongst the general population, few studies have explored the use of e-cigs amongst those with severe mental illness (SMI). In a secondary analysis of 140 adult smokers diagnosed with schizophrenia/schizoaffective disorder, we reported the prevalence and described characteristics of e-cig use among this specific demographic. **Methods**: We enrolled English-speaking, daily cigarette smokers with schizophrenia spectrum disorders who were ages 18-70 years and psychiatrically stable in a study of brief smoking interventions. Of the 162 individuals at baseline, this study analyzed 140 (86%) participants who completed the Population Assessment of Tobacco and Health (PATH) survey and answered questions about e-cig use at the 6-month follow-up visit. We collected information about demographics, smoking history, marijuana/illicit drug use, and tobacco/e-cig use. **Results**: Among the 140 participants, most were Black and White men, and a minority (n=17 or 12%) identified as Lesbian/Gay/Bisexual (LGB). The group smoked a mean of 12.7 (±8.9) cigarettes/day. Almost half (n=64 or 46%) reported ever using e-cigs, and 21 (15%) reported current use of e-cigs. Participants were significantly more likely to report ever using e-cigs if they were younger (18-45 vs. 46-70; $\chi2=11.7$; $p<0.01$), identified as LGB ($\chi2=4.8$; $p=0.03$), or reported any illicit drug use in the past 6 months ($\chi2=6.5$, $p=0.01$). Only younger age remained a significant predictor of ever-using e-cigs after adjusting for other predictors in a multivariate model (Coefficient: -0.03; $p=0.02$). Of the 64 ever users, current users of e-cigs had significantly lower carbon monoxide scores compared to past users (18±9 vs. 27±19; T= -2.08; $p=0.04$). Among ever users of e-cigs, significant reasons for currently using e-cigs (vs. past use) was harm reduction to self ($\chi2=3.7$, $p=0.05$) and to others ($\chi2=4.7$, $p=0.03$), lack of smell ($\chi2=6.3$, $p=0.01$), and use of e-cigs at places where cigarettes weren't allowed ($\chi2=4.7$, $p=0.03$). **Discussion/Conclusion**: Adult smokers with schizophrenia spectrum disorders who were ever users of e-cigs were more likely to be young, LGB, and recent users of illicit drugs. Reasons for current use of e-cigs included harm reduction, lack of smell, and use in locations where cigarettes were banned. Interventions to address tobacco use disorder among adults with schizophrenia/schizoaffective disorder should address co-use of e-cigs and include features that can be effective among people with these demographics and beliefs. This research was supported by grant RO1CA168778: Randomized Controlled Trial of a Motivational Decision Support System for Smokers with SMI.

No. 46

Comparison of Treatment Methods for Opioid Withdrawal on the Medical Floor: Minimizing AMA Discharges and Maximizing Benefits

Poster Presenter: Krista Ulisse, D.O.
Co-Author: Joseph Valdez

SUMMARY:

Opioid withdrawal is a significant barrier to treatment on the inpatient medicine unit. Patients experiencing withdrawal symptoms may check out against medical advice, putting them at risk for acute harm. This retrospective cohort study will seek to assess if buprenorphine taper for management of opioid withdrawal results in fewer AMA discharges than patients who received other forms of treatment. Data for individuals aged 18-65 who were medically hospitalized and met criteria for opioid withdrawal was pooled from electronic medical

records in the Geisinger Health System. A total of 4973 patients met inclusion criteria. Cohorts were defined as individuals treated with buprenorphine taper, methadone taper, symptomatic management, and no treatment. Rates of AMA discharges were then calculated among the four treatment arms. Rates of AMA discharges in patients receiving methadone and buprenorphine tapers were also compared. Statistical analysis is ongoing, with the goal of developing new care pathways for treatment of patients with opioid withdrawal to minimize frequency of AMA discharges.

No. 47

Evaluating the Feasibility of High-Dose Buprenorphine Induction for Management of Opioid Use Disorder

Poster Presenter: Kristyn Lao
Co-Author: Cheryl A. Kennedy, M.D.

SUMMARY:

Background: In recent years, opioid use accounted for nearly 70% of all drug-related overdose deaths. Among treatment options, buprenorphine has several advantages, such as greater patient access, fewer adverse side effects and increased survival rates. Traditional buprenorphine induction protocol for current opioid users begins with low-doses in patients in moderate opioid withdrawal. Should a patient experiences precipitated or continued withdrawal, one treatment option is to provide larger doses of buprenorphine to saturate open mu-opioid receptors, and/or displace active opioids and thus temper withdrawal symptoms. While not current mainstay practice, it is conceivable that an initial mega-dose of buprenorphine could immediately prevent precipitated withdrawal adequately with full receptor saturation. Few studies exist on the safety, efficacy, side effects and long-term potential use of high-dose buprenorphine induction in the clinical setting. Methods: PubMed and PsychINFO searches were performed with terms "high-dose buprenorphine," "macro-dosing buprenorphine," or "buprenorphine induction." Five relevant trials that examined high-doses of buprenorphine in a therapeutic or observational setting were reviewed. Results: High-dose buprenorphine was well-tolerated among patients with near complete resolution of opioid withdrawal symptoms. Of 175 patients, 8 percent reported some adverse effect such as hypotension/hypertension and/or symptoms of precipitated withdrawal, such as nausea and vomiting. All patients were in moderate opioid withdrawal prior to induction. Starting doses of buprenorphine ranged from 16-96 mg. There was no consensus among trials on optimal starting doses. Higher doses seemed to starve off opioid withdrawals with greater efficacy, though studies that compared head-to-head doses yielded varying results. Most trials focused on the effect of a single high-dose of buprenorphine with positive results for detoxification and/or preparation to bridge to naloxone therapy. One trial demonstrated that a reverse taper of high-dose buprenorphine also yielded safe resolution of opioid withdrawal. Trials were limited by the small number of subjects, drop-out rates and lack of long-term follow-up. Discussion: High-dose buprenorphine induction may be a feasible alternative to the traditional induction practice. In the right population, over-saturation of the mu-opioid receptor has the potential to eliminate opioid withdrawal symptoms immediately with low risk of adverse side effects. Some are hesitant to try buprenorphine for fear of precipitated withdrawal or had too low a maintenance dose, resulting in a prior negative experience Now with widespread experience, if we reduce precipitated withdrawals, more patients may be more open to buprenorphine therapy as a viable option. Further research is needed to better determine the risks of precipitated withdrawal, high-dose buprenorphine, the rate of and optimal dosing.

No. 48

WITHDRAWN

No. 49

One-Year Retention in Comprehensive Care Office-Based Opioid Treatment Model Versus Traditional Medication-Assisted Treatment

Poster Presenter: Shuo Qiu
Co-Authors: David Hartman, M.D., Cheri Hartman, M.D.

SUMMARY:
Background Studying the factors that enhance buprenorphine retention will help to decrease mortality. Our office-based opioid treatment (OBOT) model introduces co-located individual and family therapy and care coordination, in addition to the provision of buprenorphine and group therapy. Current literature is scant on efficacy of interdisciplinary care coordination in treating opioid use disorder. The closest comparable psychosocial intervention, case management, has demonstrated efficacy in treating substance use disorder. Objectives Compare retention rate of patients with opioid use disorder undergoing OBOT interdisciplinary, comprehensive care model versus patients receiving medication-assisted treatment using the traditional approach of medications combined only with group therapy. Assess parameters which contribute to retention of patients in OBOT model, including medical and psychiatric comorbidities, patient demographics, medication dosing, insurance type, and polysubstance use. Compare prognostic outcomes of OBOT model to MAT model. Methods This is a retrospective chart review identifying patients' retention outcomes and opioid/other drug abstinence for patients in office-based opioid treatment model (cohort #1) versus traditional medication-assisted treatment (cohort#2) in outpatient teaching clinic. Data are entered into REDCap survey with NIH-approved methods protecting privacy. Chi square test of independence (or Fisher's exact test) used to determine the dependence between 12-month completion rates and OBOT implementation and to test effect size of potentially moderating categorical variables. Approval obtained by Carilion IRB. Results Pending – retrospective chart review is underway; analytics revealed approximately 100 patients in each cohort group meeting criteria of receiving the combined product of buprenorphine/naloxone for medication-assisted treatment and not having left the program due to the exclusionary criteria of having moved out of area, transferred to a higher level of care or incarcerated. Results will be available by October. Conclusions Pending – analyses to be completed by October 2020. Scientific Significance Identifying what types of patients benefit from which treatment approaches could help policymakers and health care systems explore methods for targeting certain services to population types based on findings regarding relevant patient characteristics. Exploration of how moderating variables might affect efficacy of treatment informs the field of addiction, furthering an understanding of the complex range of variables influencing this disease process and its treatment. The benefit to patients of this study is the potential impact on better quality of care for treating their opioid use disorder. The benefit to society is identifying the potentially beneficial impact of the OBOT model versus the less comprehensive traditional model to inform state policy. More implications pending.

No. 50
Relationship of Utilization of Mental Health Care in Patients With Substance Use Disorders With and Without History of Prior Incarceration
Poster Presenter: Linda Wei Zhang, M.D.
Co-Authors: Harrison Galicki, M.D., Gerald DeMasters, M.D., Ph.D., W. Brady DeHart, Ph.D.

SUMMARY:
BACKGROUND: Robust literature highlight the social and economic burden of substance use disorders (SUD), the increase in rates of incarceration, the high prevalence of substance use in incarcerated or previously incarcerated individuals, the high prevalence of co-occurring illness, and the utilization of addictions treatment in individuals with substance use. However, limited data is available demonstrating the mental health care utilization of those with history of incarceration and SUDs. In addition, co-occurring illness (formerly known as dual diagnosis) is a common phenomenon necessitating broader general mental health treatment in addition to SUD treatment. This research aims to investigate the differences in utilization of inpatient mental health care in psychiatric patients with SUD with and without history of incarceration. This may help with future research to identify any trends in mental health care utilization and ultimately, specific recommendations to increase and improve utilization of care in this population. METHODS: De-identified existing data was pooled from the Hospital Corporations of America Capital Division database on behavioral health unit inpatients with diagnosis of SUD as

determined by ICD 10 codes. Individuals were divided based on presence or absence of lifetime history of incarceration as documented in intake and progress notes from their hospital stay. Primary objective was to compare length of stay in days and secondary objectives were to compare number and type of psychotropic use. RESULTS: 4947 patients (147 with positive history, 4800 without; 66% male; 78% white) were included in the analysis. A significant difference in length of stay (p=0.02) between patients with a positive legal history and those without was found using Welch two sample t-test. However, no significant difference in length of stay (p=0.06) was observed between the two groups using Wilcoxon rank sum test. A higher proportion of gabapentin prescriptions between patients with a positive legal history was identified. There was no significant difference in the number of prescriptions between the two groups. CONCLUSION: A higher proportion of gabapentin, but not total number of prescriptions, were present in those with a positive legal history. This may suggest an inherent difference in need between the two populations, or perhaps even a bias in prescribers, which is an avenue for further investigation. Contrary to prior studies suggesting increased need for substance abuse treatment, our study did not find a significant increase in utilization of mental health care in SUD populations with a legal history vs those without. These findings may assist with treatment resource allocation. In addition, this may help disprove the misconception that those with prior legal histories and SUDs are a larger burden on the medical system, thereby reducing stigma experienced by those individuals with legal history and SUDs.

No. 51
WITHDRAWN

No. 52
The Impact of Covid-19 on Opioid-Related Overdoses: A Review of the Literature
Poster Presenter: Faris Azeez Katkhuda
Co-Authors: Sean T. Lynch, Lidia Klepacz, M.D.

SUMMARY:
While the death toll of COVID-19 continues to rise in the US, the societal impact of this worldwide pandemic may have led to the rise in opioid overdoses in the last couple of months. Although federal data will not be available for many more months, preliminary data from the Overdose Detection Mapping Application Program, Addiction Policy Forum surveys, and many county health departments have shown drastic increases in the number of overdoses in the first half of 2020 compared to 2019, which set the record for overdose deaths according to the CDC. The opioid epidemic may have been exacerbated by the COVID-19 pandemic because of closure of treatment programs, social isolation, anxiety about the pandemic and fear of losing employment, increased EMS response times, and the decarceration of people with substance use disorders in order to mitigate outbreaks of COVID-19 in prisons. Finally, people who regularly use opioids can potentially overdose if they misinterpret the symptoms of COVID-19 as withdrawal. In response to the increase in overdoses, the Substance Abuse and Mental Health Services Administration has lightened restrictions on the amount of methadone that patients on medication assisted treatment can take home and has waived the requirement that patients who want to begin buprenorphine treatment need an in-person consultation. However, more action, like encouraging all patients with opioid use disorder to begin medication assisted treatment or making naloxone available over the counter, may help mitigate the increase in opioid-related overdoses due to the COVID-19 pandemic.

No. 53
WITHDRAWN

No. 54
WITHDRAWN

No. 55
WITHDRAWN

No. 56
Anxiety and Differential Social Media App Usage During the COVID-19 Lockdown in Madrid, Spain in 2020
Poster Presenter: Jihan Ryu, M.D.

Co-Authors: Juan José Campaña-Montes, Antonio Artés, Enrique Baca-Garcia, Maria Mercedes Perez-Rodriguez

SUMMARY:

Anxiety symptoms during public health crises are associated with adverse psychiatric outcomes and impaired health decision making. The interaction between real-time social media use patterns and clinical anxiety during infectious disease outbreaks is underexplored. This study evaluated the usage pattern of two types of social media apps (communication and social network) from Feb 1st through May 3rd, 2020, when the COVID-19 surge in Madrid, Spain resulted in the implementation of strict lockdown measures, and short term anxiety symptoms of the users at clinical follow up. A recurrent neural network (RNN)-based model was applied to differentiate clinical anxiety (N=44) from non-clinical anxiety group (N=51), based on the longitudinal time-series data of social media usage (in seconds) as well as age, sex, employment and living alone status, presence of an essential worker in the household, worries about life instability, and health status. Individual daily usage with repeated measures analysis of variance validated the model's prediction that in the clinical anxiety group (N=37), an increase in communication app usage from pre-lockdown to lockdown period was significantly smaller than in the non-clinical anxiety group (N=37), F(1, 72) 3.84, p=0.05. Further, active social network app users (N=42) during the entire period had a higher burden of anxiety and stress disorder diagnosis relative to missing or inconsistent users (N=100) (z=-2.2, p=0.03). Passive-sensing of a shift in usage patterns in category-based social media app during the lockdown can predictively model clinical behaviors moderating the severity of anxiety symptoms, identifying vulnerable populations during infectious disease outbreaks.

No. 57

A Case Report of Autism Spectrum Disorder Misdiagnosed as Schizophrenia

Poster Presenter: Sandeep Sekhon, M.D., M.B.B.S.
Lead Author: Robert A. Gadomski, D.O.

SUMMARY:

INTRODUCTION- Autism Spectrum Disorder (ASD) belongs to neurodevelopment disorders and is characterized by persistent impairment in reciprocal social communication and social interaction and repetitive, stereotypical, and restricted patterns of behavior. Schizophrenia is a heterogeneous clinical syndrome involving a range of cognitive, behavioral, and emotional dysfunctions. Core symptoms include delusions, hallucinations or disorganized speech, grossly disorganized or catatonic behavior, and negative symptoms. This case report will highlight the similarities and differences in the presenting symptoms of ASD and schizophrenia, as well as the difficulty with providing equitable care in the setting of misdiagnosis. CASE REPORT- We are reporting a case of a 53 year old Caucasian male who was brought to the emergency room after he was found laying on a bench disheveled, covered in feces, mumbling to himself with persecutory ideations, loosening of thought and grandiosity. He was initially diagnosed with psychosis and started on low dose antipsychotic. Collateral information determined the patient was from a group home for individuals with chronic mental illness and carried a previous diagnosis of schizophrenia. But over the course of hospital stay he denied auditory and visual hallucinations, was found to have stereotypical mannerisms, perseveration, social isolation, circumstantiality, and odd thinking. Head CT scan was normal. Based on these symptoms and using the Childhood Autism Rating Scale High Functioning, he met criteria for ASD. DISCUSSION- The association between Autism and Schizophrenia was formulated a century ago. Eugen Bleuler had defined Autism as 'withdrawal from reality' which was seen as a negative symptom of Schizophrenia.(1) The commonly overlapping symptoms between these diagnosis are poor attention, poverty of speech, social withdrawal, lack of interest and motivation, and aggression. Typically, patients with ASD never develop persistent and pervasive core symptoms of schizophrenia, such as delusions and hallucinations. These can also be differentiated based on the CT scan findings, as patients with ASD have larger brains as compared to small brains in schizophrenia.(1) In addition, individuals with ASD will usually have a positive family history, stereotypical mannerisms, social isolation, difficulty with communication and

speech, and abnormal prosody.(2) Differentiating ASD and schizophrenia is challenging when meeting an individual later in life who does not carry a previous diagnosis of ASD. This barrier puts the health of the patient in jeopardy, as antipsychotics have potentially harmful long term side effects that would not be prudent to prescribe long term in those with ASD.(3) Distinguishing schizophrenia from ASD is important to providing equitable care for patients in the short term and long term.

No. 58

Clozapine Induced Cardiac Complications and Challenges in Management of Treatment Resistant Schizophrenia

Poster Presenter: Nazila Sharbaf Shoar, M.D.
Co-Author: Isabelo L. Bustamante

SUMMARY:

Introduction Treatment-resistant schizophrenia is defined as having persistent moderate-severe positive symptoms, negative symptoms with cognitive and functional impairment, and failing two separate antipsychotic medications of adequate dose and duration. Clozapine is well understood and remains the only highly effective second-generation antipsychotic, and is used for treatment-resistant schizophrenia. To be eligible for a clozapine trial it should be determined that the benefits outweigh the risks and the patient/family agree. Patients need to be closely monitored for potentially life-threatening side effects of agranulocytosis (absolute neutrophil count ≥ 1500 cells/microliter), constipation, myocarditis and cardiomyopathy. Studies showed clozapine-induced cardiomyopathy has an incidence of 0.02-0.1%, and symptoms and signs developed in 87% of patients within the first month of treatment. Case We discuss a case describing a 40-year-old female with treatment resistant schizophrenia who developed congestive heart failure most likely induced by clozapine. Echocardiogram showed dilated cardiomyopathy with four chamber dilatation, biventricular failure and an ejection fraction (EF) of Discussion and Conclusion A number of cardiac disorders have been associated with clozapine. The most serious of these cardiac side effects is myocarditis and cardiomyopathy predisposing to congestive heart failure, which is a critical and possibly life-threatening condition. Clozapine-induced heart failure should be taken into consideration when patients are treated with this antipsychotic. It is understood acute myocarditis occurs in the first 2-3 weeks after clozapine is initiated. One possible solution to detect early cardiac changes could be to implement a close monitoring protocol with regular electrocardiogram, baseline echocardiogram as well as measurement of B type natriuretic peptide, troponins, and C reactive proteins. This case illustrates the complicated course of treatment resistant schizophrenia with clozapine induced cardiac failure where the mainstay of treatment with ECT was not a viable option.

No. 59

Adding Antipsychotics With Lithium Reduces Hospitalization Stay in Bipolar Manic Episodes

Poster Presenter: Hyun Kyung Lee, M.D.
Co-Authors: Rikinkumar S. Patel, M.D., M.P.H., Shikha Verma, M.D.

SUMMARY:

Background: According to the 2018 guidelines from the Canadian Network for Mood and Anxiety Treatments (CANMAT) and the International Society for Bipolar Disorders (ISBD), the first-line treatment for with bipolar disorder (BP), manic episodes with monotherapy versus combination therapy is based on the necessity of rapid response, severity of mania, previous history of response, and tolerability concerns [1]. The combination therapy has a better response by 20% than monotherapy with mood stabilizers [2]. Our study aims to evaluate the demographic predictors in patients with BP, manic episodes receiving combination regimen (COMBO) with lithium and antipsychotic, and to determine the impact of a COMBO on hospitalization length of stay (LOS) and total charges. **Methods**: Inpatient data of 1,435 adult patients with BP, manic episodes and receiving lithium was extracted from the national inpatient sample. We used independent sample T-test with equality measures for LOS and total charges. The logistic regression model was used to find the odds ratio (OR) for the utilization of COMBO in patients with BP, manic episodes. **Results**: About 34.5% of the inpatient sample received COMBO.

Statistically non-significant differences between the COMBO versus non-COMBO cohorts existed for demographics: age and sex. A higher proportion of the inpatients receiving COMBO were from high-income families above the 75th percentile (56.4%) and covered by private insurance (47.5%). African Americans (OR 2.0, 95% CI 1.43-2.82) and non-White Hispanics (OR 2.3, 95% CI 1.49-3.57) had higher odds of receiving a COMBO compared to Whites. LOS for BP manic episode management was significantly reduced by 2.8 days (95% CI 1.13-4.53 days, P < 0.001) in the inpatient cohort receiving COMBO. There was no statistically significant mean difference in total charges (P = 0.495). **Conclusion**: COMBO by adding antipsychotics with lithium in management of BP, manic episodes were associated with reduced LOS by 2.8 days compared to inpatients receiving lithium monotherapy. But we should also consider that combination with haloperidol, olanzapine, risperidone, and quetiapine with a mood stabilizer for managing acute manic episodes is less well-tolerated than monotherapy [3]. Therefore, using the COMBO as an initial treatment for hospitalized patients with BP, manic episodes should be considered as an effective model for faster response based on tolerability and requirement of faster response to manage to acute mania.

No. 60

Anxiety Increases Suicidality in Adolescents With Bipolar Depression

Poster Presenter: Ozge Ceren Amuk, M.D.
Co-Author: Shikha Verma, M.D.

SUMMARY:

Background: Children and adolescents with bipolar disorder are at increased risk for suicide [1]. Anxiety disorders are common among youth with bipolar disorder and are also independently increases suicide risk; thus, co-diagnosis of anxiety disorders may amplify the burden of disease by worsening the prognosis in this clinical population [2]. However, there is limited research on comorbidities including anxiety disorders in pediatric bipolar disorder [3]. We aim to determine the relation between suicidal behavior risk in adolescents with bipolar depression. **Methods**: Nationwide inpatient sample (NIS) from the United States was used in this cross-sectional study, and included 9,720 adolescent inpatients with bipolar depression. The inpatient sample was divided into a group based on the co-diagnosis of diagnosis of anxiety disorder. After adjusting for demographic confounders and psychiatric comorbidities, logistic regression analysis was used to measure the odds ratio (OR) of co-diagnosis of anxiety disorders and suicidal behaviors. **Results**: Co-diagnosis of anxiety disorders were higher in females (70.3%) and Whites (67.7%) among 34.8% (N = 3,385) of total inpatients. Suicide behaviors were predominant among patients with co-diagnosis of anxiety compared to those without co-diagnosis of anxiety group 54.1% and 44.6% respectively (P <0.001). Odds for suicidal behaviors in cohort with co-diagnosis of anxiety disorder were 1.35 times higher (95% CI 1.23–1.47, P <0.001) compared to the cohort without co-diagnosis of anxiety. **Conclusion**: Bipolar depression adolescents with co-diagnosis of anxiety disorders commonly display suicidal behaviors. Co-diagnosis of anxiety disorder in bipolar depression independently increases the risk of suicidal behaviors by 35%. It is significantly important to make a better understanding of diagnosing and treating the co-diagnosis of anxiety disorders in bipolar adolescents to prevent suicidal behaviors.

No. 61

Augmenting Mood Stabilizers With Low-Dose Lithium in Patients With Renal Impairment

Poster Presenter: Hema Venigalla, M.D.
Co-Authors: Rooshi Amit Patel, M.D., Alex Slaby

SUMMARY:

Augmenting Mood Stabilizers with low-dose Lithium in Patients with renal Impairment. Hema Venigalla, MD; Rooshi Patel, MD; Alex Slaby, MD; Sanjay Chandragiri, MD. The Wright Center for Graduate Medical Education Lithium is one of the gold-standard drugs for acute and maintenance treatment of bipolar disorder (1), however, it may cause nephrotoxicity in some patients on long-term therapy (2). The patients whose cycling is stabilized on chronic Lithium therapy who subsequently develop renal impairment, it is likely that a certain percentage may psychiatrically decompensate particularly with manic episodes after being

switched to an alternative mood stabilizer (3). We present a case of a 61 year old male with history of bipolar I disorder whose symptoms were well controlled on Lithium monotherapy for four decades. He had not had a relapse of his manic episodes, and was functioning appropriately without psychosocial impairment). Due to urinary retention from an anticholinergic medication, he developed lithium toxicity and subsequent nephrogenic diabetes insipidus. His lithium was discontinued and he was tried on maximal doses of divalproex and olanzapine with minimal effect. He continued to have rapid cycling of his bipolar disorder, and was hospitalized as a result multiple times. Because he was stable on Lithium in the past, we started him on a low dose of Lithium to augment the effect of a therapeutic dose of Divalproex. The addition of low dose lithium was started after thorough discussion with nephrology. Due to its prior effect on his mood stabilization, Lithium augmentation was added to the prior regimen after clearance by his nephrologist. The patient's symptoms resolved rapidly to a normal baseline over the following 2 weeks, and was ultimately discharged for further outpatient management. This case highlights the need to consider augmentation with low-dose lithium to alternative mood stabilizer regimens in patients who were previously stabilized on the medication but developed renal impairment. The concern is that these subsets of patient may not stabilize without lithium therapy but cannot tolerate full maintenance doses of the medication. With careful monitoring of kidney function, this may be a pathway for re-stabilization, improved quality of life, and fewer hospitalizations for this subset of patients. Further research regarding use of low dose lithium may uncover a safer way to treat bipolar disorder when long-term therapy is required.

No. 62

Cannabis Use Is an Independent Risk Factor for Manic Episode: A Report From 380,265 Bipolar Inpatients

Poster Presenter: Rikinkumar S. Patel, M.D., M.P.H.
Co-Authors: Ashima Singla, M.D., Miglia Cornejo, Geetika M. Verma, M.D., Zainab Cheema, M.D.

SUMMARY:

Background and objectives: Cannabis use in patients with bipolar disorder (BP) is associated with an increased likelihood of having a manic episode [1]. The goal of our study is to evaluate the odds of BP hospitalization due to psychiatric comorbidities and substance use disorders (SUDs). Methods: We conducted a cross-sectional study using the national inpatient sample (NIS) data from 4,400 hospitals covering 44 states in the US. Adult BP hospitalizations (N=380,265) were included and sub-grouped by manic (N=209,785) versus depressive episodes (N=170480). The logistic regression model was used to evaluate the odds ratio (OR) for BP hospitalizations and was adjusted for demographics and psychiatric comorbidities. Results: Patients with BP mania were younger compared to those with BP depression (33.8y vs. 35.2y, P Discussion and Conclusion: A prospective observational study found that BP patients who never used cannabis or quit during the manic/mixed episodes had better clinical outcomes than patients with continued cannabis use [2]. Additionally, cannabis use has been associated with increased BP-related hospitalization [2, 3]. As per our study, cannabis use may worsen the manic symptoms in BP patients and can increase the odds for hospitalization by 67%. This is common in young men and so it is important to provide substance use counseling/psychoeducation and discourage cannabis use among youth and prevent long-term consequences.

No. 63

Measuring Therapeutic Alliance in Adolescents at High Risk of Mood Disorder Undergoing Family-Focused Therapy

Poster Presenter: Nicole Rose Wong, B.S.
Co-Authors: Kayla E. Carta, B.S., David J. Miklowitz, Ph.D.

SUMMARY:

Adolescents with a family history of bipolar disorder (BD) who have active mood symptoms are at high risk for developing BD as they reach late teen years or early adulthood, suggesting the importance of early intervention. Family-focused therapy (FFT), consisting of 12 weeks of psycho-education, communication training, and problem-solving

training, has been associated with longer well intervals between mood episodes and lower rates of suicidality in youth at high risk for BD. However, the "active ingredients" of FFT are not well understood. Specifically, therapeutic alliance, often one of the most powerful determinants of a successful outcome in individual psychotherapy, has not been investigated in relation to outcomes of FFT. This study is part of a longer-term project that will examine the correlation between alliance and clinical and affective outcomes of FFT among adolescents at high risk for BD. We examined whether therapeutic alliance can be reliably rated by observers from videotapes of FFT sessions. Using a sample of 21 adolescents with a family history of bipolar or unipolar mood disorder, all of whom received FFT, we examined whether two raters could reliably measure alliance of adolescents and their parents along four sub-scales: Engagement in the Therapeutic Process, Emotional Connection to the Therapist, Safety in the Therapeutic System, and Shared Purpose in the Family. After 20 hours of training, raters achieved ≥ 80% percent agreement across the 4 dimensions, with any rating that differed by ≥ 1 on the 7-point Likert scale counting as a disagreement. We also found that mean alliance ratings of parents were numerically higher than those of adolescents at each time point, and specifically parents achieved significantly higher Safety in the Therapeutic System ratings relative to adolescents at T2 ($p < .001$). All mean alliance ratings numerically increased over time with the exception of the Shared Sense of Purpose in the Family dimension, which averaged a rating of $.20 \pm 1.69$ at T1 and a rating of 0.00 ± 2.12 at T2 (minimum possible score: -3, maximum possible score: 3). Thus, therapeutic alliance can be rated reliably by neutral observers and may be an important mediator of outcome among high-risk youth undergoing FFT.
Keywords: therapeutic alliance - family therapy - mood disorder - adolescents

No. 64

A Systematic Review of the Effectiveness of Contemporary Interventions Aimed at Improving Parent-Infant Relational Health

Poster Presenter: Lindsy Pang
Co-Authors: Martha Welch, Dani Dumitriu

SUMMARY:
Objective: Early adversity destabilizes child biopsychosocial development and results in worse health outcomes.1,2 The infant's relational health with a parent is protective and a marker of future socioemotional development.3,4 This review summarizes contemporary parent-infant interventions that aim to promote bonding. We focus on the different methods of intervention, the measurements used to assess successful enhancement of bonding, additional variables and outcomes measured, and the long-term effects of each main intervention. We discuss common trends among the different interventions, synthesis of knowledge gaps, and our proposed action plan for future widespread implementation. Method: A search for relevant randomized controlled trials was performed in PubMed, PsycINFO, ProQuest, Ovid, and Scopus. The search included interventions published between 2000 and 2020. Interventions were included if they specifically targeted parent-infant dyadic interactions and were initiated within the first 6 months of age. Results: A total of 11 interventions aiming to promote parent-infant bonding were identified, and all reported positive parent-infant relational health outcomes. Additional outcomes included improved infant development, responsiveness, and maternal mental health. A total of 9 heterogeneous measurements were used to determine the primary outcome of change in parent-infant relational health, leading to challenges in comparing outcomes across interventions. The focus of scoring also differed among measurement tools, with some assessing only the child's behavior, others only the mom's behavior, and yet others the child and mom's behavior separately. A minority specifically focused on the interaction between the parent and child. The length of intervention varied from a few hours to years. Strange Situation was the most commonly used primary outcome measure, reported in six of the identified interventions. A meta-analysis of these interventions showed significant benefit that appears not to be "dose-dependent" on intervention length. Conclusion: This review provides evidence for psychological, social, and developmental benefits for parent and child following interventions that promote parent-infant relational health. Interestingly, most interventions coded either mother or child with few

interventions specifically focusing on the reciprocal interaction between parent and child. Importantly, the length of intervention is not associated with differences in outcomes. We also propose greater partnership between pediatricians and child psychiatrists given that most children visit the pediatrician's office approximately a dozen times in the first two years of life. Furthermore, previous reports show that patients wish for greater psychiatric help in primary care.5,6 Investment into time and cost-effective mother-child psychiatric interventions identified in this review could significantly improve developmental trajectories with wide social reach.

No. 65

Alcohol Use Disorder and Traumatic Brain Injury-Related Hospitalization in Under 18 Population

Poster Presenter: Noha Eskander, M.B.B.S.

SUMMARY:

Background: Traumatic brain injury (TBI) is the major cause of disability with about 145,000 children and adolescents suffering from permanent cognitive, behavioral, and physical effects [1]. Alcohol intoxication has a direct neurotoxic effect on the brain in patients with AUD [2]. The co-occurrence of TBI with alcohol use disorder (AUD) has augmented long-term adverse effects on the brain functions [3]. We conducted a cross-sectional study to identify the demographic predictors of TBI, and the risk of association of psychiatric comorbidities including AUD and TBI-related hospitalizations in the children and adolescent population. Methods: We included 3,825,523 children and adolescent inpatients (age 8-18 years) using the nationwide inpatient sample (2010-2014), and 61,948 inpatients had a primary diagnosis of TBI. These inpatients were grouped by comorbid AUD (N = 2,644). Multivariable logistic regression model adjusted for demographics and psychiatric comorbidities including other substance use disorders (SUD) was used to evaluate the odds ratio (OR) of AUD as a risk factor for TBI-related hospitalization. Results: A higher portion of the TBI inpatients were adolescents (12-18 years, 82.2%), males (71.2%), and whites (59.2%). Males had three times higher odds (95% CI 3.14 - 3.26) for TBI-related hospitalization compared to females. Mood (4.1%) and anxiety (2.2%) disorders were the most prevalent psychiatric comorbidities in TBI inpatients, however, were not associated with increased odds for TBI-related hospitalization. Alcohol and tobacco use (4.4% each), and cannabis use (3.5%) were prevalent among SUD. AUD was associated with the highest odds (OR 3.5, 95% CI 3.35 - 3.67) of TBI-related hospitalization. Patients with TBI and comorbid AUD also had higher odds for abusing stimulants (OR 5.11, 95% CI 3.85 - 6.77), cannabis (OR 4.69, 95% CI 4.12 - 5.34), and tobacco (OR 3.77, 95% CI 3.34 - 4.27). Conclusion: AUD is an independent risk factor for TBI-related hospitalization. There is an increased risk of 50% in the children and adolescent population compared to non-alcohol users. White and male adolescents are the most affected group among TBI and AUD related hospitalizations. Comorbid mood disorders and substance use including stimulants, cannabis, and tobacco are common in these high-risk groups.

No. 66

An Interesting Case of Selective Mutism in a Child With a Comorbid Undiagnosed Social Anxiety Disorder

Poster Presenter: Michelle T. Jaehning, M.D.

SUMMARY:

Selective mutism is a rare, yet complex childhood anxiety disorder characterized by a child's inability to effectively speak and communicate in select social settings. Many of the children diagnosed with selective mutism are on the extreme end of the spectrum for timidity and shyness. This disorder can present with a variety of comorbidities to include enuresis, encopresis, obsessive-compulsive disorder, major depressive disorder, and developmental delay. The manifestations and severity of these comorbidities is dependent on the individual and thus will vary on a case to case basis. Interestingly, more than 90% of children with this mental disorder display symptoms of social phobia or social anxiety as exemplified in our case study. Our objective is to demonstrate through our case study that selective mutism may very well be a form of social anxiety disorder. Our patient appears as stated age and is a well-dressed, well-groomed, pleasant, semi-cooperative, alert and oriented 10-year-old female

obtaining psychiatric evaluation due to a history of selective mutism. She has a positive family psychiatric history: her first cousin has selective mutism and did not speak until she went to college and patient's mother has a history of untreated anxiety. This child is currently enrolled in the fifth grade and is not on any medications. She was diagnosed with this disorder a year prior at the Center for Neurodevelopmental Health. Patient states she is able to communicate more effectively with adults; however, her symptoms are elevated in social settings, particularly when interacting with other children. Her mother believes that her daughter is exhibiting behaviors of social phobia and has a fear of being confined to spaces or being left in an unknown area. This patient was getting outpatient treatment with her therapist, Stella Silver (at the Smart Center), for one year for her selective mutism. In the interview, patient had poor eye contact, looked to her mother for reassurance when her anxiety levels spiked, speech was very soft, and her mood was very anxious with an affect that was withdrawn and subdued. Patient was recommended to continue psychotherapy (particularly cognitive behavioral therapy) for exposure and maintenance, and we recommended that her mother initiate an IEP child study evaluation for accommodations at school. Patient was started on Prozac 10 mg for one week, with a plan to titrate up to 20 mg and remain at that dose for the next 6-8 weeks with a later reassessment for dosing. Selective serotonin reuptake inhibitors (SSRIs) is the logical first-choice treatment for selective mutism in children given the fact that selective mutism may coexist with other anxiety disorders. In this poster, we discuss a case of selective mutism in a child with undiagnosed social anxiety disorder.

No. 67

Assessing Medication Management Practices in Wilderness Therapy Programs: A Protocol for a Primary Research Study

Poster Presenter: Alan M. Atkins, M.D.
Co-Authors: Sarin Pakhdikian, Kyle Kaveh, Gino Mortillaro, Asmita Mishrekar

SUMMARY:
Introduction: Nature Based Therapy (NBT) serves approximately 10,000 US patients yearly. It describes therapies that use nature as a main theme and setting for treatment (Dobud & Harper, 2018). The COVID-19 pandemic has taken a toll on adolescent mental health by limiting social interactions, increasing screen time, and forcing psychotherapy sessions onto a telehealth platform. NBT provides meaningful physically-distanced therapeutic interactions and time away from screens. Our prior literature review suggests NBT confers greater resilience and longer-lasting benefits than traditional psychotherapy by establishing a strong therapeutic alliance, fostering introspection, fortifying self-efficacy, and creating a high-accountability environment (Harper, 2017). Wilderness therapy (WT), a sub-type of NBT, employs extended treks and targets multiple patient populations including adolescents refractory to residential treatment. It is often used in the setting of anxiety, depression, substance use, and personality disorders (Gabrielsen et al., 2019; Gillis et al., 2016). WT presents unique challenges to the psychiatric formulary including lack of storage, refrigeration, and support staff. Therefore, it is important to validate and standardize psychiatric practice within these settings. Our research team was unable to find any articles discussing medication management practices for WT applications. Thus, the proposed study design incorporates interviews with psychiatrists at WT programs to assess for differences in the WT pharmacotherapy practices as compared with those in inpatient and residential settings. Methods: We plan to use a convenience sample of psychiatrists, medical directors, and clinical directors at WT programs treating US adolescents aged 14-18. Structured interviews will be conducted over electronic meeting platforms using a standardized questionnaire to probe for specific characteristics of each provider's population, most commonly treated diagnoses, most frequently prescribed psychiatric medications, dosage, schedule, route of administration, and rationale for use. Common factors in medication practices in WT settings will be extracted from the results. Conclusion: This team aims to outline medication management practices for the most common diagnoses, compare them with psychiatric guidelines, and examine existing

differences and the rationales for each. We plan to construct new algorithms for areas necessitating deviation from traditional psychiatric treatment and suggest best practices for standardized WT medication management. We hope to expand WT's evidence base and thus bring equity to WT by increasing access to government and insurance funding.

No. 68

Breaking Barriers to Care for a Recently Emigrated Adolescent: A Case Report on Mental Health Care Consent by an Unaccompanied Minor

Poster Presenter: Samantha Ongchuan
Co-Authors: Neha Naqvi, James Kimball

SUMMARY:

Background: Children of immigrants represent one in four children in the US and are expected to represent one in three children by 2050 (Kim et al 2018). Elevated risk of mental health problems was found in undocumented immigrants, refugees, or unaccompanied minors (Torres et al 2019). Through this case report of a recently emigrated adolescent who was hospitalized in an inpatient academic medical center, we will review pearls and pitfalls and future directions towards psychiatric care in this population, along with a review of current legislation regarding their care. **Case Report**: Ms. C is a 17-year- old with history significant for depression and 3 previous suicide attempts via overdose who presents to the ED for worsening depression and daily passive suicidal ideation. She recently emigrated from Mexico due to her parents wanting her to go to school in the US. Her father was reported to be alcoholic and physically abusive. She resides in a locked bedroom in an apartment shared by a male friend of her uncle's. She was discharged on fluoxetine 20 mg daily with resources to help with school enrollment and the immigration process. **Discussion**: In this case, inpatient stabilization was delayed by 2 days due to uncertainty regarding guardianship as well as other patient barriers consistent with the immigrant population. Some known barriers with this population are: language barriers, cultural interpretations of mental health, stigma around mental health illness, and fear of negative repercussions when living with mental health illness (Salami 2019). To start treatment, we invoked NC general statute 90-21.5 that allows minors to give effective consent to a physician in NC for prevention, diagnosis, and treatment of mental health in addition to venereal disease, pregnancy, and abuse of controlled substances. It is important to note that minors do not have the right to consent for 53-61% of the states for inpatient mental health treatment (Kerwin et al 2015). In preparing for safe discharge, social work coordinated school and migration resources for our patient. Other useful strategies to improve mental health service in this population include attending to financial barriers, training immigrant service providers on mental health, and advancing the role of interpreters and cultural brokers (Salami 2019). **Conclusion**: Immigrants and their children are projected to comprise 36% of the US population in 2065 (Pew Res 2015). In the case of this future trend and 3.6 million immigrants being deported between 2003 and 2013 (Koball et al 2015), lack of legal guardianship for immigrant minors might exacerbate mental health disparities in an already vulnerable population. Physicians and risk management should be familiar with current legislature and develop protocols regarding minor consent in the setting of an uncertain guardianship, particularly in minors that are self- sufficient and actively seeking care.

No. 69

Can Magnets Cure Depression? A Systematic Review of Repetitive Transcranial Magnetic Stimulation for Adolescent Depression

Poster Presenter: Joel Dey, M.D.
Co-Authors: Hajra Ahmad, M.D., Faiq Hamirani, Narpinder Malhi, M.D.

SUMMARY:

Background: Depression is a debilitating illness in adolescents, with lifetime prevalence between 11% and 14%. Studies have shown that antidepressants have limited efficacy in treating major depression in adolescents. Repetitive transcranial magnetic stimulation (rTMS) is an easy, noninvasive stimulation of the brain cortex and has been increasingly considered for research in adolescents with treatment-resistant
depression. Objectives: The primary goal of this

literature review is to assess the efficacy and safety profile of rTMS in adolescent depression. Secondly, our aim was to elucidate the underlying mechanism of action involving modulation of glutaminergic neural activity. Methods: We performed a literature search of PubMed, Cochrane Library, Ovid, and Google Scholar from January 2000 to January 2020. The search terms used were repetitive transcranial magnetic stimulation, transcranial magnetic stimulation, adolescent depression, and depression. A total of 289 articles were identified; after applying exclusion criteria, this was narrowed down to 8 articles. Out of these 8 studies, 7 are open-label studies and 1 is a randomized controlled trial. Results: All studies supported the use of rTMS for adolescent depression. Six studies showed an improvement in depression symptoms in more than 60% of the patients. The sample size ranged from 2 to 32. The patient ages ranged between 13 and 21 years old, with approximately 60% being female. Six studies indicated that applying 10 Hz rTMS at 120% resting motor threshold to the left dorsolateral prefrontal cortex (LDLPFC) was beneficial for the treatment of adolescent depression. Patients received between 14 and 30 treatment sessions over a period of 2 to 8 weeks. Measures commonly used to determine the outcome of depression are the Children Depression Rating Scale and the Hamilton Depression Rating Scale. The reported side effects are self-limiting headaches, mild neck pain, and scalp discomfort. Two studies further implicated increased glutamate levels in LDLPFC with rTMS treatment, which correlated with a decrease in depression symptoms. Conclusions: rTMS is feasible, tolerable, and possibly effective for adolescents with treatment-resistant depression. Randomized controlled trials with larger sample sizes are needed to determine the definitive efficacy and safety of rTMS in adolescents.

No. 70
WITHDRAWN

No. 71
Clozapine for Management of Childhood-Onset Schizophrenia: Systematic Review
Poster Presenter: Mahwish Adnan
Co-Authors: Fatima Motiwala, M.D., Pranita Mainali, M.D., Shailesh Jain, M.D.

SUMMARY:
Background: Childhood-onset schizophrenia (COS) is a complex psychiatric disorder [1] affecting 1 in 40,000 children, with the onset of symptoms before 13 years of age [2]. It is a chronic and persistently more debilitating psychiatric variant of adult-onset schizophrenia. This systematic review provides an overview of clinical use, efficacy, and safety of clozapine treatment in managing COS. Methods: A systematic literature search was conducted using, (("clozapine" OR "Clozaril" OR "antipsychotic medication" OR "atypical antipsychotic medication")) AND ("psychosis" OR "schizophrenia" OR "Schizoaffective disorder" OR "psychotic disorder" OR "schizophreniform") AND (("children" OR "adolescents" OR "teenagers" OR "pediatric population") in PubMed, Embase, and PsycINFO. We searched for randomized controlled trials (RCTs), open-label studies (OLS), and observational studies. Review articles and metanalysis were reviewed for any additional studies based on our inclusion criteria. Our literature search resulted in 1524 hits. After title, abstract and full article review, we qualified 12 studies, which included double-blind RCTs (DB-RCT's) (n=3), OLS (n=3), and DB-RCT's +OLS (n=1), observational studies (n=5). Results: We found that clozapine use in short-term (six weeks) and long term (2-9 years) showed superior efficacy compared to other antipsychotics in COS management. The results at 6-8 weeks showed a 69% improvement in the Brief Psychiatric Rating Scale and significant improvement in the Positive and Negative Syndrome Scale, compared with other antipsychotics with a strong effect size. Improvement in overall symptoms maintained during long-term follow-up over the years in open-label studies. Clozapine appeared to have a favorable clinical response and shorter hospital stays [3]. Clozapine was safe and was not associated with any fatalities. Sedation and hypersalivation were commonly reported (90%), constipation was next in frequency (13-50 %). Neutropenia was seen in 6-15 % with agranulocytosis (<0.1%). Treatment onset diabetes was reported in less than 6% of patients, but overall weight gain was frequently seen (up to 64%), followed by metabolic changes (8-22%). Less

common side effects associated with clozapine were akathisia, tachycardia, and blood pressure changes [4]. Conclusions: The current systematic review supports the efficacy and safety of clozapine in managing COS. At present, available data has a small number of randomized, double-blind trials. Future large scale and well-designed RCTs are required to confirm these findings.

No. 72
Examining Vanderbilt Scales for ADHD in Asian American Populations
Poster Presenter: Mikhail Heber
Co-Authors: Audrey S. Sung, Morgan Schumacher

SUMMARY:
Background: Attention Deficit Hyperactivity Disorder (ADHD) is defined through the DSM-5 as six or more symptoms of inattentiveness and/or hyperactivity within two separate settings occurring prior to the age of twelve for at least 6 months. The Vanderbilt ADHD Rating Scale (VARS) is one of the commonly used tools to aid in diagnosis within the U.S., but the nature of the tool makes it susceptible to implicit biases. A large majority of literature validating the VARS has investigated minority populations including African American and Hispanic children, with research on Asian American populations lacking. We propose that VARS do not consider implicit bias of race and ethnicity when used to aid in diagnosis of children with ADHD requiring more research to validate it for use with Asian American children. Methods: PUBMED, PMC, and Google Scholar were used to find literature. Keywords/MeSH terms included ADHD, Asian American, Vanderbilt Scales, scales, disparities, ethnic minorities, Child Psychiatry. Articles were filtered according to year (2000-2020), presence of full text plus abstract, and core clinical journals. Results: We found that there has been a higher rate of ADHD diagnosis in adults with the lowest rate of increase within the Asian American populations. The studies performed to validate the use of VARS did not delineate Asian American populations and were largely validated on White/Caucasian and African American populations. Literature supports that cultural influences affect manifestations of ADHD as well as identification and ultimate diagnosis for Asian Americans. Conclusion: The dearth of evidence evaluating the effectiveness of VARS for Asian Americans necessitates a need for more research validating its use across populations. The relatively low reported prevalence of ADHD in Asian Americans compared to other groups suggests a possible bias in the evaluation process. Additionally, studies highlight a need for better education of schoolteachers and other adults on the different manifestations of ADHD in the context of cultural or racial biases. Possible interventions to bridge the gap in diagnosis could include emphasizing a thorough clinical interview to delineate subtle or misinterpreted signs of ADHD over results from the VARS. Another intervention could use culturally informed patient education to target stigmas and other barriers to treat ADHD. Targeting these areas could lead to more equitable diagnosis and treatment of ADHD across this racial group.

No. 73
Impacts of Facility Design, Covid-19, and Sociodemographic Factors on New Outpatient Child and Adolescent Psychiatry Appointments
Poster Presenter: Rian Kabir, M.D.
Co-Author: Parna Prajapati

SUMMARY:
Background: Missed clinic appointments represent a significant loss of professional time for providers and a lost opportunity to see new patients in need of care. A better understanding of the factors that are associated with missed clinic appointments can help identify at-risk patients and families for additional interventions to increase clinic attendance. The goal of this study is to report factors that are associated with missed clinic visits as well as the impact of rapid telehealth utilization during covid19 and facility redesign in new patient appointments at an outpatient child & adolescent psychiatry clinic of a tertiary care academic institution in an urban setting. **Methods:** Clinic attendance data were collected through the Tableau scheduling application for new patients aged 4 - 17 years old from January 2016 through December 2019 at the Virginia Treatment Center for Children (VTCC) in Richmond, Virginia. Data before and after February 2018, the opening of the new facility, were compared. Data from March

17th – June 30th, 2020 were collected to examine the effects of covid19 related telehealth. No show rates were calculated as a percentage of the number of missed appointments over the total number of appointments scheduled. Comparison of no show rates for facility design, pre vs post covid19, gender, and insurance (public vs private) were done through two-tailed z-tests for two proportions. Comparisons between ages and races were done using chi-squared tests with individual differences tested through two-tailed z-tests for two proportions. **Results:** New patients had a higher no show rate at the old vs new VTCC, 25.74% vs 20.87% (p<0.0001). The no show rate during covid19 was decreased to 12.24% compared to an overall pre-covid19 rate of 23.96% (p<0.0001). Males had a higher no show rate than females, 24.39% vs 20.59% (p=0.002). Patients with publicly funded insurance had a higher no show rate compared to private insurance, 28.59% vs 12.92% (p-<0.0001). No significant differences were detected between age groups (p=0.05). There were significant differences in no show rates between races (p<0.0001); new black patients had a no show rate of 33.56% vs white patients with 13.76% (p<0.0001). **Conclusions:** These results show there is evidence for the efficacy of updated and well-designed facilities in reducing clinic no shows for new patients. Telehealth during covid19 cut the proportion no shows by almost 50%. Male patients were more likely to miss their first appointment compared to female patients. Patients with publicly funded health insurance were more than twice as likely to miss their first appointment than those covered by private insurance. Age did not significantly affect no show rates. Black children and adolescents had over twice the no show rate of white patients. These results and can help identify which families should receive more flexible rescheduling, extra appointment reminders, or additional telehealth opportunities.

No. 74

Internet-Based CBT (ICBT) in Management of Chronic Pain in Child and Adolescent Population: In the Era of Covid-19

Poster Presenter: Mahwish Adnan
Co-Authors: Ankit Jain, Hiren Patel, M.D., Taranjeet Singh Jolly, M.D.

SUMMARY:
Introduction: Chronic pain is defined as the pain that lasts for >3 months and, in the case of injury or surgery, remains present after a standard recovery time. Overall, 5%-20% of children and adolescents suffer from severe chronic pain and require pain treatment. Our review focuses on the effectiveness of ICBT in the management of pediatric chronic pain. Method: A literature search was performed using PubMed and Ovid MEDLINE to identify randomized controlled trials (RCT) studies. We found four studies. Since meta-analysis was not possible because of heterogeneous study designs, we performed a narrative review. Results: Out of four studies, three studies were conducted in patients ages 11-17 years. The first Study on ICBT over 8 weeks showed only medium effect on pain intensity (partial eta squared: 0.11, unstandardized mean difference of 1.5 in pain intensity by online diary between treatment and control). In the second study in patients with headache, Web-Based Management of Adolescent Pain (Web-MAP) was used in the intervention group, and specialized headache treatment was used in the control group for 8 weeks. There was a greater reduction in the intervention group (mean difference (MD): 0.84) compared to control (MD:0.52); however, it was not significant (p: 0.56) with a small effect size at post-treatment (d=0.07) and at 3 months' follow-up (d=0.26). In the third study, 273 adolescents (aged 11 to 17 years with mixed chronic pain conditions) and their parents were randomly assigned to ICBT or Internet-delivered Education. There was no difference with the small effect size for change in pain intensity between treatment groups at baseline to posttreatment (b = −0.28, p : 0.24) or baseline to 6 months (b = −0.30,p : 0.07) follow-up. In a recent study in 143 patients (ages 10-17) 8 weeks of WebMAP Mobile App, the psychological intervention was compared with usual care. In the intervention group, there was increased pain posttreatment (MD:0.2); however, in the control group, there was a reduction in pain (MD: - 0.3), which was statistically similar with very small effect size (d=0.11). After 3 months of follow-up, there was a similar reduction (mean difference: 0.3 and 0.2 in the intervention and control group) between the groups with small effect size (d=0.14). Discussion: The results suggest significant evidence that CBT can be usefully

modified to ICBT for pediatric chronic pain management. Thus, ICBT has the potential to increase the availability of effective psychological treatments on a large scale, especially in the COVID era. However, more studies are needed to better understand the efficacy of ICBT and the factors associated with positive outcomes. Future studies should include fundamental quality aspects such as power calculations leading to adequate sample sizes, pre-specified primary outcomes, presentation of results from the intention-to-treat analysis, and precise adherence and attrition specifications.

No. 75

Memantine for the Treatment of Attention Deficit Hyperactivity Disorder: A Systematic Review of Literature

Poster Presenter: Amir Sohail, M.D., M.Sc.

SUMMARY:

Objective: Recent evidence indicates involvement of the glutamatergic system in Attention Deficit Hyperactivity Disorder (ADHD) pathophysiology. Studies have investigated the use of glutamate antagonist, memantine, for the treatment of ADHD. Our study aims to determine the effectiveness and safety of memantine therapy for ADHD by reviewing and synthesizing all current evidence on the use of memantine in ADHD. Methods: An electronic systematic search of Pubmed/Medline, PsychINFO and Web of Science was carried out to find all relevant studies published uptil May 2019. Reference lists of the included studies were also screened to find other potentially relevant papers. Results: We found 5 studies (2 open-label uncontrolled trials and 3 double-blind randomized controlled trials) that investigated memantine therapy for ADHD. Two of these studies were on pediatric patients and three were on adults. All 5 studies found that memantine was efficacious and well-tolerated in ADHD treatment. There were no serious adverse events, deaths or suicides; commonly reported side effects included light-headedness/dizziness, drowsiness, confusion, fatigue, headache, and GI symptoms. Conclusion: This review found that memantine is generally well-tolerated and has a favorable efficacy profile for treatment of patients with ADHD. However, the scarcity of evidence means that these findings should be considered preliminary. Further research is needed to evaluate the long-term efficacy and safety of memantine in ADHD patients.

No. 76

WITHDRAWN

No. 77

Systematic Review of Depression and Suicidality in Child and Adolescent (CAP) Refugees

Poster Presenter: Shawn Jin, M.D.

Co-Authors: Terrance M. Dolan, M.D., M.S., Alesia Cloutier, D.O., Ermal Bojdani, M.D., Lynn DeLisi, M.D.

SUMMARY:

Child adversity and trauma has been shown to have incredible detrimental effects physically and mentally in the subsequent adult life. The World Health Organization defines these adversities and trauma as “all forms of physical and emotional abuse, neglect or exploitation that results in actual or potential harm to a child.” These terms are especially prevalent in vulnerable groups such as refugees when compared with those who are US born or those who immigrated through non-refugee channels. Importantly, refugee minors have been shown to have higher rate of inpatient psychiatric care compared to their community counterparts. Thus far there are numerous studies examining cohorts of child and adolescent refugees and their impact on mental health in general and PTSD, but none have focused specifically on depression and suicide. Here we present a systematic literature review of the rates of depression and suicidality in child and adolescent refugee populations. The Preferred Reporting Items for Systematic Reviews and Meta-Analyses Guidelines were followed for the current systematic review. MEDLINE/PubMed was searched for reviews, meta-analyses, and primary studies published in print between 1980 through June 2020 that evaluate the relationship between child and adolescent refugee and outcomes of depression and suicidality. Search terms included Boolean combinations of the following: Depression, refugee, adolescent, child, suicidality, suicide, mental health. Two rounds of screening were conducted. A Medline/Pubmed search yielded 2,660

articles that were screened by title to obtain 200 associated articles. The 200 articles were screened by title and abstract which resulted in 30 articles. After removal of duplicated the 28 full-text articles were thoroughly reviewed for inclusion. Evaluation of the full-text articles yielded 13 studies that were included in this current review. We present and describe 13 full text articles that detail the estimated risk of suicidality and depression risk in child and adolescent refugee populations. Of the articles evaluated, only a few articles that address comorbid depression and suicidality. Moreover, the available articles are very heterogeneous in almost every aspect of the research, from the age, origin, gender, parent status, life experience of the participants, the measuring instruments used to assess depression and suicidality, and the study type. Overall, CAP refugees have increased risk for major depressive disorder and suicidality compared to the general population to which they have immigrated, regardless of origin. Due to the differences in the assessment tools used, it is hard to parse out if mood disturbance was secondary to MDD or PTSD, or that suicidality is independent or a sequelae of MDD/PTSD. Given the vulnerability of CAP refugees after trauma future studies are needed to further elucidate their risk of concurrent depression and suicidality, so as to facilitate appropriate treatment.

No. 78

The Role Genetics and Trauma Play in the Development of Childhood-Onset Schizophrenia: A Literature Review

Poster Presenter: Alessandra Santamaria, M.D.
Co-Authors: Michelle Thorpe, M.D., Alysha Lubana, M.D.

SUMMARY:

Childhood-onset schizophrenia (COS) is defined by an onset of positive symptoms - delusions, hallucinations and disorganized speech or behavior - before the age of 13. There are genetic components identified as well as environment components as well. Biological factors, for example, early acquired brain lesions such as infection, hypoxia, or early childhood trauma are also associated with COS. In our case, a 7-year-old child presented with positive symptoms, first break with suspected sexual abuse in early childhood. Childhood trauma, such as sexual, physical, emotional abuse and neglect, is certainly a risk factor for the development of future adult psychiatric diagnosis but is it a trigger for earlier development of COS? While the brain is developing, does the severity of the trauma result in COS?

No. 79

WITHDRAWN

No. 80

The Effect of the Covid-19 Pandemic on Family Planning in Ontario

Poster Presenter: Alessandra Teresa Ceccacci
Co-Authors: Kamna Mehra, Roula Markoulakis, Sophie Grigoriadis, Anthony Levitt

SUMMARY:

Background: Since the beginning of the COVID-19 pandemic, individuals intending to start or expand their family may have been facing uncertainty, which may have had an impact on their mental health outcomes. The pandemic, among other things, has affected access to fertility treatments, contraception, adoption, and foster services. Moreover, the effect of COVID-19 on maternal and fetal health is still largely unknown. This study examined the sociodemographic and mental health profiles of those whose family planning has been altered by the pandemic. **Methods**: This observational community-based cross-sectional e-survey (conducted through Delvinia's AskingCanadians) included a provincially representative sample of 2503 participants, aged 18 or older from Ontario, Canada. Participants were recruited based on age, gender, and location between July 30-August 17, 2020. Whether the pandemic delayed plans to start or expand one's family was assessed. The DSM-5 Self-Rated Level 1 Cross-Cutting Symptom Measure–Adult assessed the presence of mental health concerns. **Results**: For the purpose of this analysis, the sample was limited to individuals of childbearing age, between 18-49 years old (n=1302). Of this sample, 11.6% (n=151) responded that their family planning had been delayed due to the pandemic. Of these n=151, 45% were female, 96% were from an urban area, and 56% did not have children, currently. A statistically

significant difference in mental health concerns based on whether family planning was delayed was found by MANOVA, $F(4,1296)=11.644$, $p<.001$; Wilks'Λ=.965. Depression ($p<.001$), anxiety ($p<.001$), sleep problems ($p=0.01$), and suicidal ideation ($p<.001$) scores were significantly higher in those who delayed family planning compared to those who did not. A second MANOVA found a statistically significant difference in variables perceived to have been impacted by the pandemic: risk of contracting COVID-19, and changes in socioeconomic status, physical health, and mental health, $F(4,1296)=15.073$, $p<.001$; Wilks'Λ=.956. Perceived risk of contracting COVID-19 was the only variable to differ significantly between groups ($p<.001$), with those who delayed family planning reporting higher risk. Variables found to be significant by MANOVA were entered as independent variables in a linear regression ($R2=.076$, $p<.001$), revealing that suicidal ideation and perceived risk for contracting COVID-19 exerted significant independent effects ($p<.001$) on whether family planning was delayed. **Conclusion**: Family planning was delayed during the pandemic and those who did reported significantly higher scores of depression, anxiety, sleep problems, suicidal ideation, and perceived risk of contracting COVID-19. Both suicidal ideation and perceived COVID-19 risk exerted significant independent effects. Further research must explore the direction of these relationships. The results highlight the need for increased support for those who may be struggling with family planning.

No. 81

Naturally Calm: Current Literature Regarding Role of Integrative Medicine in Treating Anxiety Disorders

Poster Presenter: Michelle T. Jaehning, M.D.

SUMMARY:

Practitioners, specifically psychiatrists, are beginning to appreciate the importance of integrative medicine its beneficial role in mental health. Integrative medicine utilizes the "whole body approach" and consists of individualized metabolic testing, nutritional therapies, and dietary interventions; this is commonly used in conjunction with traditional medicine. Generalized anxiety disorder (GAD) is one of the common diagnoses that can be treated through this adjunctive approach. Several herbal remedies, such as Kava, Passionflower, and Saffron, have been studied for the treatment of anxiety. This literature review seeks to examine the evidence behind these popular remedies. Kava (Piper methysticum) may be a therapeutic and safe option that provides feelings of physical relaxation and effectively reduces anxiety through enhanced ligand binding to gamma-aminobutyric acid (GABA) type A receptors. A randomized controlled clinical trial pilot study on kava concluded that there is enough clinical evidence to demonstrate that this plant-based relaxant, commonly used in the Pacific, is a safe and effective "Level 1" treatment option for patients suffering from anxiety. In another double-blinded, randomized, placebo-controlled study, Kava was well tolerated and was shown to be a moderately effective short-term option for patients suffering from GAD. Other herbal alternatives include passionflower (Passiflora incarnata), which has a rich world history for treatment of anxiety disorders. Three double-blind placebo-controlled studies on humans have been conducted where in one study, researchers compared treatment with passionflower to oxazepam for treatment of GAD. The study found both interventions equally efficacious, however, oxazepam had the unwanted side effect of impairment of job performance which was not present in the passionflower group. The anxiolytic effect of passionflower was proven beneficial in two other studies: one concerning patients undergoing surgery who were treated with passionflower monotherapy and one with patients diagnosed with adjustment disorder with anxious mood who were treated with passionflower. Another herbal remedy for anxiety is Saffron (Crocus Sativas). Recently, a systematic review and meta-analysis investigated the effect of saffron as an adjunctive therapy and monotherapy for the treatment of anxiety and depression. This study concluded that saffron could be an effective intervention for the treatment of depression and anxiety, however, due to a lack of regional diversity and publication bias, future trials are required. There is a paucity of clinical trials conducted on integrative medicine in the U.S. Furthermore, herbal supplements are not monitored by the FDA and the quality of herbal medications is remains a concern for patients and providers.

Therefore, there is a need for further research on integrative medicine to better understand its efficacy, risks, and benefits.

No. 82
Behavioral Health Resources and Screening in Military Cystic Fibrosis Centers: A Survey
Poster Presenter: Catherine Lindsay Rutledge, M.D.

SUMMARY:
Cystic Fibrosis (CF) is the most common genetic life-threatening illness in the United States (US). According to the CF Foundation patient registry there are over 30,000 individuals in the US with this disease with over 1,000 new cases diagnosed each year. While this disease used to be considered a childhood illness, advancing science, technology, and treatments have lengthened the average life expectancy to approximately 37 years of age with over one-half of the CF population being 18 years or older. With the recent advent of CFTR (cystic fibrosis transmembrane conductance regulator) modulator therapies, this average life span is expected to rise. Research has become increasingly focused on not only prolonging the lives of individuals with CF but also improving the quality of life in these patients as well as their caregivers. Studies show that rates of depression and anxiety among patients with CF and their caregivers are often two to three times those seen in community samples. It has been observed that these patients suffering from psychological distress experience increased hospitalizations, higher healthcare costs, reduced pulmonary function, and decreased adherence to treatment. The CF foundation released guidelines in 2016 outlining behavioral health (BH) screening for patients with CF and at least one caregiver. Little is known about the utilization of these recommendations or the level of behavioral health care involvement and availability within the military system. We developed a 23 question survey that was distributed to the six major CF center program directors and their nurse case managers within the Department of Defense (DOD). The goal of our study was to further characterize the role of behavioral health care in routine CF treatment and to subsequently identify the CF BH care needs among these Military Treatment Facilities (MTFs). We found that all 6 military CF centers report screening in accordance with the CF Foundation recommendations for CF patients 12 years and older and at least one caregiver. Reported screening tools for suicidality were not standardized across centers and on average program directors surveyed indicated feeling "somewhat comfortable" in screening CF patients for depression, anxiety, and suicidality and "not so comfortable" in screening caregivers for depression, anxiety, and suicidality. By further standardizing routine screening practices, improving comfort with screening, and streamlining the recording of this data over time, we may help further research in CF and BH in efforts to continue to improve patient care and quality of life for both patients with CF and their caregivers.

No. 83
Clinical Outcomes During Covid-19 Pandemic and Transition to Telehealth Visits in Collaborative Care at Primary Care Clinic
Poster Presenter: Christopher Manschreck, M.D.
Co-Authors: Seema Quraishi, M.D., Lisa J. Cohen, Ph.D., Ursula Izquierdo, L.C.S.W.

SUMMARY:
Background: The collaborative care (CC) model is effective for anxiety and depression (Archer, 2012). It is also cost-effective for extending psychiatry to underserved populations in the setting of stigma (Mongelli, 2020). Moreover, telehealth implementations have been shown to be effective (Rollman, 2017). The Mount Sinai Downtown Psychiatric Collaborative Care Clinic uses a modified protocol of the AIMS Collaborative Care Model (AIMS Center, 2019) for publicly insured patients with depression and anxiety symptoms. Primary care physicians (PCPs) identify patients and refer them to a licensed mental health social worker who provides counseling, and acts as a liaison between consulting psychiatrists and PCPs. In March 2020, during the COVID pandemic, the clinic transitioned to telehealth visits for the clinic social worker. This study compares depression and anxiety symptoms during the COVID period to those of previous years. Methods We identified 179 patients treated from February to July during 2017-19 or 2020. Scores on Patient Health Questionaire-9 (PHQ-9) and

Generalized Anxiety Disorder-7 (GAD-7) were assessed monthly. These are widely used, validated, clinician administered scales. We also counted treatment gaps of 1 month or greater, months maintained in treatment, and patients who left treatment. 63 patients had complete PHQ-9 and 39 had complete GAD-7 data for a 6-month period. Repeated measures ANOVA compared GAD-7 and PHQ-9 scores for the 6-month period in 2020 to those from 2017-19. Treatment utilization data was analyzed with Mann-Whitney U tests and Chi-square analyses. Qualitative patient experience data during this time was collected via correspondence with the CC social worker. **Results**: The repeated measures ANOVA showed no significant interaction effect between treatment year and PHQ-9 or GAD-7 ($p=0.134$, 0.269, respectively). PHQ-9 and GAD-7 scores were significantly higher in the 2017-19 group in both February and March compared to 2020 (PHQ-9: Feb $p=0.006$, Mar $p=0.042$, GAD-7: Feb $p=0.048$, Mar $p=0.011$). There was no significant difference in number of patients who left treatment, while the count of treatment gaps and months in treatment were significantly greater during 2020 ($p=0.002$ and $p<0.001$, respectively). Qualitative data from CC social worker indicated that many patients effectively coped with the pandemic, however outcome measures may not have fully captured symptoms. **Conclusions**: There was no decrement in treatment outcomes during the study period, despite a rapid transition to telehealth. PHQ-9 and GAD-7 scores were unexpectedly higher in February and March of 2017-19, however this did not persist. Despite increased gaps in treatment, patients stayed in treatment longer during 2020. While qualitative data indicate that PHQ-9 and GAD-7 did not fully capture patient pandemic-related pathology, observations support the resilience of the CC model during transition to telehealth visits in context of the COVID-19 pandemic.

No. 84

Delirium-Penems: A Case Report of Ertapenem-Induced Neurotoxicity

Poster Presenter: Ahmed X. Valdes, M.D., M.S.
Co-Author: Zelde Espinel, M.D.

SUMMARY:
Purpose Although rare, the neurotoxic effects of antimicrobials such as ertapenem can have severe neuropsychiatric manifestations. Incidence of ertapenem-induced neurotoxicity is 0.18-0.5% with altered mental status as high as 3.3-5.1%. Patients on ertapenem can experience psychosis within three days of initiation and have lasting effects up to two weeks after its discontinuation. Likely mechanism of ertapenem-induced delirium is antagonism of gamma-aminobutyric acid type A receptors in central nervous system. Complex medical patients typically have several other possible causes for their symptoms, making drug-induced encephalopathy a diagnosis of exclusion. We describe a case report of antimicrobial-induced neurotoxicity. Methods We present the hospital course and highlight the complex medical history of a 56-year-old woman with new-onset psychosis and altered mental status. We conducted a chart review of her clinic notes from a large urban university hospital. We reviewed the literature regarding risk factors, incidence, clinical course, and mechanism by which ertapenem can induce neurotoxicity resulting in delirium and psychosis. Results On initial visit, the patient was diagnosed with urinary tract infection attributed to extended spectrum beta-lactamase positive bacteria and was prescribed a ten-day course of intravenous ertapenem. During her antibiotic treatment, she developed worsening auditory and visual hallucinations that resulted in police transport to the emergency department and subsequent admission. During the first days of hospitalization, the patient remained altered, psychotic, and agitated and she required a one-to-one sitter, physical restraints, and antipsychotic medications. The patient's complex history (myelofibrosis complicated by graft versus host disease) resulted in consultations from multiple services and an array of diagnostic tests. Magnetic resonance imaging, computed tomography of the brain, lumbar puncture with cerebral spinal fluid analysis, electroencephalogram, pan-culture, infectious disease panel, flow cytometry, and metabolic panel were all negative. The patient remained hospitalized for two weeks until resolution of her delirium. With these rule-outs and the close temporal relationship of symptom onset and progression to the course of ertapenem therapy, the antibiotic treatment was judged to be the most likely

cause. This determination was supported by the finding of a Naranjo Scale of six and reinforced by case studies from the literature review describing ertapenem induced-psychosis. Conclusions Patients with new-onset psychosis should have a thorough work-up to exclude organic causes. Even when the work-up is negative, medications, especially in the context of a patient with polypharmacy and numerous comorbid medical conditions, should be reviewed as likely causative agents. Awareness of the neuropsychiatric manifestations of antimicrobials such as ertapenem can help guide clinical decision making.

No. 85

Disaster Psychiatry Framework for Providing Psychiatric Support for Patients With Severe and Life-Threatening Chronic Diseases During Covid-19

Poster Presenter: Omar Munoz, M.D.
Lead Author: James Shultz
Co-Author: Maria A. Rueda-Lara, M.D.

SUMMARY:
Providing effective psychiatric support for patients with special medical needs and those with severe, progressive, and potentially life-threatening noncommunicable diseases is made more challenging by the superimposed threat of COVID-19. COVID-19 elevates risks for survival and represents an extreme event for these patients. Psychiatrists and population health scientists warn of the forthcoming second pandemic of widespread psychological distress and COVID-19-related mental disorders, with disproportionate impacts on persons with noncommunicable disease co-morbidities. Fortunately, helpful guidance is available from the field of disaster psychiatry that can be adapted to COVID-19. An expert consensus conference examined the scientific foundations of early psychological support for communities exposed to extreme events, culminating in the identification of five, empirically based principles of effective mass trauma intervention: safety, calming, connectedness, self-efficacy, and hope. We report on the experience of psycho-oncologists who diligently guided their cancer patients along these five pathways, describing their techniques and tools to move their patients toward the desired endpoints. Each of the five are psychologically beneficial. Collectively, they assist survivors to cope with the stressors of large-scale, potentially traumatizing events. Disaster psychiatrists envision the five principles as dynamic pathways where safety, calming, connectedness, self-efficacy, and hope as the desired endpoints. When COVID-19 arrived in the community, so too did danger, distress, physical distancing, helplessness, and despair. So, the mission of early mental health and psychiatric intervention is to move special medical needs and chronic disease patients along five pathways to help them cope with COVID-19. Effective intervention places patients who are concurrently grappling with COVID-19 on track from perceived danger to perceived safety, from fear to calming, from isolation to connectedness, from helplessness to self-efficacy, and from despair to hope. The five principles not only help chronic disease patients cope with stress in the era of COVID-19, they are psychologically beneficial. Currently being explored is whether we can extend these principles to crisis inflection points along the trajectory of care for chronic diseases. The clinical course is frequently punctuated by highly stressful events, starting with the moment when the patient receives the initial diagnosis. Other stress-laden benchmarks along the patient's course may signal life threat; these include being informed that the medical condition has worsened, that a hopeful therapy has not worked, or that future life expectancy is reduced. Coping with stress, distress, anxiety, and possible depression at each of these crisis points might potentially benefit from problem-solving and support using the safety, calming, connectedness, self-efficacy, and hope framework.

No. 86

Educational Intervention Improves Physicians' Understanding of Decision-Making Capacity and Effectively Addresses Myths Regarding Evaluating Capacity

Poster Presenter: Alex Soloway, M.D.
Co-Authors: Michelle T. Jaehning, M.D., Adriana Fitzsimmons, M.D.

SUMMARY:
Background: Capacity evaluation requests are increasing and hence capacity remains a topic of national concern. There has been an increase in the aging population where cognitive and physical changes are associated with functional declines and are affecting different aspects of decision making. This is coupled with an increased focus on patient autonomy and thus there is an immediate need to educate clinicians regarding capacity evaluations. Two important aspects of capacity include the difference between capacity and competency along with being aware that capacity is not an "all or none" phenomenon. Clinicians frequently interchange capacity with competency and may not be aware that a patient can lack decision making capacity for one decision and not for another. By understanding what aspect of decision making is in question, a consulting psychiatrist will be better able to address the concerns of the medical team requesting the consult. We evaluated whether a one-hour medical education lecture to internal medicine physician attendees made an appreciable difference in addressing the misconceptions regarding this topic in efforts to improve efficiency on the psychiatric consult service. **Methods**: We designed a survey consisting of five questions given to 21 attendees pre-lecture and 17 attendees post-lecture to determine whether this intervention improved the comfort level of those who attended the lecture in evaluating capacity. We also reviewed all hospital psychiatry consultation orders to check 1.) whether capacity or competency was included in the consult order and 2) whether the consultation request included specific detail regarding what aspect of decision making needed to be addressed, comparing time periods of November 1st to December 14th, 2018 (pre-lecture) to December 15th, 2018 to January 29th, 2019 (post-lecture). **Results**: Pre-lecture, 44.7% of the capacity consults mentioned competency, while 52.6% mentioned capacity. Post-lecture results show that only 36.6% of the audience had mentioned competency and 53.7% mentioned capacity. In addition, the specificity of the capacity consult orders improved from 15.8% pre-lecture to 26.8% post-lecture. In the post-lecture questionnaire survey, participants were overall more comfortable with assessing capacity on their own with 100% (post-lecture) compared to 81% (pre-lecture), of the participants reporting a comfort level of 3 or higher. **Conclusion**: This study highlights the positive impact of education on improving clinicians' understanding of evaluating capacity, resulting in an increased comfort level in capacity evaluations and appropriate use of the term capacity as opposed to competency. As a result of the educational intervention, there was increased attention to providing specific detail in consult orders regarding which aspect of decision making is in question. In summary, it is critical that all residents and clinical staff receive ongoing education in this area moving forward.

No. 87
Psychiatric Illness and Medical Decision-Making Capacity in Medical Units: A Retrospective Study
Poster Presenter: Dinesh Sangroula, M.D.
Co-Authors: Sachidanand R. Peteru, M.D., Pranita Mainali, M.D.

SUMMARY:
Introduction: Psychiatry consultation for medical decision-making capacity (DMC) is one of the common encounters in the Consultation-Liaison (CL) Psychiatry Services, mostly when patient is reported/documented to have psychiatric illness and is uncooperative, or refuses treatment, or wants to sign against medical advice (AMA). It is a common belief that patient with "psych history" lacks capacity more often than patients without mental illness, which might not always be true. **Objective**: The objective of this study is to examine the relation between mental illness and DMC in patients presenting to the medical settings for medical care. **Design, Setting, Participants, and Measures**: A retrospective chart review, where data were collected from the patients admitted in medical units (emergency department and inpatient) and assessed for capacity by a psychiatrist. Data collection included demographic variables, overall and specific psychiatric diagnoses, substance use history (present and past), presence or absence of active psychiatric symptoms, reasons for capacity evaluation, and capacity determination (has capacity/no capacity). Data were analyzed using SPSS. Clinical and demographic characteristics were compared between two groups (patients having capacity or

lacking capacity) using t-tests or chi-square tests, as appropriate. **Result**: Total number of patients included were 98, out of which, 53 % were found to lack capacity with commonest reason being signing out AMA. Group of patients lacking DMC had significantly more percentage of males than group having DMC (58% vs 35%, X^2= 5.14, P=0.02) but less employed (8% vs 10%, X^2=3.93, P=0.05). No significant difference was observed in other demographic characteristics among the two groups. Additionally, no significant difference was evidenced in terms of primary psychiatric diagnoses (overall and specific). However, patients lacking capacity were found to have significantly more current (48% vs 11%, X^2=15.91, P<0.001) and past history (23% vs 4%, X^2=6.99, p=0.008) of neurocognitive disorder, and trend significance (31% vs 15%, X^2=3.29, p=0.07) of active psychiatric symptoms than patients having capacity. **Conclusion and Relevance**: Based on the results from this study, we suggest that consulting psychiatry for capacity determination should strongly be considered if patient has past or current history of neurocognitive disorder or active psychiatric symptoms. However, it should not be made routine practice for all patients who has history of psychiatric disorders, especially if the psychiatric symptoms are stable and resources for the CL psychiatric services is limited. The implementation of this findings might not only reduce excessive use of resources of psychiatric consultation services but also helps preserve patient's autonomy. Larger studies in outpatient psychiatric settings are suggested to derive conclusive results about the association of psychiatric diagnoses and medical DMC.

No. 88

Safe Treatment With Psychotropic Medications in Patients With Pancytopenia: Case Report and Literature Review

Poster Presenter: Jayson Tripp, D.O.
Co-Author: Sree Latha Jadapalle, M.D.

SUMMARY:

Depression is prevalent in 15 % of the general population and it is 2-3 times more prevalent in cancer patients, Myocardial infarction and Stroke. Current treatment options utilized include Tricyclic Antidepressants, Selective Serotonin reuptake inhibitors (SSRIs), Serotonin Norepinephrine Reuptake inhibitors (SNRIs), Atypical Antidepressants, Psychotherapy, and Neuromodulation procedures such as Electroconvulsive Therapy and Transcranial Magnetic Stimulation. Serotonergic neurotransmission dysfunction is noted in major depression and is a typical target in the treatment of depression. Thrombocytopenia is a concern due to 5-HT becoming a vasoconstrictor when the endothelium is damaged and is involved in platelet aggregation. Antidepressants that inhibit reuptake of 5-HT cause 5-HT depletion in the platelets. This can inhibit 5-HT induced platelet aggregation amplification. Patients with a history of coagulation disorders should be monitored if started on any serotonin reuptake inhibitor (SRI). We will be discussing a complicated case of severe depression in a patient with skin cancer with new onset seizures in the context of pancytopenia with critical thrombocytopenia. Patient is an 81 year old male with a past medical history significant for pancytopenia, skin cancer, congestive heart failure, recent seizures, stroke, myocardial infarction, and depression admitted for altered mental status. Patient remained delirious in spite of stabilization of acute medical problems. Palliative care was considered, but the family members had concerns with the patient making end of life decisions because he was endorsing suicidal thoughts for a few weeks prior to this hospitalization. Psychiatry was consulted for management of depression and for a safety evaluation. A literature review was conducted through Pubmed to research what treatment option could best treat depression when it is complicated with pancytopenia. In considering treatment options bupropion was eliminated even with its reported <1% adverse effect of thrombocytopenia due to the contraindication in patients with seizures. The SSRIs that were most associated with abnormal bleeding are fluoxetine, sertraline and paroxetine. It is generally best to manage depression with a non-SSRI antidepressant. Our case report highlights the complexity of choosing psychotropic medications in treating depression in patients with pancytopenia. We will further discuss the different treatment options and the rationale in picking the right

psychotropic medication in treating depression in the context of pancytopenia.

No. 89

Suicidality as a Side Effect of Phenytoin: Case Report and Review of Literature

Poster Presenter: Sree Reddy, D.O.
Co-Author: Shi Xun Fang, B.S.

SUMMARY:

Background: Patients with epilepsy are particularly vulnerable to depression and suicidality. Understanding the role of Anti-Epileptic Drugs (AEDs) in exacerbating psychiatric symptoms is critical in monitoring patients during treatment. We present the case of an individual who presented with a suicide attempt after initiation of Phenytoin for his seizures and subsequent review of literature on Psychiatric and behavioral side effects (PBSE) of AEDs. Case: Mr. X is a 43-year-old male with no past psychiatric history, past medical history of intractable focal epilepsy s/p TBI due to MVA, with multiple admissions for status epilepticus. He presented to our hospital following suicide attempt via overdose of Phenytoin in the context of recent onset of depressive symptoms since starting Phenytoin two months prior. On evaluation, he endorsed symptoms consistent with a major depressive episode with suicidal ideation, scoring 25 on HAM-D. During the course of hospitalization, phenytoin was discontinued, and his mood greatly improved at discharge with HAM-D score of 4. No pharmacotherapy was initiated with outpatient psychotherapy follow up. Discussion: AEDs induced PBSE are well documented in the literature with Levetiracetam having the highest rate of 22.1%. Phenytoin is considered to be safer with a PBSE rate of 2.9%, however literature regarding suicidality specifically has been more ambiguous ranging from no increased risk to a HR of 5.33. Our patient had no past psychiatric symptoms and no experience of PBSE associated with prior trials of other AEDs. This case highlights the importance of identifying individuals at risk of AED-induced PBSEs regardless of the AED prescribed, especially Phenytoin. Susceptible individuals include those with drug resistant epilepsy and previous psychiatric history. To decrease the likelihood of PBSEs, rapid titration and high dosages of AED should be avoided, and patients should receive regular follow-up. We will present an updated literature review on this topic with a focus on phenytoin. Conclusion: Psychiatrists and Neurologists need to be abreast with the current literature on AED-induced PBSEs and remain vigilant in anticipating these side effects, especially for vulnerable patients. Further research is needed to understand the underlying mechanisms of AEDs causing PBSEs which may lead to more personalized selection for patients.

No. 90

Association Between COPD Symptom Severity, Exacerbation Risk, and Depression and Anxiety Symptoms in the SPIROMICS Cohort

Poster Presenter: Ryan Serdenes, D.O.
Co-Authors: Jacob R. Weiss, M.D., Uchechukwu Ogbuawa, D.O., Victor Kim, Mary Morrison

SUMMARY:

Background: COPD is a common, progressive lung disease characterized by several physical symptoms, such as dyspnea and chest tightness, that resemble or overlap with anxiety. Depression and anxiety are common and distressing comorbidities that may worsen dyspnea and increase the risk of COPD exacerbations. Current COPD guidelines recommend that treatment be based not on the degree of airflow obstruction but on the severity of physical symptoms and exacerbation risk. The prevalence of depression and anxiety in higher risk COPD patients is unclear. We hypothesize that COPD patients with more dyspnea and at higher risk of COPD exacerbations have more clinically significant depression and anxiety. **Methods:** SPIROMICS is a prospective cohort study that enrolled 2,981 subjects across four strata (Never smokers, Smokers without COPD, Mild/Moderate COPD, and Severe COPD) with the goals of identifying new COPD subgroups and intermediate markers of disease progression. We analyzed current and former smokers with COPD, and divided them into groups based on the Global Initiative for Obstructive Lung Disease (GOLD) treatment algorithm: groups A (low symptoms, low exacerbation risk), B (high symptoms, low exacerbation risk), C (low symptoms, high exacerbation risk), and D (high symptoms, high

exacerbation risk). We compared the groups to current or former smokers without COPD. Depression and anxiety symptoms were tracked using the Hospital Anxiety and Depression Scale. For the depression and anxiety subscales (HADS-D and HADS-A), a score of greater than or equal to 8 served as the cutoff for clinically significant depression and anxiety symptoms. Multivariable logistic regression models were used to derive the odds ratios (95% confidence interval) of clinically significant depression and anxiety among the COPD groups versus control adjusted for covariates of age, sex, substance use, and medication use. SPIROMICS was approved by the institutional review boards of all participating institutions. **Results:** Of the 2,664 subjects studied, 497 (20%) had clinically significant depression and 784 (30%) had clinically significant anxiety. Both high pulmonary symptom groups, Groups B and D, had increased odds (Group B: OR=2.98, CI 95% 2.22–3.99; Group D: OR=3.78, CI 95%, 2.61–5.49) of depression compared to control as measured by HADS-D score. Similarly, Groups B and D had increased odds (Group B: OR=1.33, CI 95%, 1.02–1.73; Group D: OR=OR=1.88, CI 95%, 1.32–2.70) of anxiety compared to control as measured by HADS-A score. GOLD group D, the high pulmonary symptom and high COPD exacerbation risk group, had the greatest risk of both depression and anxiety among the GOLD groups. **Conclusions:** COPD symptom severity, as opposed to COPD exacerbation risk, predicts clinically significant depression and anxiety. Specifically, patients with COPD in GOLD groups B and D are at the highest risk of depression and anxiety. Our results suggest that there may be utility in screening COPD patients in these GOLD groups for depression and anxiety

No. 91

Treatment of Delirium in Patient With Covid-19

Poster Presenter: Miyuki Fukui, M.D.
Co-Authors: Rebeccca Anthony, M.D., Natalia Ortiz, M.D.

SUMMARY:

The COVID-19 pandemic has affected the world significantly. Currently there have been more than 30 million cases in the United States and over 540,000 deaths, with the U.S. numbers failing to decline as in other parts of the world. Although respiratory manifestations of the novel COVID-19 are well documented there have been a plethora of other manifestations as well, which may influence pharmacologic choice in psychiatric management. A case series found that 36.4% of patient had a neurological finding with 14.8% of patient with serious infection showed impaired consciousness. In this poster, will we cover the strategies of treating delirium in a patient with COVID-19 infection. We will discuss the challenges of pharmacologically treating delirious patients with respiratory compromise, as well as how some medications may need to be used to caution depending on the treatment the patient is receiving. We will also touch on how traditional non-pharmacological methods of delirium management may not be applicable in the setting of a pandemic. Lastly, we will discuss how we have been addressing delirium management with the primary teams.

No. 92

Treatment of Psychosis in a Patient With a Prolonged QTc Interval That Is Post-TBI

Poster Presenter: Jayson Tripp, D.O.
Co-Author: Sree Latha Jadapalle, M.D.

SUMMARY:

The risk of cardiac related mortality in patients on antipsychotic medications is of great concern. The most common type of cardiac problems with antipsychotic use is prolongation of QTC interval increasing the risk of Torsade de pointes. There is a 1.5 fold increase in mortality in patients older than 65 years old that utilize antipsychotics. The goal of this case report is to add to the sparse current literature on aripiprazole helping with QTC shortening and being a drug of choice of in treating psychiatric patients with cardiac complications. Mr. A is a 65-year-old Caucasian male with a pacemaker that had a past psychiatric history of post-traumatic stress disorder presented to the hospital with worsening auditory hallucinations, paranoia, and suicidal ideations. The patient had a documented head injury due to a fall, 2 months prior where he lost consciousness. The head CT at the time showed no acute intracranial processes. Mr. A reports that the hallucinations began with that fall, but did not

seek treatment for hallucinations until he became suicidal 2 months later. He was admitted to the general medical inpatient unit for treatment of psychosis and suicidal ideations. His treatment was complicated due to his EKG showing a prolonged QTC interval of 529ms making most antipsychotics risky to use due to the possibility developing Torsades de pointes with antipsychotic treatment. After research, aripiprazole was chosen to control his psychosis because it has been shown on average to lower the QTC interval -1 to -4ms. The hallucinations and suicidality ceased after being titrated up to an effective dose of aripiprazole 7.5mg nightly over a 5 day period, and the QTC interval lowered to 527ms upon recheck 10 days after starting aripiprazole. The patient was safely discharged and referred for follow up medical and psychiatric care. Our case highlights the importance and efficacy of aripiprazole in controlling the QTC prolongation in psychiatric patients with cardiac problems. We also will further discuss different treatment strategies and options that can be used in the treatment of agitation and psychosis in the presence of QTC prolongation.

No. 93

Treatment of Schizophrenia in a Patient on Long-Term Maintenance of Fluphenazine That Develops Paralytic Ileus

Poster Presenter: Jayson Tripp, D.O.
Co-Author: Sree Latha Jadapalle, M.D.

SUMMARY:
The risk of developing paralytic ileus while treating a patient with antipsychotics is of great concern. It is a serious complication that makes the treatment of psychosis more difficult. Risk factors for ileus may be non-modifiable such as us are recent surgery, bowel disorders, colorectal cancer, female sex, advanced age, or modifiable such as inactivity, low fiber diet, and medications such as (opioids, antihistamines, anticholinergics, tricyclic antidepressants (TCAs), and antipsychotics). The goal of this case report is to add to the sparse literature of ileus developing while being treated with an antipsychotic and address ways to tailor treatment by reducing modifiable risk factors in a schizophrenic patient. Mrs. J, a 75-year-old African-American female with a past psychiatric history of schizophrenia, suffering from constipation, came to the hospital due to abdominal pain. She was found to have a paralytic ileus and a small bowel obstruction (SBO). The patient had been maintained on fluphenazine for over 10 years to control schizophrenia. The patient was admitted to the medical floor for management of ileus and SBO. A consult was placed to psychiatry due to fluphenazine being implicated as a cause to the paralytic ileus. Psychiatry held the fluphenazine as the patient was started on metoclopramide by surgery. Antipsychotics interact with metoclopramide and can cause fatal neuroleptic malignant syndrome. The fluphenazine was switched to aripiprazole because in a study that looked at 2158 schizophrenic patients being treated with aripiprazole and none of these patients developed ileus. Patients being treated with other antipsychotics developed ileus. Our patient had physical therapy to address inactivity, advised to have a high fiber diet, and their antipsychotic was switched to aripiprazole. We will discuss different treatment regimens to use in a patient that develops ileus while being treated with an antipsychotic, and how to avoid developing life-threatening ileus.

No. 94

Association Between Changes in Health Behaviors and Major Depressive Disorder During the COVID-19 Pandemic

Poster Presenter: Richa Lavingia, M.P.H.
Co-Authors: Gregory Knell, Ph.D., M.S., Katelyn K. Jetelina, Ph.D., M.P.H.

SUMMARY:
Background: The coronavirus disease 2019 (COVID-19) pandemic has significantly impacted the health, social, and economic wellbeing of those living in the United States (U.S.). However, little is known about how the pandemic has impacted mental illness, and specifically depression. The purpose of this study was to i) describe the prevalence of major depressive disorder (MDD) during COVID-19 among those with and without a history of depressive disorders, and ii) to describe the associations of current MDD with changes in positive and negative health behaviors. **Methods**: We distributed a national, online survey to measure behavioral

responses to the COVID-19 outbreak and subsequent quarantine policies. From March-April 2020, 1,838 adults residing in the U.S. participated. Participants reported prior depressive disorder diagnoses and completed the Patient Health Questionnaire (PHQ-9), indicative of MDD in the past 2-weeks. A computed score of 10-points or more was classified as MDD. Sociodemographics and changes in health behaviors (e.g. marijuana use) were also collected. Multinomial, multivariable regression models were used to evaluate the relationship between changes in health behaviors and current MDD (with no prior diagnosis of a depressive disorder). **Results**: Among the 1,838 participants, 14.2% reported current MDD (with no depressive disorder history), 8.5% reported a history of depressive disorder (with no current MDD), and 9.0% reported both a depressive disorder history and current MDD. The risk of current MDD (with no history) was significantly higher among women (RRR=2.09, 95% CI=1.45-3.02) compared to men and among those with limited mobility (RRR=2.00, 95% CI=1.19-3.27) compared to those with no limitations, and was significantly lower among those aged 50-64 (OR=0.53, 95% CI=0.33-0.87) and aged 65+ (RRR=0.23, 95% CI=0.09-0.58) compared to those aged 18-34. After controlling for sociodemographics, the risk of current MDD (no history) was significantly higher among those reporting increased marijuana use during COVID-19 (RRR=2.41, 95%CI=1.40-4.15) compared to those with no recent marijuana use. The risk of current MDD was significantly lower among those reporting the same (RRR=0.23, 95%CI=0.15-0.35) or more (RRR=0.41, 95%CI=0.29-0.57) physical activity, compared to those reporting less physical activity during that time, and among those reporting the same (RRR=.26, 95%CI=0.19-0.36) or better (RRR=0.20, 95%CI=0.12-0.35) sleep quality compared to those experiencing worse sleep quality. **Conclusion**: The prevalence of MDD was high among those with no prior history of depressive disorders in a sample of U.S. adults. Changes in physical activity, marijuana use, and sleep quality were associated with current MDD during the pandemic. Further research is needed to determine how to facilitate healthy behaviors during the pandemic and mitigate the negative impacts of COVID-19 on mental health while in isolation.

No. 95

Depression Among Mothers of Children With Chronic Illness in Out Patient Clinics of King Fahad University Hospital in Saudi Arabia, Alkhobar City

Poster Presenter: Abdulrahman Fahad Al-Thukair, M.D.
Lead Author: Ibrahim Albawardi

SUMMARY:

Chronic childhood illness affects around one in every 4 kids causing limitations in their quality of life. The psychological impact of these limitations extends to caregivers and is seen as a major cause of higher incidence of psychiatric illnesses among them. Mothers of children with chronic illnesses are found to suffer the most and, as suggested by the literature, have a higher incidence of major depressive disorder. This higher incidence of depression reflects on the child with a greater burden, as children of parents with depression are known to adhere less to therapy and suffer worse quality of life. This study aims to assess the prevalence of depression among mothers of children with chronic illness following at King Fahad University Hospital (KFHU), Khobar. This study was conducted through a cross-sectional survey for mothers whose children under the age of 16 years, with chronic illness or disability and who are receiving follow-up in Pediatrics Department in King Fahad University Hospital in Khobar. Mothers completed a validated Arabic translation of Beck's Depression Inventory-II (BDI-II). Surveyed mothers (n=124) scored significantly high rate of depression. All were found to have depressive symptoms, with a mean BDI-II score of 16.9, that is higher than the mean BDI-II scores amongst similar studies. Moderate-to-severe depression was found in 40% of the mothers. Mothers of infants and those with lower educational level had significantly worse depression scores (P-value 0.01 and 0.04 respectively).Results indicate concerning data that is suggestive of a great psychological burden on mothers of chronically ill children in our society creating higher responsibility on health systems.

No. 96

Does Comorbid Anxiety Increase Suicidality in Adolescents With Major Depressive Disorder

Poster Presenter: Keerthika Mathialagan, M.D.
Co-Authors: Timiiye Yomi, M.D., Shikha Verma, M.D.

SUMMARY:

Background: Anxiety disorders are the most common psychiatric illness in adolescents, with a significant portion at risk of developing depressive disorders, which can then place them at higher risk of suicide. This study aimed to evaluate the odds of association between suicidal behaviors and comorbid anxiety disorders in adolescents with major depressive disorder (MDD). Methods: We included 122,020 adolescent inpatients with MDD from the Nationwide Inpatient Sample (NIS) and further grouped them by co-diagnosis of anxiety disorders. Logistic regression analysis was used to evaluate the odds ratio (OR) of suicidal behaviors due to comorbid anxiety disorders. Results: Out of total MDD inpatients, 45.8% had comorbid anxiety disorders. Around 53.5% MDD inpatients with anxiety disorders had suicidal behaviors, compared to 52.6% in the non-anxiety cohort (P = 0.002). Comorbid anxiety disorders had a minimally positive association with suicidal behaviors and were not statistically significant (OR: 1.01; P = 0.710) when controlling the logistic regression analysis for demographic confounders and psychiatric comorbidities. Conclusions: MDD with comorbid anxiety had a statistically non-significant association with suicidal behaviors in adolescents. Depression has a direct and independent effect on adolescent suicidal behaviors, whereas anxiety has a direct effect only on perpetuating depression. Early diagnosis and management of comorbid anxiety with MDD reduce functional impairment and suicide risk in at-risk populations.

No. 97

Maternal Mental Health and Postpartum Depression in the Covid-19 Pandemic

Poster Presenter: Kate Rosen
Lead Author: Sheevaun Khaki, M.D.
Co-Authors: Malika Waschmann, Ladawna Gievers, M.D

SUMMARY:

Background: Recently, awareness of the burden of postpartum depression (PPD) has grown within the medical and lay communities. Previous studies examining the impact of natural disasters noted that while the incidence of major depressive disorder did not seem to increase in the general population, incidence of PPD did increase in vulnerable postnatal subgroups (e.g. African-American women and women with lower educational achievement). It is plausible that COVID-19 may differentially impact vulnerable populations for whom the impact of the pandemic may be more severe. Given that PPD is associated with an increased risk of abusive parenting, poor mother–infant interaction, and infanticide, this study aimed to characterize the effect of COVID-19 on the incidence of PPD and to identify subgroups at elevated risk for PPD during the COVID-19 pandemic. Methods: A retrospective chart review of maternal–newborn dyads, born at > 37 weeks' gestation, who were admitted to the Mother Baby Unit (MBU) at a quaternary academic medical center over two time periods: pre–COVID-19 (January 1 – June 1, 2019) and during COVID-19 (January 1 – June 1, 2020). PPD was defined as an Edinburgh Postnatal Depression Scale (EPDS) score of > 10 at any postnatal appointment. History of or current mental health diagnoses [major depressive disorder (MDD), generalized anxiety disorder(GAD), or bipolar disorder] were recorded. Data were analyzed using chi-square and t-tests. Results: The study included 1073 maternal–newborn dyads with 567 in the 2019 epoch and 506 in the 2020 epoch. The two groups had similar clinical and demographic characteristics except there were more twins in the 2020 epoch (1.4% vs 3.9%, p=0.02). Rates of PPD from 2019 to 2020 were similar (18.5% to 18.2%, p=0.95). In subgroup analyses, PPD rates were similar amongst primiparous births (18.7% to 21.9%, p=0.435) and publicly insured mothers (26.7% to 25.7%, p=0.935). The 2020 epoch exhibited higher incidence of current mental health diagnoses: MDD (10.1% vs 14.2%, p<0.05) and GAD (10.6% to 18.6%, p<0.01). However, incidence of PPD among women with current mental health diagnoses decreased from 47.1% in 2019 to 30.4% in 2020 (p=0.02). Conclusions: Few preliminary studies have been published regarding the impact of the COVID-19 pandemic on the psychological distress of vulnerable

subgroups such as pregnant and postpartum women. Most notably, the finding of a stable PPD rate despite an increase in current mental health diagnoses, highlights the complexity of the biopsychosocial milieu contributing to PPD. Further study of psychiatric care access and treatment offers an important next step in understanding the relationship between current mental health diagnoses and PPD during the COVID-19 pandemic. While assessing only the early effects of the COVID-19 pandemic, these findings may help to determine the differential impact of COVID-19 on traditionally vulnerable populations.

No. 98

Performance of Clinician Cardio Metabolic Monitoring of Inpatient Psychiatry Patients in an Urban Community Hospital

Poster Presenter: Arun George Prasad, M.D.
Co-Authors: Samuel J. Rothman, M.D., Ralph Amazan, Soroush Pakniyat-Jahromi, M.D., Aditya Sareen, M.D.

SUMMARY:

Patients with severe and persistent mental illness (SPMI) die an average of 10 -15 years earlier than those without an SPMI. Second-generation antipsychotics, while effective for managing primary symptoms related to mental illness have been shown to increase the risk for cardio-metabolic syndrome. Cardio-metabolic syndrome is a constellation of conditions including abnormal LDL, elevated blood sugars, and an increase in abdominal girth that together, increases the risk for chronic medical conditions such as dyslipidemia, diabetes, obesity which can lead to an increased risk of cardiovascular disease and stroke. Research around this topic has identified atypical antipsychotics, in particular- olanzapine, clozapine and quetiapine to put patients most at risk for these adverse outcomes. Studies indicate that the prevalence of antipsychotic-related metabolic syndrome has been reported in varying samples ranging from 23 to 50 percent. Given the negative impact on the cardio-metabolic health of our patients, the management of antipsychotic associated side effects is a major concern for clinicians. Here we collected baseline data in a resident-run performance improvement initiative. We retrospectively reviewed 718 inpatient psychiatric visits in our inner urban community hospital over a period of six months. Our aim was to collect baseline data to review the performance of our clinicians with respect to monitoring cardio-metabolic related factors including LDL, Hemoglobin A1c, and Body Mass Index. Using the cardio-metabolic guidelines recommended by the American Psychiatric Association and the American Diabetes Association. We will present baseline data with the patient's clinical characteristics and review the performance of clinician cardio-metabolic monitoring. While the literature identifies that cardio-metabolic syndrome is an area of concern for clinicians, it also suggests that as clinicians we need to be doing far more to monitor our patients. Our aim is to identify strategies and make recommendations that would improve clinicians' monitoring of these chronic conditions in our patient.

No. 99

Racial and Ethnic Disparities in Childhood ADHD Treatment Access and Utilization

Poster Presenter: Kelly Yang, B.S.
Co-Authors: Michael Flores, Ph.D., M.P.H., Benjamin Cook, Ph.D., M.P.H.

SUMMARY:

Examine racial/ethnic disparities in treatment access and use conditional on access among children with caregiver-reported attention deficit hyperactivity disorder (ADHD). Methods: Using nationally representative, cross-sectional data from the Household Components of the 2011-2017 Medical Expenditure Panel Survey (MEPS), racial/ethnic disparities in access and use of ADHD-specific and general mental health (MH) treatment by children ages 5-17 with parent-reported ADHD (n=5,132) were examined. Logistic models were estimated for access outcomes and generalized linear models were estimated for use outcomes. Multivariable regression models adjusted for race/ethnicity, age, sex, and treatment need in accordance with the Institute of Medicine definition of healthcare disparities. Model estimates were weighted

according to sample design and survey nonresponse. Results: In adjusted analyses, Black (p

No. 100

It Works, Let's Use It: Effectiveness of ECT in Mania and the Disparity in Use Across Various Segments of the Population

Poster Presenter: Fnu Nur-Ul-Ein, M.B.B.S.
Co-Authors: Muniza Majoka, M.B.B.S., Scot G. McAfee, M.D.

SUMMARY:

The case: A 22 year old Haitian man, carrying the diagnosis of Bipolar disorder for 6 years, was admitted to the psychiatric inpatient unit with symptoms of elated mood, flight of ideas, increased energy levels, episodes of aggressive outbursts, affective lability, grandiosity, poor sleep, and psychomotor agitation. This was his fifth manic episode, which had been ongoing for 3 months and his third inpatient hospitalization in 3 months. His treatment was significantly complicated by the limitations of his sensitivity to psychotropic medications . During his initial inpatient treatment 6 years ago, he was started on Risperidone and Olanzapine but developed muscle rigidity and elevated CPK on both, with concerns for developing Neuroleptic malignant syndrome (NMS). Similar symptoms developed during trials of Clozapine and Chlorpromazine. Hence, he was maintained on both Lithium and Depakote with moderate response. There was recent historical evidence to suggest relative tolerance of Aripiprazole and Quetiapine. However, when this regimen was restarted, he again developed symptoms of NMS and was stabilized by acute medical management. He was then maintained on Depakote 1000 mg BID and Lithium 600 mg daily with an aim of not restarting any antipsychotics. Given his presentation with acute mania, complicated by NMS, he was an ideal candidate for Electroconvulsive therapy, however, three different facilities were unable to provide access to ECT due lack of insurance coverage and limited availability due to the pandemic conditions. Objective: To quantify the effectiveness of ECT in the treatment of Mania and to collate available data about the disparity of its use across the populations.Methods: A review of literature on Pubmed and Google Scholar was carried out using multiple terms. Results: ECT has been shown to be a very highly effective treatment of acute mania, with response rates of 46 to 100%[1, 2]. Studies also show a remission rate of up to 80%[3, 4]. ECT was shown in various studies to be superior to the treatment of mania when compared to various psychotropics[5, 6]. In the US, studies have shown ECT was shown to be used to treat mania in only 8.5 % of patients, which is much lower than other countries[8, 9]. There is evidence to suggest that Caucasians had a significantly greater likelihood of being treated with ECT than African Americans[10-12]. Non-Hispanic Blacks and Hispanic were found to be half as likely to get treated by ECT as non-Hispanic Whites[13]. These disparities exist despite evidence of comparable response of both Blacks and Whites to ECT[14]. Conclusion: Electroconvulsive therapy is an effective and proven treatment modality for acute mania. It should be offered to the appropriate candidates from all racial and ethnic backgrounds, given its potential to significantly alleviate the suffering and disability caused by acute mania.Further research and quality improvement measures are necessary to make it equitably available.

No. 101
WITHDRAWN

No. 102

The Interplay Between Excited Delirium, Law Enforcement, and Race

Poster Presenter: Sophia Kiernan
Co-Authors: Julie Owen, M.D., M.B.A., Sarah Elizabeth Slocum, M.D., Jessica Sachs, John Owen, M.D., R.N.

SUMMARY:

Background: With the resurgence of the Black Lives Matter movement in response to recent high-profile, lethal interactions between law enforcement officers and individuals of color, medical professionals and organizations have become more vocal on issues regarding racial equality and social justice. Within Psychiatry, these events should prompt further discussion regarding Excited Delirium Syndrome (ExDS), a diagnosis not found in DSM-5 nor endorsed

by major professional organizations, including the American Medical Association. Law enforcement officers have cited ExDS as the precipitant for administering ketamine to Elijah McClain (Mass 2020), who later died from cardiac arrest, and as a potential contributing factor for the murder of George Floyd (Roth 2020). A universal, inter-specialty definition and clear diagnostic criteria for ExDS do not exist (Gonin 2017); additionally, pre-hospital treatment approaches of ExDS relying on EMS protocols lack consistency. **Methods**: A literature search of PubMed was performed for articles published in English between January 1, 1990 and August 30, 2020. Search terms utilized were “excited delirium AND police,” “excited delirium AND police deaths” and “excited delirium AND restraint.” Twenty articles meeting criteria were classified by study type and further analyzed to capture demographic data (age, race, gender), incidence of mortality, and other pertinent descriptors or patterns. Additionally, a total of 26 EMS protocols categorized by U.S. region (West, Southwest, Midwest, Northeast, and Southeast) were also examined for mention/description of ExDS and to elicit regional variations in pharmacological approaches to ExDS. **Results**: A review of these studies suggests: young males are most at risk for being identified as having ExDS; substance use (particularly stimulant abuse) is frequently co-morbid with ExDS; death in the setting of ExDS is often associated with restraint. A review of the EMS protocols that guide pre-hospital management of ExDS, inclusive of medication use and restraint, suggests that treatment approaches vary as to specific medications recommended as well as dosing strategies. **Conclusions**: Literature related to ExDS, albeit limited, suggests that young males under the influence of substances are more frequently assessed as having ExDS during interactions with law enforcement, and that these interactions are not uncommonly fatal. U.S. data related to injuries sustained during actions with police suggests possible overlap with race and socioeconomic status. Thus, formal inter-specialty consensus (including Psychiatry, Emergency Medicine, Emergency Medical Services, and Forensic Pathology) regarding the diagnosis of ExDS should be pursued. Considering the apparent variability across EMS protocols as to treatment of ExDS in the field, dedicated inter-specialty efforts should also be focused on developing a standardized approach to agitated individuals in the pre-hospital setting.

No. 103

The Role Of Race In Admission To A Dual Diagnosis Unit Versus General Inpatient Psychiatric Unit In Those With Active Substance Use

Poster Presenter: Calvin Sung, M.D.
Co-Authors: Rachael Holbreich, M.D., Amy Swift, M.D.

SUMMARY:
Background: Psychiatric disorders are highly comorbid with substance use disorders, and the presence of co-occurring conditions increases severity of illness and complicates recovery. Integrated treatment for both mental illness and substance use have consistently been found to be superior to treating either illness alone. Those with comorbid mental illness and substance use disorders benefit from specialized services, specifically integrated dual diagnosis treatment.1,2 Admission to a dual diagnosis unit requires health care providers to consider a number of factors, including severity of illness, psychiatric history, bed availability, and providers' perceived likelihood of benefit of specialized services for patients.3,4 Ideally, decisions regarding the necessity of substance use treatment are made independent of race, but yet, racial disparities exist among those who are offered substance use treatment.5,6,7 Thus, more research is needed to better understand the relationship between race and provider consideration of the need for specialized substance use treatment. Objectives: We aim to evaluate if there are racial differences among patients who are identified as having active substance use, yet are admitted to a general adult inpatient psychiatric unit rather than to a dual diagnosis unit, compared to the racial composition of a matched, general population. Methods: Our study consists of a retrospective analysis of patients, aged 18-65, admitted to a general adult psychiatric unit, at a private metropolitan hospital, between July 1st, 2019 - June 30th, 2020. Our sample of patients are those identified as having active substance use on presentation in the psychiatric emergency room,

defined as either positive urine toxicology or self-reported history. The primary outcome is a comparison of demographic factors, particularly racial composition, of our sample to a matched, general population.   Discussion: We suspect that racial differences exist among those who are identified as having active substance use on presentation, who are admitted to a general adult psychiatric unit, versus those who are admitted to a dual diagnosis unit, despite dual diagnosis treatment being equally accessible. We theorize that those who are identified as having active substance use, but not admitted to the dual diagnosis unit, are more likely to be non-Latino White. We hypothesize that providers' unconscious bias of race confounds admission decision-making, and affects access to available resources and services. Conclusion: It is important to identify racial differences in regards to utilization of specialized services, such as admission to a dual diagnosis unit, to address structural health disparities among the substance use disorder population.

No. 104
To Feed or Not to Feed
Poster Presenter: Jo Everett, M.D.

SUMMARY:
Anorexia Nervosa is well documented as one of the more lethal psychiatric conditions. While many agree that weight restoration and psychological treatment are complementary and crucial, there are ethical issues that arise when contemplating how to achieve those goals. Reviewing the literature regarding these ethical issues brings to light questions about beneficence and patient autonomy. One of the major issues is the capacity to consent to or refuse treatment. In this poster we discuss the challenges that arise in this difficult patient population, from the perspectives of bioethics, medicine, law, and psychiatry via discussions with the Bioethics Committee, Family Medicine Residents, and Psychiatry Residents.

No. 105
Ethical Considerations in a Patient With Suspected Factitious Disorder
Poster Presenter: Samantha Ongchuan
Co-Authors: Sahil Munjal, M.D., Nona A. Nichols, M.D.

SUMMARY:
Background: Munchausen syndrome or factitious disorder (FD) is a psychiatric disorder in which a person assumes the role of a sick patient without intention of external gain. Early detection of FD is paramount for limiting waste of healthcare resources (Yates & Feldman 2016) and decreasing harm to patients (Vaduganathan et al 2014). Caring for patients with FD can be extremely difficult for providers, and a psychiatry consultation is commonly solicited to help with management. We report the case of a woman with suspected FD and discuss ethical considerations when treating such patients. Case Report: Ms. P, a 52-year-old female with history of major depressive disorder, generalized anxiety disorder, diabetes, tobacco use disorder, and multiple medical comorbidities presented with a reoccurring infection of her shoulder. Psychiatry was consulted due to concern that Ms. P was manipulating her wound as there was a reported history of PICC line tampering. Concern for FD complicated the next steps for Ms. P, as IV antibiotics were deemed risky by the infectious disease team, despite Ms. P having undergone multiple rounds of oral antibiotics and surgical interventions without resolution of her infection. On assessment, psychiatry could not identify primary or secondary motives and noted that the patient had poor health literacy regarding her wound care. An interdisciplinary discussion with orthopedics, infectious disease, and the internal medicine was held with plans for 6 weeks of IV antibiotics following discharge. Discussion: Both the nature and approach to treatment of FD are controversial and under research. It is difficult to ascertain primary versus secondary motives as they can coexist and fluctuate over time. Since FD is classified as a mental disorder which exposes patients to extreme risks, it can be argued that paternalistic interventions are needed to fulfill duty of care (Fry & Gergel 2016). However, once a treatment team becomes suspicious that a patient is deliberately fabricating an illness, countertransference can potentially interfere with the provision of compassionate medical care (Baig et al 2016). Furthermore, immediate confrontation in the inpatient setting

appears ineffective in most patients with FD (Weber 2020). Ethical conflict may arise as the questions regarding the patient right to self-determination and right to be informed are tested (Barbosa 2010). Implications: Although consultation with psychiatry is important when caring for a patient with suspected FD, psychiatry cannot provide binary answers or dictate the appropriate standard of care treatment for such parties. Regardless of the hazards and limitations of the diagnosis of FD, a well-coordinated, multi-disciplinary approach involving hospital administrators, attorneys, and ethics committees is crucial to establishing a treatment plan in FD.

No. 106
Psychedelics and the Military: Ethical Challenges for Psychedelic-Assisted Therapies in Military Clinical Settings and Active Duty Populations
Poster Presenter: Scott M. Hoener

SUMMARY:
Psychedelic treatments, particularly psilocybin- and MDMA-assisted psychotherapies, have recently undergone a renaissance in research efforts investigating their therapeutic potential in clinical care. Early phase trials for both agents have demonstrated remission of depression and post-traumatic stress disorder at rates greater than currently available treatments. These findings, coupled with the FDA's recent Breakthrough Therapy designations for both psilocybin- and MDMA-assisted psychotherapies suggest that psychedelics could usher in a paradigm shift in the treatment of psychiatric conditions. Given their unique properties, these agents raise new ethical concerns as it pertains to their potential therapeutic applications in the active-duty military setting. Here, we outline the unique clinical aspects of psychedelic assisted therapies and the relevant potential implications of clinical psychedelic research and treatments in military clinical settings. This poster will outline the current science of psychedelic-assisted therapies, with a discussion of their potential applications to improve recovery from severe psychiatric conditions for active duty service members. This poster assesses the unique properties of psychedelic treatments and how these properties may raise ethical issues that are relevantly different from existing therapies. We conclude by arguing that military psychiatrists will need to consider the distinct neurobiological and psychological effects of psychedelic therapies in order to ensure that the safety, privacy, and dignity of individual service members are preserved. Moreover, there may be an ethical appeal to study these therapies further in active duty populations to help further clarify uncertainties regarding safety and efficacy, particularly if service members could benefit in cases where existing therapies fall short.

No. 107
The Ethics of Physical Touch and Osteopathic Manipulative Treatment in Psychiatry
Poster Presenter: Evan Allen
Lead Author: Thomas Finstein, D.O.
Co-Authors: Michael Holcomb, D.O., Donald Banik

SUMMARY:
Problem: There is a lack of research and literature on the ethics of touch within psychiatry especially in the ethics of a providing psychiatrist utilizing osteopathic manipulative treatment. Background: Currently the world is moving toward an era of limited physical contact and social distancing. Although this may be new and unfamiliar territory for many, this is a part of every-day practice for psychiatrists and other professionals in mental health. Inexperience, concerns regarding legal implications, a provider's comfort, and patient history are some of the factors leading to the psychiatrist's decision to limit physical contact with their patients. In the midst of the current pandemic, our Military Treatment Facility (MTF) is moving toward an increasing number of virtual appointments across all specialties. Although the aim is to reduce and to prevent the spread of disease during the pandemic, this comes at the cost of in-person physical examination, assessment, and interview. We wish to address the concept of touch in psychiatry: moreover, to examine the ethical consideration and utility of touch and treatments modalities such as Osteopathic Manipulative Treatment (OMT). Research Question: What are the ethical and legal concerns for a providing psychiatrists in utilizing a treatment modality involving physical touch such as osteopathic

manipulative treatment? Methods: We plan to complete review of available literature regarding the ethics of touch in psychiatry by searching PubMed, PSYCINFO, and Google Scholar. We plan to review the available literature on OMT in the field of psychiatry by searching PubMed, Google Scholar and The Journal of American Osteopathic Association. Discussion: Historically, osteopathic physicians were educated regarding the importance of treating the patient through a holistic approach focused on the mind, body, and spirit. In contemporary medicine, a holistic model is applied broadly by all medical physicians, particularly psychiatrists. OMT is a treatment that is used as monotherapy and as an adjunctive treatment modality for a variety of medical conditions to include musculoskeletal injuries as well as neurologic conditions. To date, there are limited studies that address the use of OMT for treatment of psychiatric conditions However, studies have demonstrated promise by using this under-utilized technique in the field of psychiatry as adjunctive treatment. Furthermore, during the initial search, we find minimal conversation discussing the use of OMT by providing psychiatrists in treating their patients. This paper will examine the ethical and legal considerations for the providing psychiatrist regarding touch in their practice. None of the authors identify any conflict of interest. The views expressed in this manuscript are those of the authors and do not reflect the official policy or position of the Department of the Army, Department of Defense, or the U.S. Government.

Poster Session 7

No. 1
Assessing for Postpartum Depression in Transgender Males: The Case for More Inclusive Screening After Birth and Beyond

Poster Presenter: Colby Cayton
Co-Author: Pooja Raha Sarkar, D.O.

SUMMARY:

Pregnancy, a highly gendered experience in our society, poses significant challenges for transgender men who become pregnant. The peripartum period itself is a time of vulnerability for cis-gendered new mothers, and during this time they face an increased risk of depression compared to the general population. Transgender individuals also have well-documented increased risk of depression and transgender pregnant men are at a significantly higher risk of developing postpartum depression (PPD) due to both gender identity and reproductive status. 1 Moreover, the risk factors for PPD in cis-gendered women differ from those of transgender men during pregnancy. Of note, gender dysphoria has been shown to be a significant risk factor for transgender men in the peripartum and postpartum period2. Gender dysphoria is heightened during this period due to tension placed on the physical female body imposed by pregnancy juxtaposed against a perception of self as male. Current literature indicates transgender men report more negative health care experiences than the general population, with 25% of transgender men reporting a negative health care experience in the last year. 4 In addition to negative healthcare experiences, other factors may exacerbate the negative experiences associated with pregnancy for transgender men, such as unanticipated emotional experiences associated with stopping testosterone, in addition to the pregnancy and the hormonal changes that come with the postpartum period. Moreover, numerous factors lead to underreporting of PPD in this population, particularly due to limiting screening methods. Current assessments used to detect PPD, such as widely-accepted The Edinburgh Postpartum Scale, fail to adequately monitor for worsening gender dysphoria and suicidal ideation, simply because such scales do not inquire about symptoms of gender dysphoria. Pregnancy, which is a time of rapid physiological and psychosocial change, can be challenging regardless of gender identity, however transgender males are especially vulnerable due to increased experiences of gender dysphoria and feelings of isolation3,4. Existing surveys used to screen pregnancy and postpartum women for pregnancy lack the scope to assess the impact of pregnancy on gender dysphoria in transgender men. As such, there exists a critical need to develop an inclusive scale that assesses and synthesizes the risks for postpartum depression in this population.

No. 2
Gender Dysphoria and First Break Psychosis: A Case Series
Poster Presenter: Soroush Pakniyat-Jahromi, M.D.
Co-Authors: Mani Sadeghzadeh, M.D., Bibiana Mary Susaimanickam, M.D.

SUMMARY:
Introduction: Gender Dysphoria (GD) is the conflict a person has between their assigned or physical gender and the gender with which they identify.1The prevalence of GD in adults has been increasing. A study in the US showed 0.5-0.6% of 151,456 adults surveyed from 19 states identified as transgender.2To our knowledge there are only 4 case reports that discuss the correlation between GD and first break psychosis. We discuss three case reports with GD that presented with first break psychosis and their management. Case 1: 22-year-old Hispanic female, single, unemployed and domiciled with her grandparents. She was brought to the hospital by the NYPD after walking into the police station and reporting she is having a mental breakdown, as she remembered she had touched a friend inappropriately when she was younger. She reported auditory hallucinations and persecutory delusions. Patient identified self as gender fluid but primarily identifying as female now and pansexual. Case2: 20-year-old African American male, single, unemployed, domiciled with family, with no past psychiatric history, brought to the ED by EMS for bizarre behavior and disorganized thought process. Patient preoccupied with his obsessive thoughts, reporting being controlled by sex demons. Reports he is “bisexual” and expressed poor self-image including negative and unfavorable attitudes toward his body and it’s functioning. Case3: 19-year-old African American male with no past psychiatric history who admitted for erratic and disorganized behavior. Patient heard news of his best friend coming out as gay and this bothered him, questioning his own masculinity and sexuality. He also reported past history of trauma of his father touching him inappropriately when he was 5-6yrs old to check he was gay and these thoughts resurfaced and made him upset. Discussion: Patients with GD are at greater risk for mental illnesses and have higher risk for suicide.3, 4Patients with psychosis and GD are unique in their presentations and must be managed on a case-by-case basis.5All 3 patients had first break workup and psychological testing done; they also had chronic history of cannabis use and history of trauma. There were feelings of guilt and fear of judgment about their sexuality from society, which caused intense distress and functional impairment. These patients were treated for their psychosis with improvement in their symptoms with intensive outpatient support services referral. Patient and treatment team must have a strong therapeutic alliance if such cases are to be treated successfully. Family support was essential in developing effective treatment plan. Conclusion: More research and data collection is needed to link GD and sexual identity issues which cause psychological distress and psychosis. Advocacy for more support services to LGBTQ population is warranted. Training clinicians is needed to identify and treat co-morbid psychiatric issues in these patients.

No. 3
Management of Gender Dysphoria With Co-Existing Psychotic Features: A Literature Review
Poster Presenter: Rebecca L. Joyce, B.S.
Co-Authors: Vanya Jain, B.A., Hojun Yoo, M.A., Jasmine Lin, M.S.

SUMMARY:
Background: Investigations of mental health in transgender individuals have revealed a high prevalence of psychiatric disorders and psychopathology in this population. However, the rate of major psychiatric disorders such as schizophrenia has been found to be low and not higher than in the general population. While more research needs to be done, gender affirming therapy may provide long-term mental health benefits for individuals with gender dysphoria. In individuals with psychotic symptoms expressing gender dysphoria, it can be difficult to uncover whether or not the dysphoria is a product of psychosis. This literature review sought to isolate studies investigating the management of gender dysphoria in individuals with co-existing psychotic features from the last 5 years, and to summarize the most recent recommendations for differentiation and treatment. Methods: A literature search was

conducted in the PubMed database using the search terms (gender dysphoria) AND (“psychosis” OR “psychotic” OR “schizophrenia” OR “schizoaffective”). Results were limited to the last 5 years. The last search was conducted on August 30, 2020 which yielded 19 PubMed papers. A manual search was performed to filter for relevant papers specifically pertaining to gender dysphoria and psychosis. Results: The systematic literature search yielded six publications: Three reviews, a case-series, a case-study, and a cross-sectional study. Of these, only 2 papers specifically investigated treatment strategies. The treatment strategies described by the review papers were based on research conducted before 2015, which concluded that research was lacking and revealed no consensus for management. One case series followed 4 transgender individuals whose gender dysphoria symptoms were shared only after the onset of psychosis, who underwent gender-affirming treatment with paralleled treatment of psychotic symptoms. After follow-up of at least 3 years, all patients were satisfied with their treatment. Another case-study followed an adult male patient with psychotic symptoms in the setting of chronic polysubstance abuse, requesting gender affirming therapy 1 year after first experiencing gender dysphoria. These symptoms resolved over 3 years after discontinuation of drugs and maintenance on low-dose Thioridazine. These studies demonstrate the importance of determining the origin of gender dysphoria in patients with psychotic symptoms in regards to treatment. Conclusions: This systematic literature search revealed a clear lack of original research on the management of gender dysphoria in patients with co-existing psychosis. Considering that gender reaffirming therapy may improve long-term mental health outcomes in those with gender dysphoria, it is important to conduct more research to establish treatment guidelines for individuals with co-existing psychotic features.

No. 4

Prevalence of Sleep Disturbances and Its Association With Depression in Nursing Home Residents

Poster Presenter: Faisal Aftab Ansari, M.D.
Lead Author: Adeel Anwar
Co-Author: Baris Olten

SUMMARY:

Title: Prevalence of Sleep disturbances and its association with depression in Nursing Home Residents Background/Introduction: Mental disorders such as depression are a common problem in residents of long-term care facilities (LTCF). The World Health Organization estimated that the overall prevalence rate of depressive disorders among the elderly generally varies between 10 and 20%, depending on the cultural situations. Sleep disturbances are frequently associated with psychiatric disorders and can be both a cause and an effect. Likewise, poor sleep quality can also result in depression. Therefore, identifying poor sleep quality as an underlying cause of depression would be beneficial in the management of elderly patients with depression. Objective: The primary objective of this study is to assess the prevalence of sleep disturbances among the residents of Schulman and Schachne Nursing Homes. Our secondary objective is to determine the association of sleep disturbances with depression among the residents. Methods: This IRB-approved study used two scales including Geriatric Depression Scale (GDS) and the Pittsburg Sleep Quality Index (PSQI) to assess the depression and sleep quality respectively in nursing homes residents. All the residents without dementia were included in this study. Researchers also verified that the residents were cognitively capable to participate in the survey by reviewing their MDS scores in their medical records. All the selected residents were evaluated by using the Geriatric Depression Scale (GDS) and the PSQI after consent was obtained. GDS comprised of 30 items with scores ranges 0-9 (Normal); 10-19 (mild depression); 20-30 (severe depression). PSQI consists of 19 individual items with score ranges (0-21), “0” indicating no difficulty and “21” indication severe difficulties. Conventionally, score >5 shows poor quality sleep. A supplemental questionnaire about demographics, medications and diagnosis was also included. Results: Data collected till date included 34 residents. Out of 34 residents, 73.5% (25) reported poor sleep quality on PSQI (score >5) and 52.9% (18) reported mild to severe depression on GDS. Mean age of the sample was 62.9 with SD of 10.4. Mean PSQI score was 9.7 with SD of 4.5. Poor sleep quality reported by 52% (13) of the depressed residents. About 40% (10) of

depressed residents were found to be on antidepressants and sleep medications. Comorbidities causing sleep problems were found among 44.1% (15) of the residents. Moreover, correlational analysis shows less sleep quality has an association with higher levels of depression. Conclusion: Sleep disturbances are frequent among the nursing home residents and have significant association with depression. These results highlighted the fact that sleep disturbances should be addressed as a separate entity because it may act as a cause or an effect of the depression in elderly population.

No. 5

Current and Future Challenges in the Delivery of Mental Healthcare During Covid-19

Poster Presenter: Mohan Gautam, D.O., M.S.
Co-Author: Anjali Thakrar, M.D.

SUMMARY:

The USA is in the midst of the COVID-19 pandemic. We assess the impact of COVID-19 on psychiatric symptoms in healthcare workers, those with psychiatric comorbidities, and the general population. We highlight the challenges ahead and discuss the increased relevance of telepsychiatry. We analyzed all available literature available as of March 25, 2020, on PubMed, Ovid Medline, and PsychInfo. We utilized the MeSH term “covid AND (psychiatry OR mental health)” and included all articles. Duplicates were removed resulting in 32 articles, of which 19 are cited. Four additional references are included to examine suicide data. During the review process, an additional 7 articles were identified which are also included. Frontline healthcare workers are currently experiencing increased psychiatric symptoms and this is more severe in females and nurses. Non-frontline healthcare workers, as well as the general population, are experiencing vicarious traumatization. People with psychiatric comorbidities, and the general population, face increased psychiatric symptom burden. Migrant workers, the elderly, children, and the homeless may be disproportionately impacted. Suicide rates may be impacted. The COVID-19 pandemic has resulted in a severe disruption to the delivery of mental healthcare. Psychiatric facilities are facing unprecedented disruptions in care provision as they struggle to manage an infected population with comorbid psychiatric symptoms. Telepsychiatry is a flawed but reasonable solution to increase the availability of mental healthcare during COVID-19.

No. 6

Planning for Mental Health Needs During COVID-19: An Expedited Review

Poster Presenter: Alexa Bell
Co-Authors: Rachel H. Han, M.D., Morgan Schmidt, M.D., Wendi M. Waits, M.D.

SUMMARY:

Background: Despite significant academic discussion about mental health (MH) sequelae from the novel SARS-CoV2 (COVID-19) pandemic, there has been little published regarding the practical matter of planning for increased post-pandemic MH demand. The purpose of this poster is to review data on mental health sequelae from twenty-first century pandemics to include the COVID-19 pandemic in order to assess trends and gain insight regarding anticipated psychological needs, and subsequently provide recommendations for planning on how to best allocate mental health resources to meet mental health needs associated with COVID-19. **Methods**: An expedited review was conducted that focused on twenty-first century pandemics, with the goal of establishing a preliminary projection of mental health needs in order to inform initial planning efforts. The review included papers published from January 2002 to July 2020 on PubMed, and searches of various gray literature sources for guidelines, position papers, and journalistic reports. Search strategies were structured around three major concepts: pandemics, mental health, and data analysis. **Results**: Reviews of previous pandemic studies revealed increased psychiatric morbidity for frontline healthcare workers (HCWs), quarantined persons, and illness survivors. For HCWs, psychological distress was directly related to the perceived quality and quantity of information about the outbreak. HCWs in high-risk environments demonstrated the greatest amount of distress. Anxiety and distress, often attributed to isolation, were the most prominent

mental health complaints during previous pandemics and with COVID-19. Additionally, post-traumatic stress was surprisingly common and possibly more enduring than depression, insomnia, and alcohol misuse. Predictions regarding COVID-19's economic impact suggest that depression and suicide rates may increase over time. **Conclusion**: COVID-19 has changed the MH landscape in unprecedented ways. Available data suggest that the mental health sequelae of COVID-19 will mirror those of previous pandemics. Clinicians and mental health leaders should focus planning efforts on the negative effects of isolation, particularly anxiety and distress, as well as post-traumatic stress symptoms. Additionally, planning efforts should be on evidence-based treatments, particularly those that can be delivered using virtual platforms and group-based interventions, which will be critical to decrease isolation, normalize experiences, and facilitate peer support.

No. 7

Advances in Obstetric Providers' Managing Bipolar Disorder in the Perinatal Period

Poster Presenter: Grace Masters
Co-Author: Nancy Byatt

SUMMARY:

Introduction: The Massachusetts Child Psychiatry Access Program for Moms (MCPAP for Moms) helps front-line providers in Massachusetts address perinatal mental health conditions through training, consultation, and resource/referrals. It has become a national model and other perinatal psychiatry access programs are being implemented in 14 states. This study aimed to assess obstetric providers' practices regarding bipolar disorder since program inception (2014). Screening for bipolar disorder in the perinatal period is recommended for obstetric providers, especially prior to initiating unopposed antidepressant pharmacotherapy. **Methods**: Focus groups and assessments were conducted with obstetric providers within (n=28) and outside Massachusetts (n= 8) and coded to identify themes. Program utilization trends (n=7759 encounters) were examined over time. **Results**: All obstetric providers reported wanting to address bipolar disorder. MA-providers reported comfort with screening, assessment, treatment, and follow-up whereas non-MA-providers lacked needed training/resources. Facilitators for MA-providers included access to MCPAP for Moms services and treatment algorithms. Barriers for all included lack of resources/psychiatric referrals, reticence to address psychiatric illnesses, and lack of training. MA-providers were twice as likely to screen for bipolar disorder than non-MA-providers (58.3 vs 28.6%, p<0.001). MCPAP for Moms' bipolar disorder-related encounters have increased at a greater rate than for depression (35.7% vs. 25.9%) since inception, particularly since 2018 (33.0% vs. 12.0%). **Conclusion**: Despite being a complex condition for even psychiatrists to treat, aided by MCPAP for Moms, MA obstetric providers are becoming comfortable screening and even co-managing bipolar disorder. Non-MA obstetric providers are still struggling. Continuing national dissemination of perinatal psychiatry access programs may help assure women get needed care.

No. 8

Finding RESTpite in Trying Times: A Wrap-Around Model for Enhancing Resilience in Hospital Staff

Poster Presenter: Savannah Lee Woodward, M.D.
Co-Authors: Thomas Klotz, Monica D. Ormeno, D.O., Timothy Marcoux

SUMMARY:

The experience of medical workers in regions dramatically affected by COVID-19 in the early and late pandemic response phases has been marked by significant stress, high risk of infection, overwork, and limited ability to access usual sources of support. Clinicians have reported numerous mental health symptoms ranging from anxiety and depression, to insomnia and anger. These problems directly impaired their ability to provide pandemic-related patient care. Military medical personnel are particularly vulnerable considering the added uncertainty and lack of autonomy inherent in their service obligations, requirement to maintain mission readiness, and potential for rapid humanitarian deployments to COVID-19 "hotspots." The Resiliency Support Team (REST) was created at Naval Medical Center San Diego (NMCSD) to ensure that front-line medical staff had access to evidence-based

resources to augment their resiliency and support their efforts to control this outbreak. REST has focused on providing resource coordination to support hospital staff at (NMCSD), giving psychologically minded crisis-leadership recommendations to hospital commanding officers, and also offering best practice guidelines to the Department of Defense (DoD) so that these policies can be implemented at medical treatment facilities (MTFs) worldwide. As we enter the late phase of the pandemic, we anticipate a growing wave of demand for mental health services. Through continued prophylactic intervention under the principles of psychological first aid, we aim to reduce clinician morbidity, support public health engagement, improve public participation within the healthcare system, and mitigate the overall severity of pandemic-related mental health outcomes.

No. 9

Ambiguity in Management Guidelines for Agitated Catatonia

Poster Presenter: Vanya Jain, B.A.
Co-Authors: Hojun Yoo, M.A., Jasmine Lin, M.S., Rebecca L. Joyce, B.S.

SUMMARY:

Background: Catatonia is a complex syndrome that can present in a multitude of ways. Symptoms range from mutism, hypoactivity, hyperactivity, agitation or any combination thereof. Thus catatonia is classified into the subtypes of hyperexcitable, retarded, and malignant. It is important to distinguish these subtypes of catatonia because the classification can dictate management. Hyperexcitable catatonia, or agitated catatonia, can be identified by excess movements such as stereotypy, agitation, or restlessness. This review aimed to outline the recommended medical management of agitated catatonic patients based on recent literature findings, as opposed to retarded catatonia, which is more common. Methods: A literature search was conducted in the PubMed database using the search terms "agitated catatonia" OR "excited catatonia" OR catatonia AND management, and only studies published from 2015 to 2020 were included in the final analysis. The last search was conducted on August 30, 2020 which returned 80 PubMed papers in the results. These results were then manually screened for relevance to the search terms and the purpose of the study. Only studies including results for management were included, and studies that did not specifically identify hyperactive active catatonia were excluded. Results: The systematic literature search yielded six publications. There were three relevant case reports, and two systematic reviews and one monograph. These publications focused on assessing the efficacy of using benzodiazepines for treatment. While one unique case report supported use of the long acting benzodiazepine, diazepam, two systematic reviews concluded that while benzodiazepines are an effective treatment, more research and higher quality studies were needed for assessing long-term treatment outcomes. One of these systematic reviews compared the efficacy of benzodiazepines to ECT due to the lack of consensus about the treatment for agitated catatonia. This review found the literature too insufficient to state there is a definitive benefit of benzodiazepines as compared to ECT. Conclusions: This literature review found that recent studies support the use of benzodiazepines as first-line therapy for agitated catatonia. All three case reports reviewed showed improvement in symptoms of agitated catatonia after administration of benzodiazepines. However, the small number of results indicate the lack of research in this area. In conclusion, though benzodiazepines are the best first line therapy for agitated catatonia as per the current literature, more studies need to be done in the future to develop the data and evidence-based protocols for management of agitated catatonia specifically, as opposed to catatonia in general.

No. 10

WITHDRAWN

No. 11

WITHDRAWN

No. 12

Road Map for Quality Improvement: Standardizing the Handoff System at the Manhattan VA Inpatient Psychiatric Unit

Poster Presenter: Mary D. Rockas, M.D., M.B.A.

Co-Authors: Clancy Jones, M.D., Arslaan Arshed, M.D., M.H.A., M.S., Pantea Farahmand, M.D., M.A.

SUMMARY:

Background: Transitions of care have been identified as sources of medical errors (Horwitz et al., 2009) with handoffs identified as a source of that error by thirty percent of physicians (Smith et al., 2015). Recognizing this importance to decreasing mortality and morbidity, the ACGME instituted new requirements directing residency training programs to educate residents on handoff systems (CLER, 2020). IPASS was standardized on many inpatient medical and pediatric services (Starmer et al., 2012). To date, there are only two standardized psychiatry handoff systems. The tool PSYCH was used for emergency psychiatry (Mariano et al., 2016). For inpatient and consult-liaison psychiatry, the tool M-PSYCH-PASS was associated with fewer transition errors when integrated into the electronic medical record (Patel et al, 2019). This project sought to assess transitions of care at the Manhattan VA, which resulted ultimately in implementation of the M-PSYCH-PASS tool into the electronic medical record (EMR). Methods: Transitions of care were assessed using open ended surveys and focus groups of physicians to complete a fishbone analysis. Subsequently, handoffs were identified as a specific point of intervention and M-PSYCH-PASS was implemented into the VA EMR, CPRS. Providers were given surveys to assess for omissions in handoff as well as satisfaction of the established handoff system both pre- and post-intervention. Preliminary data was analyzed using mean comparisons. Results: During the pre-implementation period, the average response on both handoff accuracy and communication was neutral (5/10) on a Likert scale, with only 30% of responders reporting to be at least somewhat satisfied. Preliminary data indicates that implementation of this EMR-based handoff tool has resulted in an increase in handoff accuracy, communication, confidence, and satisfaction. Conclusions: Preliminary results show that instituting this new standardized and adapted M-PSYCH-PASS handoff system improved transitions of care at the Manhattan VA in terms of handoff accuracy, communication, subjective confidence and satisfaction. These results can be used to promote improvement in handoffs for other psychiatric services in the VA system nationally, both furthering QI educational objectives put forth by the ACGME and high quality patient care. ***Please note that authors Dr. Clancy Jones and Dr. Mary Rockas contributed equally to this project.

No. 13

Improving Metabolic Monitoring Guideline Adherence in Psychiatry Residency Outpatient Clinic

Poster Presenter: Shane Rall

SUMMARY:

Increased risk for weight gain, hypercholesterolemia, and development of diabetes are well documented side effects with the use of Second Generation Antipsychotics (SGAs). Additionally, these side effects can lead to serious cardiovascular complications later in life. As a result, the American Psychiatric Association and American Diabetes Association developed clear guidelines for responsible metabolic monitoring when treating a patient with a SGA which includes annual measurements of Lipid panel and Ha1c. This project aimed at developing strategies for quality improvement, with the goal of increasing the percentage of Psychiatry Residency patients at the Spokane Teaching Health Clinic who met these requirements for annual lab monitoring. Utilizing the tool Slicer/Dicer through Epic electronic medical records, all Spokane Psychiatry Residency patients treated with a SGA could be identified, and the percentage of those with Ha1c and lipid panel results within the previous year could be determined. To promote adherence, strategies were employed including cycles of verbal announcements to residents, providing education regarding guidelines, embedding reminders into note templates, and providing personal and group patient metrics as feedback. In the five month period since employing strategies, compliance improved from 52.7% to 61.3%. This demonstrates that simple methods of education, reminders, and patient metric feedback to providers can promote improvement in standard of care practices. The opportunity for improvement in providers outside of psychiatry was shown amongst the Spokane Internal Medicine

Residency, Family Medicine Residency, and whole Providence system with respective average guideline adherence of 41%, 35%, and 12%. Furthermore, among Psychiatry Residency patients on SGAs, 24% demonstrated abnormal Ha1c's and 48% had abnormalities on their lipid panel, emphasizing the importance of catching SGA metabolic side effects early. As such, appropriate measures can be taken and serious complications later in life can hopefully be avoided.

No. 14

Catatonia as a Rare Alcohol Withdrawal Sign

Poster Presenter: Stanley O. Nkemjika, M.D., M.P.H.
Co-Authors: Olaniyi O. Olayinka, M.D., M.P.H., Terence Tumenta, M.D., Tolu Olupona, M.D., Ayodeji Jolayemi, M.D.

SUMMARY:
Catatonia is a complex neuropsychiatric syndrome that has been described in medical literature since the 16th century. Life threatening complications have been reported in literature. Documented evidence suggests that the etiology of catatonia is still unclear as literature depicts more occurrence in patients with previous psychiatric history like affective disorders and schizophrenia. Etiologically, apart from psychiatric disorders, medical causes like neurological and metabolic diseases are common. Among substances, alcohol and benzodiazepines withdrawal have been reported to be associated with catatonia. A complicated Alcohol Withdrawal Syndrome (AWS) includes epileptic seizures and/or delirium tremens (DT). However, there is still little literature on catatonia as a consequence of AWS. Secondly, the few noted reported cases in the literature were mainly of non-American population. Hence we present the case of a middle aged woman with no past psychiatric history admitted for psychosis and altered sensorium with delayed catatonic feature in the context of a history of alcohol use disorder. Ms. M.T., a 44-year-old African-American female with no past psychiatric history but past medical history of gastric bypass surgery, presents to the psychiatric emergency department via emergency medical service due to roaming the street because of acute onset of altered mental status and psychotic features. While on the inpatient unit, the patient had an isolated episode of catatonic stupor despite being administered Lorazepam 2mg every four hours as needed. Supportive medical staff should also be aware of catatonia as a rare manifestation of alcohol withdrawal. A persistent, thorough medical workup and evidence based 'investigative' history gathering can help elucidate the source of the presenting symptom in this patient population.

No. 15

Bupropion: Misunderstood Medication?

Poster Presenter: Mohan Gautam, D.O., M.S.
Co-Author: Shivali Patel, M.D.

SUMMARY:
Bupropion, a recognized dopamine and norepinephrine reuptake inhibitor, is a well-known treatment for major depressive disorder and for smoking cessation. Compared to patients with major depressive disorder, patients with bipolar disorder or schizophrenia have higher rates of comorbid tobacco use. Yet, there is limited literature examining the combination of bupropion and an antipsychotic in the treatment of these illnesses. This is possibly due to the perception that bupropion's direct dopaminergic activity may exacerbate manic or psychotic symptomatology. We discuss bupropion's pharmacological properties and clinical implications, highlighting that this medication undergoes extensive first-pass metabolism and has overall weak dopaminergic activity. We present a retrospective analysis of electronic medical records from 09/01/2016 to 08/31/2018 from ten community mental health centers utilizing the Genoa Healthcare database. The expected prevalence of prescribed medication combinations was compared with the actual prevalence of the prescribed combinations using the test of proportions. Clozapine and the risperidone sprinkle formulation were prescribed concurrently with bupropion significantly less often than chance ($p<0.005$). None of the other antipsychotic medications were prescribed with bupropion significantly differently than chance. Considering the additional impact of smoking on the metabolic profile of patients taking antipsychotic medication, it is important not to discard possible alternatives that

may help. We suggest that bupropion should receive more study as a useful augmenting agent in combination with these antipsychotics, to aid with smoking cessation and to target co-morbid mood symptoms.

No. 16

Efficacy of Psilocybin in Patients With Treatment-Resistant Depression: A Pooled Analysis of Short-Term, Placebo-Controlled Studies

Poster Presenter: Alexander Sinu, M.D.
Co-Author: Nancy Kerner, M.D.

SUMMARY:

Background: Depression is a major public health problem that continues to be a leading contributor to the global burden of disease. Every year more than 17 million American adults suffer from depression and many have chronic treatment-resistant depression; currently, there is a lack of effective treatments. In recent years, psilocybin has emerged as a possible approach to treatment-resistant depression and anxiety. Here, we focus on the safety, feasibility and efficacy of psilocybin for treatment-resistant depression and anxiety. **Methods**: A PubMed search was conducted using the keywords, "Psilocybin for treatment-resistant depression" and "Psilocybin for anxiety". **Results**: Four clinical trials were found that met our search criteria. The first trial was a phase 2 randomized, two-session, double-blind, crossover trial with 51 patients with life-threatening cancer and anxiety. This trial demonstrated that the overall rate of clinical response at 6 months was 79% and 83% for depression and anxiety as measured by the HAM-D and HAM-A ($p < 0.001$), and the overall rate of symptom remission at 6 months was 65% and 57%. The second trial was an open-label feasibility PILOT study which involved 12 patients with moderate-to-severe, treatment-resistant depression. This trial demonstrated that at 3 months, 83% of patients scored a 10 on the QIDS which was sustained ($p = 0.003$). 67% of patients achieved complete remission at 1 week and 58% maintained their response at 3 months, with 42% still in complete remission. The third trial was a double-blind, non-randomized, single group, placebo-controlled study involving 12 patients with advanced-stage cancer and anxiety. A sustained decrease in STAI trait anxiety was observed for the entire 6-month follow-up, reaching significance at the 1-month ($p = 0.001$) and 3-month ($p = 0.03$) points after the second treatment session. The BDI revealed an improvement in mood that reached significance at 6 months ($p = 0.03$). The fourth trial was a phase 1 randomized, placebo-controlled, double-blind crossover trial with 29 patients with cancer-related anxiety and depression. For all primary outcome measures (HAD-S, BDI, STAI), at 7 weeks after dose 1, 83% of patients in the psilocybin group vs. 14% in the placebo group met criteria for anti-depressant response, and 58% in the psilocybin group met criteria for anxiolytic response, compared to 14% in the placebo group. At the 6.5-month follow-up, antidepressant or anxiolytic response rates were approximately 60-80% ($p < 0.01$). In these studies, participants tolerated psilocybin well despite transient increases in blood pressure and transient anxiety. **Conclusion**: Treatment-resistant depression is a significant problem in the general population. Emerging evidence is demonstrating that psilocybin may be a safe and effective treatment option. Further research is warranted to establish the safety and efficacy of using psilocybin for treatment-resistant depression.

No. 17

Pharmacologic Renal Protective Strategies in Lithium Use: A Case for Prophylaxis?

Poster Presenter: Stephanie Susan Kulaga, M.D.

SUMMARY:

Background: Lithium is widely known as the most effective mood stabilizer for bipolar disorder, but is often avoided for fear of adverse renal effects (ie-polyuria, nephrogenic diabetes insipidus, interstitial nephropathy and even renal failure.) While most patients will not develop severe renal disease, complications can become irreversible over time even when lithium is discontinued. Current guidelines for prevention and management of renal effects focus largely on dosing/monitoring strategies and lithium discontinuation, which confers a high risk of relapse and potential development of treatment resistance. This poster will review evidence for pharmacologic renal protective agents

in patients on lithium with an emphasis on evaluating their potential for prophylactic use. **Methods**: A search of PubMed database was performed for articles in English published from 1/1/90 to 8/17/20 using the following search strings for all fields: “(lithium) AND (renal protective)” and “(lithium) AND (prevent OR treat) AND (renal failure OR nephrotoxicity OR nephrogenic diabetes insipidus OR kidney disease OR renal disease OR renal insufficiency OR nephropathy OR polyuria OR nephrotic syndrome OR nephritis).” Titles and abstracts were reviewed to select articles with animal or human evidence for pharmacologic prevention/management of lithium-induced kidney disease. Selected interventions were then reviewed individually for mechanism, efficacy, safety and alternate indications to assess their potential utility as prophylactic agents for lithium-induced kidney disease. **Results**: The search yielded a total 900 articles; 63 were selected for further review. Duplicates and papers on non-lithium nephrotoxic drugs were removed, leaving 45 articles. Of these, 31 reported on animal models and 14 on humans. A total of 29 unique agents were identified. Of these, only amiloride had both animal and human evidence of renal protective properties. Diuretics were most studied (17), followed by supplements (8), and NSAIDs (5). Other agents included antihypertensives, antidiuretics, statins and hormonal therapy. The majority of studies focused on treating lithium-related renal complications once they had already developed. **Conclusions**: The evidence for pharmacologic renal protective agents in lithium use is limited, with little to no guidance on prophylactic use. However, given the dearth of current options to prevent or manage lithium-induced renal complications and the high cost to patients of discontinuing lithium, early initiation of renal protective agents may be warranted on a case-by-case basis – namely if (1) an agent is indicated for an existing co-morbidity in a patient on lithium or (2) an agent is relatively benign and not otherwise contraindicated. Specific agents meeting these criteria will be discussed in further detail.

No. 18
WITHDRAWN

No. 19
Meta-Analysis of Positive Psychology Interventions on the Treatment of Depression

Poster Presenter: Shannon A. Pan
Lead Author: Kiran Ali
Co-Authors: Yasin Taha Ibrahim, M.D., Regina Baronia, M.D.

SUMMARY:

Background: Positive psychological interventions focus on positive aspects of life, such as optimism, gratitude, social ties, humor, and resilience. These interventions have increasingly been recognized as a possible treatment of emotional suffering. The objective of this meta-analysis is to examine the efficacy of positive psychological interventions in treating depressive symptoms. Methods: We conducted a systematic search on PubMed, Clinicalkey, and Web of Science, using the key words “positive psychology” and “treatment of depression”. Controlled clinical trials that implemented positive psychology interventions and measured depressive symptoms pre- and post-intervention were included. Random-effects meta-analyses were performed on post- vs. pre-intervention and post-follow-up vs. pre-intervention differences in depressive symptoms. Results: Initial search revealed 2,793 articles and only eleven relevant articles met eligibility. Positive psychology interventions were effective in decreasing depressive symptoms, with significant improvements of depression scores vs. control groups in all but one study. Meta-analyses revealed significant treatment effects for positive psychology interventions vs. controls in post- vs. pre-intervention (pooled Cohen’s d = -0.44, [-0.77, -0.11]) and follow-up- vs. pre-intervention (pooled Cohen’s d = -0.46, [-1.02, 0.09]) comparisons. There was significant heterogeneity between the articles; however, this was fully explained by study-level covariates. Two covariates that emerged as positive moderators include proportion of women in the samples and proportion of individuals with higher education. Conclusion: The findings from this study have a wide range of clinical applications, from improved accessibility and affordability of depression treatments to increased primary care involvement in mental health treatment. The identified moderators could be used to define

endophenotypes who would benefit most with positive psychology interventions.

No. 20
WITHDRAWN

No. 21
Implementing Order Set to Improve Cardiometabolic Screening in Patients With Antipsychotic
Poster Presenter: Khai Tran, M.D.
Co-Authors: Ingrid Haza, M.D., Arun George Prasad, M.D.

SUMMARY:
All antipsychotic medications share common side effects of increased metabolic disturbances, especially in atypical antipsychotics. Hence, the APA implemented a guideline on metabolic screening in patients that are on antipsychotic medications, as it was shown that this population has a shorter life expectancy than the general population. With roughly 51% of our outpatient population on at least 1 antipsychotic, we began phase 1 accessing the frequency in which high risk cardiometabolic screening occurs. At the end of phase 1, we established that HbA1C was screened 30%, fasting glucose 52%, and lipid panel 38% of the time. With these results, phase 2 began with the department implementing a "hard stop" in our documentation, requiring our psychiatrists to review metabolic screening and order necessary measures as well as creating an order set to quickly order missing measures. We compared 2018 data against the data in phase 1 and found a mild increase. However, the data was not completed as some of the patients were no longer followed up in the clinic. This year, we are comparing all active patients are on antipsychotic in the year 2019 hoping to see a more impactful result from the order set

No. 22
Mental Health Urgent Care Visits: A Look at Utilization Rates Pre-Covid and Peri-Covid in the San Fernando Valley Area, a QI Assessment
Poster Presenter: Manjit K. Bhandal, M.D.
Co-Authors: Angel Cienfuegos, M.D., James Coomes, L.C.S.W., Tinh Luong, M.D.

SUMMARY:
Introduction: The COVID19 pandemic has highlighted social, medical and mental health disparities. Utilization of the Olive View Mental Health Urgent Care (UCC), which serves a wide underserved demographic in LA county, can reflect a local populations' mental health needs, and how clients respond to crisis and what helps them cope. The prevalence of certain diagnosis, conditions, and the demographic of clients that access the UCC can differ in times of crisis compared to a similar time period before exacerbation by the pandemic. Through this study, we can identify populations that may need more outreach and areas of improvement to address these disparities. Methods: Intake data will be gathered from March and April 2019 as well as March and April 2020, and analyzed for statistical variances in 18 demographic variables of clients accessing the UCC, as well as the prevalence of DSM 5 diagnoses, reason for presentation, and reason for holds during these two time periods. Anticipated results: Data is currently being gathered from the above mentioned time points and results will be available in our poster presentation. Conclusion: The results from this data collection will provide the necessary framework to better identify patient populations who are at higher risk of mental health decompensation, and help establish guidelines for improved mental health interventions focused on these groups. An increase in demand for mental health services has already been noted.

No. 23
The Impact of Virtual Visits on No-Show Rates in a Child and Adolescent Psychiatry Fellowship Continuity Clinic During the Covid-19 Pandemic
Poster Presenter: Megan Chochol, M.D.
Co-Authors: Jyoti Bhagia, M.D., Sanskriti Mishra

SUMMARY:
Background: Psychiatric outpatient clinics have reported no-show rates as high as 60%.[1] The COVID-19 pandemic has hindered face to face (F2F) visits and we have seen a dramatic surge in telemedicine.[2] An overview of COVID-19 and telepsychiatry reported a 20% decrease in no-show rates at Massachusetts General Hospital, however

no-show rates in trainee clinics were not reported.[3] Only one study was found examining no-show rates in a resident psychiatry intake clinic prior to the COVID-19 pandemic.[4] In this study, we assess the impact of virtual visits on no-show rates in our outpatient Child and Adolescent Psychiatry (CAP) fellowship continuity clinic. **Methods**: We pulled data of return F2F and virtual visits for established patients in the Mayo Clinic CAP fellowship continuity clinic during April-July 2019 (575 consecutive appointments) and April-July 2020 (461 consecutive appointments.) No-show rates were compared using the Chi-square test and Student T-test. Descriptive statistics were reported including mean and median with standard deviation. **Results**: The 575 visits scheduled from April-July 2019 were all face to face. Of these 575 visits, the absolute no-show rate was 12.4% (11.5%, 15.6%, 12.4% and 7.8% in April, May, June and July of 2019, respectively). Of the 461 visits scheduled from April-July 2020, 67.9% (313) were virtual. The absolute no-show rate was 2.70% for F2F, 3.51% for virtual, and 3.25% for total visits. The proportion of F2F visits steadily increased each month in 2020 as monthly no-show rates remained low (range: 1.7% - 4.8%.) Monthly no-show rates by visit type from April-July 2020 were 1.9%, 5.6%, 3.4% and 3.1% for virtual compared to 0%, 0%, 2.9% and 6.5% for F2F visits. Comparison of absolute no-show rates for all visits in April-July 2019 vs. 2020 showed a statistically significant decrease in 2020 ($p<0.0001$). Comparison of absolute no-show rates for only F2F visits during the same period showed a statistically significant decrease from 12.4% (71 of 575) in 2019 to 2.7% in 2020 (4of 148; $p=0.0002$). Comparison of monthly mean no-show rates of all visits showed a statistically significant decrease in 2020 compared to 2019 ($p=0.013328$). **Conclusion**: The absolute no-show rates and monthly mean no-show rates for F2F and combined F2F plus virtual visits in April-July 2020 were significantly lower compared to the corresponding time period in 2019. The proportion of F2F visits continued to steadily increase chronologically in 2020 however a marked decline in the no-show rate for F2F visits in 2020 compared to 2019 was maintained. We attribute the reduction to the availability of virtual visits as an option that reduces logistical barriers to care. We continue to collect this data to identify long-term trends and we hypothesize there will continue to be lower no-show rates as long as virtual visits are available to patients.

No. 24

Fasting or Withdrawal? Treatment of a Muslim Man With Psychosis and Catatonia During Ramadan

Poster Presenter: Daniel Thomas Higgins, M.D.

SUMMARY:

A 23-year-old Ghanaian man presented to the hospital under an emergency order initiated by his housemate for concerns of abnormal behavior. He demonstrated waxy flexibility, rigidity, mutism, staring, and withdrawal which had been preceded by one week of worsening religious delusions, aggression, ranting, and neglect of personal hygiene. He was admitted to the inpatient psychiatry unit under an involuntary status given concerns for imminent high risk of inability to care for self. Given concern for catatonia, he was treated with scheduled lorazepam. While the motor symptoms of catatonia abated, he remained mute and hyperrelgious with limited oral intake. He was able to follow complex instructions and indicated that he was able to speak but choosing not to do so, and responded to yes/no questions that indicated his behavior was religiously motivated. He was subsequently treated with aripiprazole and fluoxetine which failed to meaningfully affect his mental status. With thoughts that observation of Ramadan was contributing to these behaviors, more aggressive treatment was deferred for multiple weeks. When symptoms remained even after Ramadan had concluded, ECT was performed and he demonstrated remarkable response: spontaneous production of speech, restoration of appetite, and absence of psychosis. This case illustrates how a combination of catatonia, psychotic symptoms, and cultural factors including religious observance can challenge traditional diagnosis and treatment.

No. 25

Can SSRIs Worsen Symptoms in Patients With Parkinson's Disease? A Case Report and Review of the Literature

Poster Presenter: Ashleigh Johnson, M.D.
Co-Authors: Donika Hasanaj, B.S., James N. Kimball, M.D.

SUMMARY:
Depression is the most common psychiatric disturbance in Parkinson's disease (PD), affecting 40% of patients. Its identification and treatment are critically important in disease management. Although antidepressant medications are commonly used to treat depression in PD, little information is available regarding their tolerability and effectiveness in this condition. An association between antidepressants and extrapyramidal reactions is not a new observation. In 1958, treatment with the monoamine oxidase inhibitor iproniazid was reported to be associated with "muscular hypertonicity" and "hypermotility." Soon after, several extrapyramidal reaction cases associated with imipramine treatment, involving parkinsonism and dystonia, were reported by Foster and Lancaster. It is likely that the rate of antidepressant-related extrapyramidal reactions is relatively low, but nevertheless it is important for practitioners to be aware that extrapyramidal reactions can be associated with treatments that are not routinely known for causing these adverse effects. We present a case of a 59 year old female with a past medical history of Parkinson's disease and major depressive disorder. The patient had been recently started on citalopram by her primary care provider for her depression but stopped it after 7 days when she complained of a worsening of rigidity. Her rigidity resolved when she stopped the medicine, but quickly recurred after restarting the medication. She stopped it again, which led to a worsening of mood and a recurrence of suicidal ideation, which led her to be admitted to an inpatient psychiatric unit. She was started on the SNRI duloxetine with improvement in depressive symptoms and no recurrence of rigidity. **Discussion**: It is confirmed by Kostic et al (2012) that fluoxetine significantly reduced depression in PD patients while no motor performances were impaired. However, unlike other antidepressants, the use of SSRI's was associated with greater apathy. There is evidence from animal studies that serotonin transporter inhibitors, such as citalopram and fluoxetine, play a role in the downregulation of tyrosine hydroxylase (the rate limiting enzyme in dopamine synthesis). There is a report of increased microglial activity in the presence of SSRIs, and it is proposed that the increased activation may be responsible for the reduction in tyrosine hydroxylase activity in the substantia nigra and the striatum. **Conclusion**: Psychiatrists, especially consultation-liaison psychiatrists, should be aware of the potential worsening of motor symptoms when an SSRI is added to a patient with Parkinson's disease. More rigorous research efforts are necessary to achieve a better understanding of the clinical risk factors for extrapyramidal reactions associated with serotonergic antidepressants.

No. 26

Clozapine Prescribing Barriers in the Management of Treatment-Resistant Schizophrenia: A Systematic Review

Poster Presenter: Anum Iqbal Baig, M.D., M.B.A.
Co-Authors: Shahrzad Bazargan-Hejazi, Ph.D., Gul M. Ebrahim, M.D.

SUMMARY:
Background: Schizophrenia is a treatable psychiatric disorder affecting more than 20 million people worldwide and is associated with significant disability (1). It is estimated that 30% of patients with schizophrenia are considered treatment-resistant (2). Clozapine remains the gold standard treatment for treatment-resistant schizophrenia but is under-utilized (3). **Objective**: To identify barriers to prescribing clozapine. **Methods**: Studies of multiple methodologies on Clozapine barriers in the last three-year period (2017 through 2020) associated with treatment-resistant schizophrenia have been identified from searches in PubMed. Article selection was limited to those written in the English language. Keywords included: Clozapine, treatment, prescribing, barriers, prescription. **Results**: 123 relevant abstracts found, 39 were screened, and 16 reviewed based on inclusion criteria. Out of the 11 included, provider's lack of knowledge and training, concern about side effects, and frequent monitoring were found to be greatest prescription barriers with all studies describing more than one barrier. **Conclusion**: Clozapine remains under-prescribed due to multiple barriers including side effects, prescriber knowledge, experience, monitoring, administrative/logistic/systems issues, and poor medication adherence. Barriers may be

overcome by improving medication package inserts, individualizing clozapine dose, and improving prescriber knowledge and training including side effect early detection and management. However, further research is required to determine the effectiveness of these measures in the context of health equality and health equity among marginalized populations. Research supported by NIH National Center for Advancing Translational Science (NCATS) UCLA CTSI Grant Number UL1TR001881.

No. 27
WITHDRAWN

No. 28
Psychiatric Telehealth During Covid: A Hindrance or a Help in Diagnosing EPS
Poster Presenter: Chelsea Younghans, M.D.
Co-Authors: Alana Connell, M.D., Christopher Cox, M.D.

SUMMARY:
Ms. N is an unmarried 22 y/o Colombian female with Other Specified Schizophrenia Spectrum and Other Psychotic Disorder as well as past medical history of absence seizures, MDD and body dysmorphia who presented to the Emergency Room with her family twice in one weekend for insomnia and restlessness. This patient was being seen in the adult outpatient behavioral health clinic for schizophrenia with somatic delusions, constricted affect, impoverished thought content, and negative symptoms, but without hallucinations or gross disorganization in speech or behavior. Patient was making small improvements in daily functioning and as well as distorted thoughts when her appointments were transitioned to telehealth due to COVID. Patient was seen for a follow up appointment via telehealth at which time she had been on aripiprazole 5mg for 7 weeks and agreed with provider to trial 10mg for further organization of thoughts and persistent delusions. Upon next telehealth visit 2 weeks later patient reported improvement in clarity of thoughts. Ms. N reported restless legs worse at night after taking medications and residual restlessness during the day, although patient was able to sleep 8-9 hours at night. Aripiprazole was decreased at this time due to akathisia but AIMS had not been done on the patient in over a month due to telehealth. Akathisia continued to worsen for this patient, even on propranolol and clonazepam, leading to multiple ED evaluations and eventual psychiatric admission for drug-induced Parkinsonism and akathisia. At time of admission patient could not sit for interview and paced the room while answering questions. She also exhibited masked facies, autonomic instability, decreased swinging of arms while walking, and LEFT rigidity. She was admitted to an inpatient psychiatry ward for symptom control and rapid medication changes. Not only was this case challenging in terms of the patient's complicated schizophrenia diagnosis, but her EPS started after her appointments had to be moved to a virtual platform making it difficult for the provider to evaluate her physical symptoms and side effects from her medications. Telehealth can be an asset in times of crisis and allows people in vulnerable positions to continue to receive care at home. Would this patient's care have changed or could her hospitalization have been avoided if she was seen in person? With every new advancement in the way physicians practice medicine we must take a critical look at what we gain and lose in patient care.

No. 29
Schizophrenia and Medication Non-Compliance in Recreational Marijuana Users in the United States
Poster Presenter: Ramu Vadukapuram
Co-Authors: Venkatesh Sreeram, M.D., Raman Baweja

SUMMARY:
Background: Schizophrenia is a chronic psychiatric disorder with an age of onset in mid-twenties in men and in the late twenties in women [1]. Medication non-compliance is a major problem in schizophrenia management as it leads to significant suffering to the patients as well as their families, with a rising healthcare burden [2]. Of the 1.2 million schizophrenia patients in the Medical Expenditure Panel Survey, more than 70% of the patients were non-adherent to antipsychotics [2]. In a review of 15 observational studies, there is an increased medication non-compliance in marijuana users by 2.5 times compared with the non-users [3]. The main goal of our study is to comprehend the region-wide

differences in demographics, comorbid substance abuse, and hospital outcomes in adult schizophrenia inpatients with marijuana use and medication non-compliance. Methods: We included 51,975 adults (18-65 years) from the Nationwide Inpatient Sample (2012 to 2014) with a primary diagnosis of schizophrenia and medication non-compliance, and cannabis use disorder (i.e. recreational marijuana use). We used descriptive statistics and linear-by-linear association to evaluate the region-wise differences in demographics and comorbid substance abuse. Analysis of variance is used for continuous variables such as length of stay (LOS) and total charges during hospitalization to measure the differences across the regions. Results: Our study comprised of inpatients from northeast ([NE] 30.4%), midwest ([MW] 24.3%), south (27.3%), and west (18%). A higher proportion of young adults (age: 18-35 years; overall total: 62.4%) are from the south (65.1%) and the NE (64.3%) regions. The study population comprised majorly of males in all the regions, ranging from 78.6% to 82.2% (overall total: 80.5%). The west region comprised majorly of whites (42.6%), whereas all other regions majorly had blacks, with the highest seen in the MW (63.2%) and south (63%) regions. The most prevalent comorbid substances in the study inpatients are tobacco (46.3%) and alcohol (32.3%). The mean LOS and total charges for the hospitalization are much higher in the NE region (LOS: 15.8 days; total charges: $44,336). Conclusion: The NE region showed a high prevalence of marijuana use and medication non-compliance in schizophrenia patients. In the overall regions' young adults, males and blacks from low-income families are affected. There is also a significant association with higher hospitalization stay and cost which indirectly increases the healthcare burden.

No. 30

Suicidal Behavior in Childhood-Onset Schizophrenia: Perceptions From 39,615 Psychiatric Inpatients From the United States

Poster Presenter: Shruti Prabhudesai, M.B.B.S.
Co-Authors: Shikha Verma, M.D., Rikinkumar S. Patel, M.D., M.P.H.

SUMMARY:
Background: Childhood-onset schizophrenia (CoS) while an incredibly rare disorder, is also one with severe repercussions on the patients, their families, and society at large [1]. Suicide is a worse outcome seen in patients with CoS and is understudied so far [2-4]. The main objectives of our study are to evaluate the risk of association between suicidal behavior CoS and identify relative risk of suicidal behavior in CoS by demographic parameters. Methods: We conducted a cross-sectional study using the nationwide inpatient sample (NIS), and included 39,615 pediatric psychiatric inpatients (age 6 to 12 years). We compared the cohorts with a primary diagnosis of schizophrenia (N = 2,140) to that with other psychiatric conditions i.e. non-CoS cohort (N = 37,475). We further identified the co-diagnosis of suicide and intentional self-inflicted injury (i.e. suicidal behavior). Logistic regression analysis was used to measure the odds ratio (OR) of suicidal behavior in the CoS cohort compared to the non-CoS cohort. Next, the relative risk (RR) of suicidal behavior in CoS was evaluated by race using the logistic regression analysis after comparing it to the non-CoS counterpart. Results: We analyzed data and found 5.4% of the sample had a primary diagnosis of CoS. A higher proportion of CoS inpatients were males (60%) and white (45.6%). However, when compared to non-CoS cohort, black and Hispanic patients were found to have 1.4 times (95% CI 1.24 – 1.57) and 1.3 times (95% CI 1.13 – 1.46) higher odds for CoS respectively. The risk of CoS appears to decrease with increasing median household income, as the children from low-income families below the 25th percentile had 1.4 times higher odds (95% CI 1.22 – 1.66) for CoS. We found no statistically significant difference between suicidal behavior seen in the CoS cohort versus the non-CoS cohort. However, when compared to the non-CoS cohort, there was a statistically significant increased risk for suicidal behavior in blacks (RR 1.33, 95% CI 1.09 – 1.63) and Hispanics (RR 1.31, 95% CI 1.06 – 1.63). Conclusions: Blacks and Hispanics suffering from CoS are at 31-33% increased risk of suicides. Suicide prevention hinges greatly on identifying groups and individuals at risk early on, and this study aims to aid in providing evidence in order to identify and avoid suicides in children with CoS.

No. 31
WITHDRAWN

No. 32
WITHDRAWN

No. 33
Childhood Trauma Sub-Types and Age of Trauma Occurrence in Relation to Acute and Chronic Suicide Risk
Poster Presenter: Alexandra Sarah Dunn, M.D.
Co-Authors: Mary-Ann Abraham, M.D., Lisa J. Cohen, Ph.D.

SUMMARY:
Introduction: It is well known that childhood trauma raises the risk for multiple pathological outcomes, including suicide. However, while multiple studies have linked childhood trauma and suicide risk, we know little about the effect of the specific sub-types of trauma and the age at which the trauma occurred. The current study analyzes the relationship between 5 different types of childhood trauma and 3 different age ranges (childhood, adolescence, and adulthood) and recent and lifetime suicidal risk. Methods: The sample included 224 psychiatric inpatients. The following instruments were used: Brief Betrayal Trauma Survey (BBTS), Childhood Trauma Questionnaire (CTQ) and the Columbia Suicidal Severity Rating Scale (CSSRS). The BBTS is a 12 item scale that assesses trauma, distinguishing whether the trauma was or was not considered a "betrayal" (by someone the victim was close to). For the present study we only analyzed ratings of High betrayal. The scale further distinguishes between traumas occurring in three age categories of before age 12, ages 12-17, and age 18+. The CTQ is a 28-item questionnaire with high reliability and validity that measures five types of trauma (emotional, physical, and sexual abuse, emotional and physical neglect). The CSSRS assesses the nature, history and severity of suicidal ideation and behavior (SIB). A 1-9 rating of severity of SIB was extracted from the CCSRS, ranging from 1 = no ideation to 9 = actual suicide attempt. We used Spearman's rho correlations to analyze the relationships among variables. Results: Correlations were conducted between the 5 CTQ scales, 3 BBTS age ranges and lifetime and past month SIB. High Betrayal BBTS before age 12 and from 12-17yo demonstrated a significant correlation for lifetime SIB, but no correlation with past month SIB. High Betrayal BBTS for ages 18+ did not demonstrate significant correlations either between lifetime or past month SIB. The analysis for the CTQ scale demonstrated significant correlations between all the types of abuse (emotional, physical, sexual neglect, emotional neglect, and physical neglect) and lifetime SIB. No types of abuse were significantly correlated with past month SIB. Discussion: A better understanding of the consequences of childhood trauma will support better and more targeted treatment solutions for our patients. As the results have demonstrated, lifetime risk of suicide is significant in the context of trauma amongst those 17 years and younger. Therefore, interventions at an earlier age for children who have experienced trauma may decrease risk for future suicidality, by developing coping skills and building resilience. Interestingly, high betrayal BBTS scores and CTQ scores did not affect the immediate risk of SIB. This may signify that trauma at an early age affects future risk of suicide, but is a poor predictor of imminent suicidal risk.

No. 34
Effect of Covid Pandemic on Suicide-Related Trauma Burden at a Level 1 Trauma Center in Queens, New York
Poster Presenter: Claire Eden, M.D.
Co-Authors: Roger Zhu, M.D., Shahenda Khedr, B.A., Konstantin Khariton, D.O.

SUMMARY:
Background: In March 2020, the first cases of COVID-19 were reported in New York state and an executive stay-at-home order was enacted. The combination of social isolation along with other inherent stressors associated with a pandemic, such as financial insecurity and decreased access to health professionals, had a profound effect on mental health. Social alienation and financial strain are well described as risks for increased incidence of suicidal ideation and attempts. We hypothesize that the COVID-19 pandemic had an adverse impact on

mental health in our community, leading to an increase in violent suicide attempts. Methods: We queried our institutional trauma registry, we identified adult patients with ICD-10 diagnosis of intentional self-harm (X71-X83) from January 2018 to July 2020. We defined a violent suicide attempt as one requiring evaluation by the trauma team. We reviewed the monthly incidence of violent suicide attempts compared to overall monthly trauma incidences in our institution. To reduce the effect of seasonality on suicidal behavior, we compared patients admitted for suicide attempt in the time period of March 1 to July 31 in 2020 to those of the same period of 2018-2019, specifically studying demographic and injury characteristics. We then compared the outcomes including length of stay, hospital disposition, injury severity and mortality. Results: We observe a significant uptrend in the number of patients requiring trauma intervention after violent suicide attempts from July 2019 to July 2020 ($r = 0.8$, $p < 0.001$) and a significant downtrend in total number of trauma seen at the institution ($r = -0.7$, $p = 0.003$). When adjusting for seasonality, during the months of March through July, we identified 5, 6, and 18 suicide attempts during the observed period of 2018, 2019, and 2020, respectively. The mean age of victims and gender distribution are similar between all groups. Although not statistically significant, patients admitted due to suicide attempt during the pandemic were more likely to have pre-existing psychiatric diagnoses (67% vs 28%, $p = 0.12$), to live alone(33% vs 6%, $p =0.10$), to jump from height (50% vs 11%, $p = 0.09$), to have injury severity score > 9 (44% vs 18%, $p = 0.16$), and to receive surgical intervention (73% vs 46%, $p=0.16$). Three victims during covid period died in the emergency room compared to zero in the comparison group. Conclusion: Our findings suggest a rise in violent suicide attempts at our instuituition during the pandemic and consequently an increased burden to the trauma surgery service. Mandated social isolation resulting in decreased access to familial and medical support networks likely had the most profound impact on individuals with pre-existing mental health disease, causing acute exacerbation of previously controlled symptoms. Early establishment of mental health outreach programs during such circumstances may help to mitigate the reverberating psychosocial consequences of a pandemic.

No. 35
Racial Differences in Suicide Mortality During the Covid-19 Pandemic

Poster Presenter: Michael J. C. Bray, M.Sc.
Lead Author: Paul S. Nestadt, M.D.
Co-Authors: Nicholas O. Daneshvari, Indu Radhakrishnan, Janel Cubbage, M.S.

SUMMARY:
Background: Changing patterns of suicidality during the COVID-19 pandemic are probable but currently are poorly understood.1 The impact of this and the degree to which it differs between racial groups is not yet known. Better characterization of these trends may inform public policy with implications for population health. The present study's objective was to characterize suicide mortality during the COVID-19 pandemic in Maryland, USA, including racial differences. The authors hypothesized increased suicide mortality among Black and White residents. Methods: State-wide, observational data for all non-natural deaths in Maryland, USA was obtained by the Office of the Chief Medical Examiner of Maryland (OCME) between January 1, 2017 through July 7, 2020, including number of deaths by suicide stratified by race/ethnicity for each calendar day in that period. 236 deaths by suicide between January 1st – July 7th, 2020 were compared to 289 recorded in the same period in 2017, 305 in 2018, and 249 in 2019. Race/ethnicity was obtained from comprehensive OCME records. To evaluate effects of the COVID-19 pandemic, three temporal windows were chosen for comparison: January 1st – March 4th (prior to the COVID-19 pandemic), March 5th – May 7th (period of progressive closure of businesses and public spaces, starting from statewide state of emergency declaration), May 8th – July 7th (period of progressive reopening). Results: Death by suicide increased among Black residents, nearly doubling between March 5th – May 7th compared to historical norms (0.344/day in 2020 vs. 0.177/day in 2017-2019, $p<0.01$). During the period of progressive reopening, this returned to levels comparable to historical norms. In contrast, deaths by suicide among White residents decreased in both periods

following the Maryland state of emergency declaration (0.672/day in 2020 vs. 1.224/day in 2017-2019, p<0.001 between March 5th – May 7th and 0.787/day in 2020 vs. 1.126/day in 2017-2019, p=0.03 between May 8th – July 7th). Conclusions: During the COVID-19 pandemic in Maryland, suicide mortality has increased among Black residents and decreased among White residents. These effects were attenuated in Black residents during the period of progressive reopening, though this may be confounded by co-occurrence of the Black Lives Matter global social movement. Black residents have suffered disproportionately due to the COVID-19 pandemic and the present findings also demonstrate disproportionately increased suicide mortality.2 The degree to which greater economic instability, higher rates of COVID-19 related death/disability, and reduced access to mental health services interact to influence the observed increased rates of suicide in this population represents a priority for future research.3 These findings are of relevance to policymakers and public health officials.

No. 36
WITHDRAWN

No. 37
Social Media Content Regarding LGBTQ Mental Health: Where Does #Twitter Stand?
Poster Presenter: Chaden R. Noureddine
Co-Authors: Philip Wong, M.D., Ozlem Gunal, M.D., Petros Levounis, M.D.

SUMMARY:
Introduction: More people and patients are turning to social media for resources and learning. Additionally, physicians and professionals are utilizing social media to educate the public about different medical topics (1). It is unclear if the information distributed via social media, including information regarding LGBTQ+ mental health, is articulated by users with a professional background in medicine and mental health. This is specifically resonant considering the mental health disparities affecting LGBTQ+ identifying individuals(2), as well as the significance of social media usage for the purpose of learning among the LGBTQ+ community(3). During a time of physical isolation due to the COVID pandemic, social media use has been on the rise. This study speculates that, the results of twitter searches vary between the keywords used in the search bar. We speculate that the keywords "LGBTQ Mental Health" will yield to a larger proportion of results of educational nature, and tweeted by professionals, compared to the keywords "Queer Mental Health." **Methods**: A Twitter search was conducted using the phrases "LGBTQ mental health," and "Queer Mental Health," between June 17th and August 17th, 2020; a total of 297 were found. Tweets were classified as educational (containing statistics, new data, research findings, facts), and non-educational (opinions, announcements, self-promotion, and entertainement). Tweets were classified as posted by professional users (physicians, psychiatrists, psychologists, Psychology professors, social workers, psychiatric and psychological practices, and official and accredited psychiatric and psychological associations) and non-professional users. **Results**: For "LGBTQ Mental Health" a total of 256 tweets are identified. Out of 256 identified tweets, 50, 103 (40.2%) tweets contained educational material, while 153 (58.5%) contained non-educational material; 106(41.4%) tweets are posted by professionals, while 150(58.6%) are posted by non-professionals. For "Queer Mental Health" a total of 41 tweets are identified. Out of 41 identified tweets, 30 (73.2%) tweets contained educational material, while 11 (26.8%) contained non-educational material; 4 (9.8%) tweets are posted by professionals, while 37(90.2%) are posted by non-professionals. The proportion of tweets posted by professionals is significantly higher in tweets containing the phrase "LGBTQ Mental Health" compared to "Queer Mental Health." X2(1,N)= 297 = 13.854, p = .000198<.05. The proportion of tweets containing educational material is significantly lower in tweets containing the phrase "LGBTQ Mental Health" compared to "Queer Mental Health." X2(1, N = 84)=14.2004,p =.000164<.05 . **Conclusion**: Since many users turn to social media for learning resources, it would be a helpful opportunity for professionals to use platforms such as Twitter to post reliable and educational content, as a smaller portion of tweets are educational, and posted by mental health professionals.

No. 38

Telehealth and Appointment Compliance Among Different Age Groups at an Outpatient Psychiatric Clinic in West Texas

Poster Presenter: Nancy D. Madia, M.D.
Co-Authors: Preetam Nallu Reddy, M.D., Darshini Vora, M.D., Gaurav Chaudhari, Mahamudun Nabi, M.D.

SUMMARY:

Introduction The COVID-19 Pandemic prompted a national waiver expanding telehealth [1]. However, despite telehealth's proven quality and effectiveness, its impact on patient compliance remains in question. As medical associations call for an extension of the waiver authority [2], it is essential to evaluate telehealth's impact on missed appointments. The following analysis examines the trends of "no shows" among different age groups at an outpatient psychiatric clinic in West Texas after transitioning to 100% telehealth services in March 2020. **Methods** This was a cross-sectional study conducted in an academic outpatient psychiatry clinic. De-identified data was obtained from the EHR. Monthly trends of "no-show" appointments were analyzed from Mar19-Jul20 (telehealth was implemented in Mar20). Patients were categorized into five age groups (1-19, 20-39, 40-59, 60-79, and 80+). "No-show" rates were calculated by age group and overall data set. Monthly trends in "no show" rates were evaluated using the Cochran-Armitage trend test [3]. **Results** A total of 14302 appointments were scheduled from Oct19 to Jul20, 6247 (43.7%) patients were 1-19 years old and 3788 (26.5%) were 20-39 years old. The total number of "no-shows" was 1828 (12.8%) with no difference between age groups (p: 0.10). Overall, there was a significant increase in the "no-show" rate from Oct19 (21.4%) to Apr20 (21.4%) (P< 0.001), followed by a slight downward trend (13.8% in Jul20) but still higher than pre-telehealth. Similar upward trend was observed for the 1-19 (9.8%, 21.7%, 14.5% for Oct19, Apr20, Jul20 respectively, P<0.001), 40-59 (10%, 19.7%, 13.8% for Oct19, Apr20 and Jul20 respectively, P: 0.02) and 60-79 (5.9%, 25.9% and 17.4% for Oct19, Apr20 and Jul20 respectively, P< 0.001) age groups. For the 20-39 age group, there was an upward spike in Apr20, but no trend post-Apr20 (P: 0.94). There was an upward trend for the 80+ age group(10.5% in Oct19, 15.8% in Apr20, and 16.7% in Jun20); however, the sample size (n=119) was too underpowered to detect a significant difference (P: 0.48). There was no monthly/seasonal trend for patients by age group or overall (P: 0.53) in the control group for pre-telehealth trends. **Conclusion** There was a significant upward trend in no show appointments after telehealth was implemented. Since then, the "no show" rate has decreased but remains higher than pre-telehealth months. There was no monthly variation in no show rates prior to telehealth implementation. This implies that the upward trend is a reflection of telehealth utilization. Although telehealth offers a myriad of benefits for psychiatric care, factors that may impact appointment compliance should be further examined in order to guarantee equal access among all patients.

No. 39

Defining Mental Health Issues Across Generations of Hmong Families in Wisconsin

Poster Presenter: Richard Lee

SUMMARY:

The Hmong community is a rapidly growing segment of Wisconsin's population. This growth is concentrated in particular counties including Dane County. Because of the rapid growth and because Hmong people have often experienced severe stress related to war and refugee experiences, it is important that Wisconsin's physicians and other providers understand the mental health challenges faced by this group. As Hmong have now lived in Wisconsin for decades, providers should be aware of differences in mental health issues across generations. In order to provide information about Hmong mental health as a function of generations, our group used a culturally-appropriate strategy to recruit 99 families with one member in each of 3 generations. The mental health of all of the subjects in the older two generations was assessed by cultural brokers using standardized interviews that included the well-validated Harvard Trauma Questionnaire and the BSI. In the youngest generation, only the 21 subjects who were 18 or older were surveyed regarding traumatic experiences and related symptoms. The oldest

generation (average age = 70.7 yrs) reported experiencing significantly more types of trauma (6.98 vs. 4.34, $p<0.001$), significantly more severe PTSD symptoms (2.36 vs. 1.79, $p<0.001$), and had significantly more subjects who met criteria for probable PTSD (46% vs 20%, $p<0.001$) than the middle generation (as measured by the Harvard Trauma Questionnaire). The youngest generation wasn't included in the analysis due to the difference in protocol for them, but those assessed reported far fewer symptoms and the mean severity of any symptom did not reach clinical significance. Thus, Hmong elders have a significantly different mental health profile than does the generation in their middle years. However, the middle-aged Hmong generation still has markedly higher rates of PTSD symptoms and probable PTSD than the general US population.

No. 40

Oral Ketamine-Assisted Psychotherapy for Trauma-Exposed Patients in an Outpatient Setting: A Clinical Chart Review Study

Poster Presenter: Pratheek Mangini
Co-Authors: Yitong Xin, Alan Davis

SUMMARY:

Trauma exposure across the lifespan produces risk for posttraumatic stress disorder (PTSD), depression, anxiety, and sleep disorders, as well as global disability in functioning. This retrospective clinical chart review is the first of its kind to assess the efficacy of oral ketamine body-centered psychotherapy in trauma-exposed patients. De-identified clinical records data on self-reported symptom measures were retrospectively analyzed for patients ($M_{age}=46.65$, $SD=13.09$) entering ketamine-assisted psychotherapy treatment in an outpatient clinic between 2018 and 2020. Patients who completed six sessions of therapy reported significant improvements in total PTSD symptoms ($p=.03$; $d=-.52$), depression ($p=.03$; $d=-.53$), and mean level of global disability ($p=.04$; $d=-.52$). Notably, there were no improvements in anxiety symptoms and insomnia significantly worsened ($p=.01$, $d=1.02$). Oral ketamine-assisted psychotherapy results in heterogenous clinical utility among patients with trauma-exposure in the outpatient setting.

No. 41

AVATAR Therapy to Improve Auditory Hallucinations in Patients With Psychotic Disorders: A Scoping Review

Poster Presenter: Isabelle Cote, M.D.
Co-Author: Jonathan Lafontaine, M.D., Ph.D.

SUMMARY:

Background: AVATAR therapy (AT) was developed by Julian Leff in 2008. It is a computer-assisted therapeutic approach which aims to reduce the frequency and severity of auditory hallucinations, and, as a result, the patient's distress associated with the voices. The approach is based on computer technology that enables the patient to create a digital representation (an avatar) of his presumed persecutor. Then, the therapist, through the avatar's voice, promotes and controls a dialogue between the patient and the avatar in order to help the patient to progressively gain power and control over his persecutor, and therefore over his symptoms. AT is an innovative treatment option with limited amount of research to date. The objective of this poster is to present a scoping review highlighting the current level of knowledge on the use of AT to improve auditory hallucinations in patients with psychotic disorders. More specifically, identify which populations have been studied, what results have been obtained, as well as the strengths, weaknesses, and gaps in the current literature. Finally, make recommendations for future research and discuss the next steps towards the implementation of AT in clinical practice. **Method**: A preliminary limited literature search focusing on AT and auditory hallucinations was conducted in MEDLINE electronic database via Ovid. It was followed by an identification of the keywords contained in the titles and abstracts of the relevant articles as well as the index terms used to describe them. A formal search using the identified keywords and index terms was then performed in selected electronic databases (MEDLINE, PsycINFO, EMBASE, and CINAHL), updated in March 2021. Titles and abstracts were screened for relevance by two independent investigators and full texts of potentially eligible

studies were then retrieved and assessed. **Results**: Using the described method, 27 studies that were relevant to AT in treating auditory hallucinations in patients with psychotic disorders were included for analysis. A few studies, including the first adequately powered RCT published by Craig et al. in the Lancet in 2018, have shown that this novel intervention present favorable results. These results have later been replicated in smaller preliminary studies by an independent team with RCT, Dellazizzo et al., in 2021. **Conclusion**: Although there is only a limited amount of literature available on AT, the current evidence is very promising. In the future, larger, longer, well- designed and well reported RCTs in both inpatients and outpatients' settings as well as qualitative studies to further explore the process involving the dialogue and the key therapeutic elements of AT, will be needed to better establish the effectiveness of AVATAR therapy, which could become an interesting option as a psychological treatment for auditory hallucinations.

No. 42

Benzodiazepine Prescriptions Are Associated With Increased Drug-Related Poisonings in Opioid Maintenance Therapy Patients

Poster Presenter: Kevin Y. Xu, M.D., M.P.H.
Co-Authors: Jacob Borodovsky, Ph.D., Carrie Mintz, M.D., Laura Bierut, M.D., Richard Grucza, Ph.D.

SUMMARY:

IMPORTANCE: Persons with opioid use disorder who take benzodiazepines are at high risk for overdose and adverse drug reactions. Limited data exist on the relationship between benzodiazepine use and drug-related poisonings in patients receiving opioid maintenance treatment. QUESTION: To determine if non-fatal drug-related poisonings are associated with benzodiazepine use among opioid use disorder patients receiving buprenorphine. DESIGN: Case-crossover study SETTING/PARTICIPANTS: This study focused on prescription claims in persons (ages 12-64) with opioid use disorder who were prescribed buprenorphine in the Truven MarketScan® database from January 1, 2006 to December 31, 2016. This encompassed 14,213,075 person-days of observation time. Treatment prescriptions (measured as person-day periods) constituted the unit of observation. EXPOSURES: Benzodiazepine prescriptions were standardized as daily diazepam-equivalent milligram doses and separated by pharmacologic properties (short-acting, long-acting, Z drug). MAIN OUTCOMES AND MEASURES: The main outcome was non-fatal drug-related poisonings, which includes overdose events. We used conditional logistic regression to evaluate variation in benzodiazepine and buprenorphine use between poisoning and non-poisoning days. RESULTS: A total of 23,036 participants with opioid use disorder (mean age 30 years, 51% male, mean observation time 600 days) were prescribed buprenorphine. Buprenorphine treatment days were associated with a nearly 40% reduction in risk of a poisoning event (OR=0.63, [95% CI: 0.60-0.66]) relative to non-treatment days, whereas benzodiazepine treatment days were associated with an 88% increase in such events (1.78-1.98). In stratified analyses by dose, we observed a 78% (1.67-1.88) and 122% (2.03-2.43) increase in risk of poisonings associated with low-dose and high-dose benzodiazepine treatment days respectively. High-dose, but not low-dose, benzodiazepine treatment was associated with increased poisonings in combination with buprenorphine co-treatment (OR=1.64 [1.39-1.93]), but this was lower than the risk associated with benzodiazepine treatment in the absence of buprenorphine (OR=1.69 [1.60-1.79] for low-dose, OR=2.23 [2.04-2.45] for high-dose). CONCLUSIONS and RELEVANCE: Increased risk of non-fatal drug-related poisoning are associated with benzodiazepine treatment in patients with opioid use disorder, but these risks are partially mitigated by buprenorphine treatment. Dose reduction of benzodiazepines—while maintaining buprenorphine treatment-- may have the advantage of lowering drug-related poisonings.

No. 43

Exercise Prescription Practices to Improve Mental Health

Poster Presenter: Ivan Escobar Roldan, M.D.
Co-Author: James Blumenthal, Ph.D.

SUMMARY:

Purpose : There is good evidence that higher levels of physical activity (PA) are associated with better

mental health. Moreover, interventional studies have shown that PA improves a number of psychiatric conditions.. Despite this evidence, there is relatively little information about how this information is being translated into clinical practice. We aimed to characterize the exercise prescribing practices by health care providers from different subspecialties and evaluate factors that may influence their prescribing practice. Methods: A cross-sectional survey was conducted among faculty and staff from the Departments of Psychiatry, Medicine and Family Medicine from a large academic tertiary care medical center in the Southeastern US. Participants were invited via email or departmental newsletters. Descriptive statistics were used to characterize the sample and ordered logistic regression was used to analyze practices about exercise as a therapy for psychiatric illness. Results: A total of 185 respondents completed the survey. The majority of providers reported that they recommend PA/exercise as part of the treatment for patients with psychiatric conditions; however, few providers offer specific exercise instructions and follow national guidelines. Depression (83.5%) and anxiety (68.7%) were the most common indications for exercise prescription and insufficient knowledge or training was the most common barrier. We also found significant differences in prescription practices depending on the providers' formal clinical degree and their reported personal exercise habits. Conclusions: Exercise is recognized by most clinicians as a therapeutic option for psychiatric conditions. Yet, only a small proportion provide recommendations consistent with national guidelines or empirical research. Insufficient knowledge and training were considered the most common barriers to exercise prescription and the differences in prescription practices among clinicians from different specialties suggest a need for inclusion of exercise prescription education in school curriculums.

No. 44
WITHDRAWN

No. 45
WITHDRAWN

No. 46
Improving Completion Rates of Maternal Depression Screening in an Academic Pediatric Practice
Poster Presenter: Kelly Habib

SUMMARY:
Background: Postpartum depression not only affects the mother, but has also been demonstrated to negatively impact the health and development of the child. The American Academy of Pediatrics recommends Pediatricians screen all postpartum women for maternal depression as it is prevalent and affects between 10-40% of postpartum mothers. The purpose of this study is to determine if biases are present among Pediatricians screening for maternal depression at well-child check-ups. The results of this study will shed light on provider biases in regards to screening and will serve as a guide to target and eradicate these biases. Methods: This was a retrospective study within the Division of Primary, Complex Care, and Adolescent Medicine at Phoenix Children's Hospital from July 1st, 2019 to March 31st, 2020. Maternal depression screening was conducted utilizing a validated 2-question screening tool, the Patient Health Questionnaire (PHQ2). This tool was administered to mothers at their child's well-child check-up (ages 1 month, 2 months, 4 months, and 6 months). Analysis was based on completion of the screening at the age-specific well-child visits, race/ethnicity, maternal language, age of infant, sex of infant, and socioeconomic status (public versus private insurance). Results: A total of 401 patient encounters were collected and patient demographic characteristics were reported with frequencies and percentages. Individual comparisons between the 4 time points were assessed using the McNemar's test followed by multiple comparisons adjustment. Results showed statistically significant increase in depression screening between 1 month (N=156, 38.9%) and 2 months (N=187, 46.6%) for all patients (p Conclusion: This study suggests that there are biases among Pediatricians screening for postpartum depression that are influenced by gender of the infant, race/ethnicity, language spoken by the mother, and socioeconomic status. We are concerned these biases may be leading to healthcare disparities and plan future studies with larger sample sizes and analyzing screening practices amongst

Pediatricians at different training levels (intern, residents, attending).

No. 47

Over 50-Years of Publications on Catatonia (1965–2020): A Bibliometric Analysis

Poster Presenter: Jeremy Weleff, D.O.
Co-Author: Awais Aftab

SUMMARY:

Introduction: Kahlbaum's classic 19th-century description of catatonia had a critical impact on psychiatry's view of this unique syndrome. Since then, many advances to our understanding of the identification, causes, and treatment of this condition have been made. Bibliometric analysis can be useful for understanding the publication patterns, most cited ("classic" or "core") texts, most productive authors, most productive countries, and primary journals on a topic. To date, there has not been a comprehensive bibliometric analysis on catatonia. The purpose of this study was to conduct that analysis to better understand the published literature. Methods: Using the search term Title(catatoni*) in Web of Science (WoS) Core Collection for all available years (1965-2020), all available publications were identified, and metadata extracted. Title was chosen to ascertain that all articles pertained directly to catatonia. All published articles, proceeding papers, and reviews were included. Analysis was completed using available tools within WoS; and then by using R/RStudio, and the R-package bibliometrix and biblioshiny app to evaluate authors, publications, journals, countries of publication, and cited sources. Results: 1,015 articles were identified representing 2,861 authors, 346 journals, and 15,639 references. Average publications per year over the last twenty years (31.3) more than doubled in comparison to the twenty years prior (12.8). The most cited article (444 times) was Bush et al.'s 1996 paper about the development and use of the Bush-Francis Catatonia Rating Scale (BFCRS). The top three most common journals were Psychosomatics, Journal of ECT, and Schizophrenia Research which represented 12.6% of all publications. The top three countries by production were USA (37.0% of records), Germany (8.4% of records), and France (6.1% of records). The most used reference of the 19th-century literature was Kahlbaum's classic work on catatonia and of the 20th-century it was Bush et al.'s 1996 paper. Discussion: The number of publications on catatonia per year continues to grow likely indicating increased interest in this topic. Many journals publish on catatonia but Psychosomatics continues to be a leading publication on this topic. Interestingly, while the USA leads in publications many European countries continue to produce many articles which may reflect the historical discussion and importance of this syndrome in those countries. Conclusion: The literature on catatonia is growing and is produced by many authors across multiple countries. This analysis allows us to point to the "core texts" of the catatonia literature, and further analysis of these texts can help to guide future research and our current understanding of catatonia. While articles can be cited for many reasons, the publication of the BFRCS appears to be one of the "core texts" when it comes to our 20th-century understanding of catatonia as the most cited article.

No. 48

Mechanisms of Alcohol Use Disorder-Induced Missplicing in the Brain

Poster Presenter: Ilya Blokhin
Co-Authors: R. Dayne Mayfield, Derek Van Booven

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 (in case of alternative splicing) diversification of transcriptome. We tested the hypothesis if AUD impairs splicing on a genome-wide scale across various brain regions. Brain samples were obtained from patients with AUD and matched control subjects (n = 30 in each group). Superior frontal cortex (SFC), nucleus accumbens (NA), basolateral amygdala (BLA), and central nucleus of amygdala (CNA) were studied, as these regions have been shown to be involved in the progression of

AUD. RNA sequencing was performed using the TruSeq RNA Library Prep Kit v.2 and sequenced on the Illumina HiSeq 2,000. To evaluate splicing, bam files from STAR alignments were indexed with samtools for use by rMATS software. We found that AUD was associated with only limited changes in the transcriptome: expression of 23 genes was altered in SFC, 14 – in NA, 102 – in BLA, and 57 – in CNA. In contrast, missplicing in AUD occurred on a much broader scale: 1,421 mis-splicing events were detected in SFC, 394 – in NA, 1,317 – in BLA, and 469 – in CNA. To determine the mechanism of missplicing, we analyzed key elements of spliceosome (a nuclear machinery responsible for splicing): small nuclear RNAs (snRNAs) and splicing factors. While snRNAs were not affected by alcohol, expression of splicing factor heat shock protein family A (Hsp70) member 6 (HSPA6) was drastically increased in SFC, BLA, and CNA, suggesting a mechanism of AUD-induced missplicing in the brain. In summary, alcohol is associated with genome-wide changes in splicing across multiple human brain regions, likely due to upregulation of splicing factor HSPA6.

No. 49

Substance Use Characteristics Among Individuals With Binge Eating Disorder

Poster Presenter: Robert Rymowicz, D.O.
Co-Author: John Tsuang

SUMMARY:

Background: Growing interest in the concept of food addiction has led to an increasing body of research largely coalescing around the concept of a substance-based disorder as diagnosable by the Yale Food Addiction Scale version 2.0 (YFAS 2.0). This scale applies DSM-5 diagnostic criteria for substance use disorders to excessive food intake, permitting researchers to explore disordered eating as a substance use or addictive disorder. Although the DSM-5 does not recognize a diagnosis of food addiction, previous studies have estimated the prevalence of food addiction among patients with Binge Eating Disorder (BED) to be between 79-92%, and second only to Bulimia Nervosa at 95-96%. A good deal of research has elaborated the relationship between Bulimia Nervosa and Substance Use Disorders (SUDs), but less is known about the characteristics of substance use among individuals with BED. The treatment of comorbid SUDs in individuals with BED will be better informed by a systematic review of the available literature. Aims: The aims of this systematic review are to: estimate the prevalence of various SUDs among patients with BED; elaborate upon their chronicity and course to the extent permitted by the available data; identify attempts by patients to control or modulate BED through SUDs; and, highlight the need for further research into risk factors, interventions, and evidence-based treatments for BED with comorbid SUDs. Methods: Literature searches for peer-reviewed journal articles listed in PubMed, PsychINFO, and EMBASE, and published between 2013-2020 will be conducted in January 2021 for papers referencing BED and any of the diagnoses listed in the DSM-5 chapter for Substance Use and Related Disorders, including Gambling Disorder. Data will then be tabulated to determine the estimated prevalence of various comorbid SUDs among patients with BED. An attempt will be made to note subthreshold substance use in the setting of BED, even when it fails to rise to the level of a diagnosable disorder. Discussion: A number of explanations may be posited to account for the relationship between BED and SUDs, including that the two may share a common etiology, whether it is genetic, environmental, or multifactorial. Substance use may trigger hyperphagia, as in cannabis intoxication or stimulant withdrawal, and individuals have been reported to engage in stimulant use to suppress appetite, or sedative and hypnotic use to promote sleep in the setting of hunger or an impulse to engage in binge eating. A growing body of research seems to suggest that both BED and various SUDs may be amenable to similar therapeutic interventions, and a better understanding of the rates of comorbidity may help to better elucidate the potential risks in using controlled substances for the management of BED.

No. 50

The Subjective Experience of Salvia Use as Reported in an Online Internet Forum

Poster Presenter: Elizabeth M. Fam, M.D.
Co-Authors: Mary-Anne Hennen, M.D., Douglas Opler, M.D.

SUMMARY:
Background: Salvia divinorum (salvia) is a short-acting hallucinogen originating in Mexico traditionally used by the Mazatec Indians in religious rituals. Salvia, also known as “sally” or “magic mint” is gaining popularity as a recreational drug. It is legal in most states and can be purchased on the internet. While salvia is widely-used, many clinicians are unfamiliar with it. Its short-term effects are broad and ill-defined. In this study, we examine first-hand user experiences as recounted on an online forum to better understand the effects of this drug. Methods: A search result on the public online forum, Reddit, was performed using keywords “trip report+salvia”. Of the 188 total posts, only 104 were used for analysis. The remaining 84 posts were excluded because they either were not trip reports, described simultaneous use of other drugs, or were non-written media forms such as photos or videos. Written posts that qualified for analysis were coded. Results: Salvia can be used via chewing, but the vast majority choose to smoke it. Users described a quick and intense high, hallucinations with distorted visuals, and feelings of derealization and depersonalization. Many also experienced confusion, terror, and the feeling that they were dying. Some physical effects reported were sweating, drooling, difficulty speaking, and incoordination. People often described a body “heaviness” and loss of control over their bodies, sometimes leading to the salvia users injuring themselves. Several posts promote having a trip sitter to make sure that the salvia user does not inadvertently harm themselves. Out of the 104 posts that were used for analysis, 47 were considered to be overall positive reports (45.2%), 34 to be negative (32.7%), and 23 to be equivocal (22.1%). It is important to note that many of the positive reports were related to their experience of “coming down” from salvia. Their experience while intoxicated was frightening and depersonalizing, and there was an overwhelming sense of relief in the waning of these sensations. However, some users describe having lingering feelings of terror or paranoia, leading to difficulty sleeping and inability to engage in their normal daily activities. Some users were concerned with possible long-term effects of salvia, such as PTSD and precipitation of chronic psychosis. Conclusion: User experiences on salvia were mixed and were often described as positive despite unpleasant symptoms. Many said that despite feeling terrified or uncomfortable, they would use salvia again. Motivations for this varied among users: pursuing unique experiences known as “breakthroughs,” or “enlightenment.” It is important for clinicians to be aware of salvia in order to understand patient motivations and experiences, properly screen patients for use, and advise them regarding their safety. Further study is required to better understand salvia and allow for physician preparedness.

No. 51
WITHDRAWN

No. 52
A 55 Year Old Male With Prior Psychiatric History of Depression, Anxiety and ADHD, Stable and in Treatment Was Admitted to the Emergency Department

Poster Presenter: Rene Compean, M.D.
Co-Author: Hussain Syed

SUMMARY:
55 year old male patient was brought by the police into the Psychiatric Emergency Room amidst the COVID-19 outbreak. Prior to this episode, the patient was in his usual state of health until he was diagnosed with COVID-19 about 5 weeks ago. Within 2 weeks of his COVID-19 diagnosis, the patient began to demonstrate manic symptoms exhibited by irritability, elevated mood, hyper talkativeness, distractibility, and increased goal-directed activity. The patient began sleeping only one hour nightly, obsessively reading articles and watching the news regarding COVID-19. Coincidently, during this time, the patient was also notified that he would not be getting sick pay from CVS, where he worked as an APN until about March of 2020. As per collateral the patient was enraged with this news and proceeded to send threatening emails to the governor, news stations, police stations, trying to contact a lawyer and stating “CVS will change their name because of me”. On the day of his first ER evaluation, Police was called by the patient''s psychiatrist after he was notified that the patient had barricaded himself in

his basement and was exhibiting restless agitation. During our assessment in the ER upon his first visit, his mental state examination indicated pressured speech, elevated mood, and grandiose with persecutory elements. He was agitated enough in the ER warranting intramuscular medications. the patient was hospitalized in an inpatient unit and started on Depakote 500mg PO BID, Klonopin 1 mg PO QHS, and Topamax 50mg PO daily for migraine prophylaxis. Pt was later discharged, where he remained manic, psychotic, with ongoing persecutory delusions and worsening irritability, aggression, and bizarre behavior. He was readmitted to the inpatient Psychiatric unit when the wife called the police after the patient physically threatened her and broke several windows in the house "without provocation". He endorsed persecutory delusion that his neighbor, wife, and family were out to get him. Upon stabilization, the patient left the hospital again, only to be brought back upon being found wandering on the streets with a cell phone bill with the words scrawled "payback''s a bitch MF" on it as well as a laminated handwritten sheet detailing a conversation with the devil. This case report illustrates the potential of COVID-19 as a causal factor in reactive psychoses in a patient with no prior bipolar or psychotic history. It indicates the need to consider new onset psychiatric disorder presentation in a patient infected with the virus. The ideal treatment for the neurotropic effects of COVID-19 and the long-term prognosis of such cases needs to be further examined. More research must be done to determine to what extent COVID infection causes behavioral manifestations.

No. 53
WITHDRAWN

No. 54
Neuroimaging of Depression With Diffuse Optical Tomography During Repetitive Transcranial Magnetic Stimulation

Poster Presenter: Shixie Jiang, M.D.
Lead Author: Huabei Jiang
Co-Authors: Jingyu Huang, Glenn W. Currier, M.D., F. Kozel

SUMMARY:
Background: Repetitive transcranial magnetic stimulation (rTMS) is an effective and safe treatment for depression; however, its potential has been reduced due to non-optimized targeting, unclear ideal stimulation parameters, and lack of information regarding how the brain is physiologically responding during and after stimulation. While neuroimaging is ideal for obtaining such critical information, previous modalities have been limited due to poor spatial resolution, along with significant noise interference from the electromagnetic spectrum. In this study, we used a novel diffuse optical tomography (DOT) device in order advance our understanding of the neurophysiological effects of rTMS in depression. Methods: Healthy and depressed subjects aged 18-70 were recruited. Treatment parameters were standardized with targeting the left dorsolateral prefrontal cortex with a magnetic field intensity of 100% of motor threshold, pulse frequency of 10 per second, a 4 second stimulation time and a 26 second rest time. DOT imaging was simultaneously acquired from the contralateral dorsolateral prefrontal cortex. Results: Six healthy (5 men and 1 woman) and seven depressed subjects (2 men and 5 women) were included for final analysis. Hemoglobin changes and volumetric three-dimensional activation patterns were successfully captured. Depressed subjects were observed to have a delayed and less robust response to rTMS with a decreased volume of activation compared to healthy subjects. Conclusions: In this first-in-human study, we demonstrated the ability of DOT to safely and reliably capture and compare cortical response patterns to rTMS in depressed and healthy subjects. We introduced this emerging optical functional imaging modality of DOT as a novel approach to investigating targeting, new treatment parameters, and physiological effects of rTMS in depression.

No. 55
Practical Applications of Neuroimaging in Psychiatry

Poster Presenter: Bruna Campos Souza
Co-Authors: Rafael Tonelli Bernardes, Matheus Flores, Larissa Yano Souza Martins, Rafael Felipe Silva Rodrigues, Tatiana Mourao-Lourenco, M.D.

SUMMARY:
Background: Imaging research can complement or improve the accuracy in the diagnosis of psychiatric diseases. It is also an important resource for the differential diagnosis of dementias and for the management of neurological diseases that are commonly presented with psychiatric symptoms. This study aims to present neuroimaging applications that can be useful in Psychiatry. Methods: Narrative review of studies from 2010 to 2020 in the PubMed, Cochrane Library and Scielo databases based on the "use of neuroimaging in psychiatric diseases" theme. Results: This review showed the uses of neuroimaging on Psychotic disorders, Alzheimer's dementia, schizophrenia and Borderline Personality Disorder. In psychotic disorders. Injuries to the frontal, temporal, thalamus or hypothalamus lobes may present as psychosis. In Dementia due to Alzheimer''s Disease, in case of inaccurate diagnosis, PET-Scan has an important role. With diagnostic accuracy equivalent to four years of clinical segment, this test detects signs of hypometabolism and atrophy of the gray matter, enabling rapid confirmation of the disease. In schizophrenia, functional magnetic resonance imaging will reveal abnormal activation in the prefrontal cortex and cingulate and in the medial temporal lobe, with abnormal interaction between these structures. Regarding the depression or dementia dilemma, it was found, in Functional Magnetic Resonance Imaging, that the activation of the hippocampus during a memory task appears reduced in patients with dementia, when compared to controls and depressed patients. Finally, a 2019 study demonstrated a change in the olfactory groove in adolescents with the first manifestation of Borderline Personality Disorder. Conclusion: For differential diagnosis in psychiatry, there are important uses of neuroimaging. It can also be crucial for the detection of a concomitant neurological condition, in which a correct in time diagnosis and treatment may be predictors of better prognosis and survival rates.

No. 56
Childhood Sexual Abuse and Neuroimaging Brain Abnormalities: A Recent Review
Poster Presenter: Jasmine Lin, M.S.
Co-Authors: Rebecca L. Joyce, B.S., Vanya Jain, B.A., Hojun Yoo, M.A.

SUMMARY:
Background: Childhood maltreatment is an indicator of poor mental health in adulthood. Neuroimaging studies in traumatized pediatric populations have yielded a wide variety of inconsistent neurological abnormalities, possibly due to the inclusion of multiple types of trauma. This review sought to isolate recent findings of structural and functional brain abnormalities in adolescents with childhood sexual abuse (CSA). Methods: A literature search was conducted in the PubMed database using the search terms ("child sexual abuse" OR "childhood sexual abuse" OR "pediatric sexual abuse" OR "child sexual trauma" OR "childhood sexual trauma" OR "pediatric childhood trauma") AND (brain imaging). In PubMed, terms between quotation marks yielded results for the literal term, and terms standing alone yielded wider results (e.g., brain imaging yielded results for both "neuroimaging," and the combined terms "brain" AND "imaging," including a broad range of neuroimaging modalities such as functional MRI, diffusion tensor imaging, etc.). A limit of 5 years was placed on the query. The last search was conducted on August 20, 2020. This yielded 109 PubMed papers. A manual search was performed in the result query to filter for relevant papers specifically pertaining to CSA. Results: The systematic literature search yielded 14 publications. 5 were cross-sectional studies, 4 were longitudinal studies, 2 were neurocognitive studies, 1 was a multi-cohort analysis, and 1 was a preliminary study of a neurotrophic factor variant. Excluding the multi-cohort analysis, studies included a range of 13-27 participants and determined a history of CSA by retrospective surveys. CSA-associated abnormalities in limbic regions included: decreased amygdala-prefrontal cortex (PFC) connectivity, decreased hippocampal-PFC connectivity, smaller right-sided amygdala volume, and amygdala hyperreactivity. Abnormalities in cortical structures included: lower anterior cingulate cortex (ACC) activity and inconsistent reports of ACC and PFC volume abnormalities. 3 studies demonstrated CSA-associated white matter abnormalities in the corpus callosum with lower fractional asinotropy in the genus, midbody, splenium, and tapetum.

Conclusions: Long-term deficits of different trauma subtypes on the human brain should be taken into account when differing between childhood traumas. This targeted analysis of recent findings of CSA-associated neuroimaging abnormalities revealed variable deficits in connectivity and threat-processing in the amygdala and hippocampus, and inconclusive findings on the volumes of the ACC and PFC. Meanwhile, results specific to the corpus callosum were consistent in reporting deficits of white matter integrity. All studies utilized retrospective assessments when determining CSA severity. Thus it would be valuable for future neuroimaging studies to consider early-recruitment of participants before the onset of CSA for improved longitudinal assessment of brain integrity.

No. 57

Inpatient Treatment Challenges for Disinhibited Social Engagement Disorder With Intellectual Disability and History of Trauma: A Literature Review

Poster Presenter: Alessandra Santamaria, M.D.
Co-Authors: Andrew Bradshaw, M.D., Patrick Oczkos, M.D., Michelle Thorpe, M.D.

SUMMARY:

Disinhibited social engagement disorder (DSED) is a complex, debilitating psychiatric and arguably multisystem phenomenon that irreversibly alters the baseline mental status of the individual it afflicts. The disorder typically presents comorbidly with varying levels of intellectual disability (ID), and global developmental delay (GDD). This occurs within the context of parental neglect and abuse, resulting in chronic emotional trauma. We present the case of a 14-year-old female who presented to the child and adolescent facility with DSED-ID features and review the available literature on this illusive disorder. We then attempt to illustrate certain behavioral and algorithmic inpatient treatment challenges facing the DSED adolescent. We highlight these different challenges, positing that doing so may stimulate novel DSED treatment hypotheses amongst clinicians, as the disorder finds itself in a diagnostic transitional period.

No. 58

Manifestations of Child Sexual Abuse in Adolescence

Poster Presenter: Abdulrahman Fahad Al-Thukair, M.D.
Co-Authors: Philip Harvey, David Martinez Garza, Feras Abdulaziz Alkharboush, M.B.B.S.

SUMMARY:

Background: Child sexual abuse affects around one in every ten children in the United States, causing limitations in their quality of life and represents a widespread problem worldwide. The psychological impact of this early life adversity extends to cognitive and personality development. There have been many studies of the effects of childhood sexual on adults, but much less research has measured the proximal consequences of sexual abuse in adolescents. This study investigated associations between the Minnesota Multiphasic Personality Inventory-Adolescent (MMPI-A) score elevations, IQ scores, and academic achievements in sexual abuse victims. Methods: In total, 736 adolescent psychiatric inpatients (Age Range 13-17) were evaluated at Four Winds Hospital in Westchester County, New York. Participants were assessed with the Childhood Trauma Questionnaire (CTQ) and the Minnesota Multiphasic Personality Inventory (MMPI-A). as well as the age-appropriate Weschler Intelligence Scales. The sexual abuse scores from the CTA were related to the outcomes from the victims'' comprehensive and personality assessment battery. Results: 26% of the cases met the criteria for sexual abuse based on self-report. Females were more likely to be sexually abused ($) compared to males (%8) (p Discussion: Identifying the early effects of sexual abuse is complex. Early-onset cognitive and intellectual impairments were found in this sample of adolescent inpatients with a history of sexual abuse. The outcomes are similar to previous findings in the adult population except that there was insufficient evidence to confirm a relationship between a history of childhood sexual abuse and personality changes (i.e., borderline personality disorder or depression). These problems might then be expected to have a later onset than early adolescence. Cognitive impairments observed in adolescents who experienced childhood sexual

abuse could be limited by early recognition and intervention.

No. 59

Self-Concept and Its Relation to Clinician-, Parent-, and Self-Rated Psychopathology in an Outpatient Sample of Adolescents and Young Adults

Poster Presenter: Cassandra Mary Nicotra, D.O.
Co-Authors: Megan E. Acito, D.O., Nida Khan, D.O., Greg Haggerty, Ph.D., Meena Azizi, M.D.

SUMMARY:
Background: Self-concept, an individual's beliefs about his or her personal attributes, is a major developmental milestone in adolescents that impacts multiple facets of life. Low self-concept has been associated with non-suicidal self-injury and poor performance. It has a bidirectional relationship with victimization; exposure to victimization at a young age may damage one's self-concept, yet those with an established healthier self-concept may perceive less distress from similar experiences. Victimization has also been linked to several psychopathologies, including personality, influencing interpersonal functioning of adolescents. The aim of this study is to look at correlations of self-concept with psychopathologies in adolescents and young adults to reveal potential target areas for treatment. Methods: 121 adolescents and young adults from a safety net teaching medical center's outpatient psychiatric clinic and their parents were consented. The sample was 55% female, with average age 18.77 (SD=3.2). Their ethnicity was 35.3% Caucasian, 31.9% African American, 23.3% Hispanic, 2.6% Asian; 6.9% identified as other. The primary diagnosis was mood disorder (55%). Patients completed the Beck Youth Inventory (BYI; self-report measure of social and emotional impairment). Parents completed the Child Behavior Checklist (CBCL; parent-rated measure of psychological impairment) and Youth Outcome Questionnaire-Parent Version (YOQ-P; parent-rated measure of functioning). The intake clinician completed prototype ratings of personality using Shedler-Westen Assessment Procedure-personality prototypes rating and prototype ratings of 5 common diagnoses seen with adolescents using Psychopathology prototype rating. The BYI's Self-Concept Inventory (BYI-SCI) was used as the measure of patients' self-concept. High scores on the BYI-SCI are indicative of patient's reporting healthier self-concept. Results: Issues with patients' self-concept were overall related to parent and clinician-reported psychopathology and interpersonal functioning. The BYI-SCI was negatively correlated to the CBCL's internalizing ($r = -.28$, $p = .03$) and total problems ($r = -.33$, $p < .01$). The BYI-SCI was negatively related to YOQ-P social isolation ($r = -.33$, $p = .02$), hyperactivity/distractibility ($r = -.27$, $p = .05$), and depression/anxiety ($r = -.27$, $p = .05$). The BYI-SCI was negatively correlated to prototype ratings of Major depressive disorder ($r = -.41$, $p < .01$) and personality prototypes of Emotionally-dysregulated ($r = -.33$, $p = .03$) and positively correlated with prototype ratings of Psychological Health Index ($r = .42$, $p < .01$). Conclusion: These results show that self-concept is related broadly to psychological problems, impairments in interpersonal functioning, and poor quality of psychological health and well-being, as determined by self, parent, and clinician ratings. Enhancing patients' self-concept should be a key focus of treatment of psychopathologies in addition to purely symptom reduction.

No. 60

The Abuse of the Vulnerable: Investigating the Relationship Between IQ and Proximal Childhood Physical Abuse

Poster Presenter: Feras Abdulaziz Alkharboush, M.B.B.S.
Co-Authors: Valentina Metsavaht Cara, M.D., Safa Angelo Sadeghpour, Abdulrahman Fahad Al-Thukair, M.D.

SUMMARY:
Background: Physical abuse affects children deeply as they are quite vulnerable. Among the more vulnerable children are those with intellectual dysfunction and disability. The psychological impact of this early life adversity may extend to cognitive and personality development. Many studies researched adult and childhood abuse effects on adults, but only a little research has measured the connections of proximal physical abuse in adolescents, in those with lower IQ. This study investigates different intellectual dysfunction domains in physical abuse victims, as compared to

those who did not have lifetime exposure to such events. Methods: In our study, 736 adolescent psychiatric inpatients (with age ranging 13-17) were evaluated at Four Winds Hospital in Westchester County, New York. Participants were assessed with the Childhood Trauma Questionnaire (CTQ) as well as IQ tests and the Wide Range Achievement Test (WRAT). IQ and WRAT scores were matched with outcomes of the CTQ subscales, including the physical abuse subscale. Results: Of the patients included in the sample, 28% of the cases met the criteria for physical abuse based on self-report. 14% reported both physical and sexual abuse. We found that patients meeting criteria for physical abuse had lower IQ scores (Full scale, verbal, and Performance) than the rest of the sample, as well as lower performing in reading as measured by the WRAT. Of interest, 16% of the patients in the sample had IQ scores < 70 but carried no prior diagnosis of intellectual disability, though were enrolled in the regular public-school system. Discussion: Childhood trauma and intellectual dysfunction are intertwined. Studies performed on adults suggested an association between IQ and history of trauma. In the few studies performed on the childhood population, associations had been indeed described between IQ and symptoms connected with trauma. In our sample, early-onset cognitive and intellectual impairments were found in this sample of adolescent inpatients with a proximal history of physical abuse. We show that lower intellectual functioning may be a factor that puts a child at risk for physical abuse, with many patients undiagnosed with intellectual disability despite enrollment in the public-school system. This suggests early detection and recognition of cognitive impairments, and then offering services that may anticipate their abuse events based on appreciating their vulnerability to abuse, as a viable goal.

No. 61

The Association Between Problems With Self-Concept and Self-Reported Psychopathology and Interpersonal Functioning in a Sample of Adolescents

Poster Presenter: Megan E. Acito, D.O.
Co-Authors: Cassandra Mary Nicotra, D.O., Anders Krug Waalen, M.D., Meena Azizi, M.D., Greg Haggerty, Ph.D.

SUMMARY:

Background: Identity formation is a major developmental process in adolescence, early adulthood, and throughout life. Self-concept is an individual’s beliefs about one’s own personal attributes and qualities, and the term is considered interchangeable with self-esteem. Studies show that self-concept has important implications for psychological wellbeing and interpersonal functioning. Self-concept has been viewed as an adaptive process as it involves learning from experiences to develop self-insight, whether negatively or positively. In this study we examine how self-concept relates to psychopathology and interpersonal functioning though patient self-report measures to identify potential areas for treatment. Methods: 121 adolescents and young adults from a safety net teaching medical center’s outpatient psychiatry clinic and their parents were consented. The sample was 55% female with average age 18.77 (SD=3.2). Their ethnicity was 35.5% Caucasian, 31.9% African American, 23.3% Hispanic, 2.5% Asian; 6.9% identified as other. The primary diagnosis was mood disorder (55%). Patients completed the Beck Youth Inventory (BYI; self-reported measure of social and emotional impairments), Inventory of Interpersonal Problems-32 (IIP-32; self-reported measure of interpersonal problems), Youth Outcome Questionnaire (YOQ; self-reported measure of psychological functioning and treatment progress), Youth Self-Report (YSR; self-reported measure of psychopathology), and the Schwartz Outcome Scale (SOS-10; self-reported measure of psychological health and well-being). The BYI’s Self-Concept Inventory (BYI-SCI) was used as the measure of patients’ reported self-concept (i.e., perceptions of oneself as competent, potent, and having a positive self-worth). High scores on the BYI-SCI are indicative of a patient's reporting of healthier self-concept. Results: Problems with self-concept were broadly related to self-reported psychopathology and interpersonal functioning. BYI-SCI was positively related to SOS-10 ($r=.69$, $p<.001$). The BYI-SCI was negatively correlated with BYI Anger Inventory ($r=-.49$, $p<.001$), IIP-32 scales measuring being personally overly-accommodating ($r=-.39$, $p<.01$) and self-sacrificing ($r=-.59$, $p<.001$), YOQ somatic scale ($r=-.56$, $p<.001$), YOQ social isolation scale ($r=-.79$,

p<.001), YOQ conduct problems scale (r=-.40, p<.01), YOQ hyperactivity/distractibility (r=0.68, p<.001), YOQ depression/anxiety scale (r=.68, p<.001), YSR scales of externalizing (r=-.33, p<.01), internalizing (r=-.52, p<.001), and YSR total problems (r =-.48, p<.001). Conclusion: Our results support that negative self-concept is associated with self-reported psychopathology, impairment in interpersonal functioning, and poor quality of psychological well-being. Meta-analysis has shown intervention in self-concept improves outcomes in mental disorders. Interventions to improve self-concept may be key in decreasing incidence of psychopathology and interpersonal problems in adolescents.

No. 62

Rationale for Antidepressant Pharmacogenomic Testing in Adolescents With Major Depressive Disorder: Preliminary Results of a Systematic Review

Poster Presenter: Nicole I. Leibman, M.D.
Co-Authors: Mark Andrew Frye, M.D., Jennifer L. Vande Voort, M.D., Martha Paola Corral Frias, M.D., Julie Christensen, M.D.

SUMMARY:
The overall goal of this systematic review is to evaluate the outcome of the 2004 FDA black-box warning on antidepressant use in the child and adolescent population, 15+ years later. This warning was issued as a result of increased suicidality during drug trials; however, not one suicide had been completed. Currently, the rate of completed suicide is increasing worldwide, perhaps most significantly, in the pediatric population. The aim of this review is to examine and assess the impact of the FDA safety warning on children and adolescents with Major Depressive Disorder. As well as investigate the utility of pharmacogenomic testing in this arena. A systematic search was performed to identify articles that detailed the adverse effects of antidepressant use in the pediatric population, the FDA black-box warnings, trends and patterns in diagnosing major depressive disorder and in prescribing antidepressants for pediatric patients. A total of 28 journal articles have been identified and checked for quality measures.

No. 63
WITHDRAWN

No. 64

Understanding Barriers to Participation in Psychosocial Mental Health and Wellness Services for Breast Cancer Survivors

Poster Presenter: Emily Zhang, B.S.
Co-Authors: Kristin Szuhany, Ph.D., Gabriella Riley, M.D., Carly Miron, B.A., Naomi Simon, M.D.

SUMMARY:
Background: Even after successful treatment, breast cancer survivors continue to face reduced quality of life and stressors due to residual effects of their disease and treatment, as well as fears of cancer recurrence and increased rates of mental illness including depression and PTSD, highlighting the need for mental health and wellness services for survivors. However, even when resources are offered, survivors may face barriers to utilization, such as lack of motivation, anxiety, and sadness. In this survey, we aimed to characterize barriers to participation in breast cancer survivorship plan activities (exercise, support groups, psychotherapy, mind-body interventions). Methods: Participants were 168 breast cancer survivors (mean age=57±13, 99% female) who received cancer treatment at the NYU Langone Health Perlmutter Cancer Center and consented to complete surveys for a research study evaluating needs, gaps, barriers, and motivators for use of supportive mental health and wellness services in survivorship. Surveys included a version of the 15-item Barriers to Treatment Questionnaire (BTQ) that was adapted to the study population to assess potential psychological, physical, and contextual barriers to receiving these supportive care services. BTQ assesses barriers on a 5-point Likert scale from 0 (not at all) to 4 (extremely). Binary variables were also created for each barrier in which responses of 0 were categorized as “not a barrier” and responses ≥1 were categorized as “barrier.” Results: Barriers rated at least 2 (moderately) or higher with the highest frequency included: lack of time to participate (81.5%), financial costs of participation (63.7%), work/school obligations (65.5%), lack of information about health

and wellness activities (65.5%), and lack of motivation (60.1%). Cronbach's alpha for the BTQ was 0.80, indicating acceptable internal validity. An exploratory factor analysis with maximum likelihood estimation and promax rotation identified 4 factors with eigenvalues >1, which explained 50% of the total variance. Factors included: 1) emotional barriers (sadness, anxiety, emotional discomfort at the Cancer Center; factor loadings: 0.38-0.96), 2) cancer- or motivation-related barriers (pain, fatigue, access/distance, cancer treatment, financial, motivation, lacking information on activities; factor loadings: 0.337-0.835), 3) household or caretaking responsibilities (household, family health, childcare; factor loadings: 0.472-0.914), and 4) individual responsibilities (time, work/school; factor loadings: 0.817-0.820). None of the factors were significantly correlated. Conclusion: Four independent categories of barriers may interfere with breast cancer survivors' participation in recommended survivorship plans. Although limited by its cross-sectional design, this study provides a foundation for future research to address barriers and improve participation of breast cancer survivors in recommended mental health and wellness services.

No. 65
WITHDRAWN

No. 66
WITHDRAWN

No. 67
Environmental Depression: A Review of the Direct and Indirect Impacts of Endocrine Disrupting Chemicals on Mood Disorders

Poster Presenter: Jeremy D. Wortzel, M.Phil.
Co-Authors: Akhgar Ghassabian, M.D., Ph.D., Leonardo Trasande, M.D., M.P.P.

SUMMARY:

Extensive evidence has demonstrated the harmful impact of endocrine disrupting chemicals (EDCs) on human health. EDCs are ubiquitous in the environment, present in countless products including plastics, toys, cosmetics, and pesticides. Through various exposure routes, EDC's primarily interfere with endocrine and hormonal pathways that impact neurological, reproductive and endocrine systems. As a result, EDC's affect everyone in the population and have caused a significant physical and economic burden to our society, often with racial and socioeconomic disparity. Recently, numerous studies have demonstrated the impact of EDCs on behavioral and mental health. For example, EDCs can disrupt the synthesis, transport and release of many neurotransmitters including dopamine, serotonin, norepinephrine, and glutamate, which all play key roles in modulating behavior and mood. Therefore, understanding the impact of EDC's on mood disorders can elucidate potentially important modifiable risk factors for these mental health conditions. While studies evaluating the connections between EDCs and Autism, ADHD and schizophrenia have been comprehensively reviewed, the body of research that has studied the relationship between EDCs and mood disorders, specifically clinical depression, has not yet been collectively evaluated. Using Pubmed, Embase, PsychINFO, and Web of Science, 69 peer-reviewed articles studying EDC's impact on human populations were identified with the search terms prioritizing "depression", "anxiety" and "mood disorders" through January 13th, 2021. A summary of the current literature on the clinical and molecular impact of six specific EDCs, namely Polychlorinated Biphenyls (PCB), Bisphenol A (BPA), Organophosphates (OP), Polybrominated Diphenyl Ethers (PBDEs) Flame Retardants, Perfluorooctanesulfonic acid (PFOS) and Phthalates, on mood disorders. Areas are being highlighted that can potentially benefit from further study, specifically, the mental health burden of families surrounded by inequitable EDC exposure and the anxiety that this may induce. This review emphasizes the direct molecular interference of EDCs on depression and examines of the broader impacts of EDCs on mental health.

No. 68
Gut Bacteria, Dietary Practices, and Depression: A Substantive Literature Review

Poster Presenter: Farah Shaikh, M.D.

SUMMARY:

In the United States, there has been a notable increase in the prevalence of neuropsychiatric conditions such as depression and anxiety. These interconnected psychopathologies are affected by various internal and external factors. Until recently, diet was not considered as a noteworthy cause of worsening mood. Recent literature has highlighted the beneficial aspects of a healthy diet on one's intestinal normal flora. A balanced and diversified normal flora has recently been noted as a potential cause of several neuropsychiatric illnesses such as depression, anxiety, and bipolar disease. There are several reasons postulated for gut dysbiosis; this literature review will emphasize the important of diet in one's intestinal flora. Diets that emphasize increased ingestion of unsaturated fats, fish have been shown some benefit in patients diagnosed with major depression and anxiety. Patients diagnosed with major depression have reduced concentrations of certain groups of dysbiosis with an overconcentration of negative bacteria implicated in an inflammatory response. These bacteria incite an immunological response and cause the release of inflammatory mediators. Additional studies should be conducted to identify an association between change in diet and the presence of certain bacterial, and its effect on psychiatric symptoms.

No. 69

Treating Depression and Comorbid Anxiety With Stepped Care Among Women in Tajikistan

Poster Presenter: Diana Ioana Rapolti, B.S.
Co-Authors: Stevan Merrill Weine, M.D., Gulchekhra Pirova, M.D., Chloe Smith, M.P.H., Jonbek Jonbekov, B.A.

SUMMARY:

Purpose: To evaluate the effectiveness of stepped care in the treatment of women with comorbid depression and anxiety in primary care in Tajikistan. Background: Depression is a leading cause of disability worldwide including in low-income countries such as Tajikistan. It is a heterogeneous disorder more frequent in women and often comorbid with anxiety. Comorbid anxiety can account for treatment resistance and require additional treatments. Women in low income countries such as Tajikistan are less likely to receive treatment because of limited national mental health resources. Stepped care may be able to help women with depression and comorbid anxiety in LMICs. **Methods:** We adapted and then piloted stepped care with 45 women in a primary care clinic in Dushanbe with HAM-D>16. The Stepped Care model consists of 3 steps: 1) nurse and peer led "Building Recovery of Individual Dreams and Goals through Education and Support" (BRIDGES) group health education; 2) nurse or peer delivered Interpersonal Counseling (IPC), and; 3) physician-delivered amitriptyline (50-150 mg). Participants proceed through each step until their HAM-D is <13. We assessed the Hamilton Depression Rating Scale (HAM-D), Hamilton Anxiety Rating Scale (HAM-A) and PTSD Checklist (PCL) scores after each step. **Results**: Initially, 31 of 45 (69%) of women with depression had comorbid anxiety. Higher earned income (p<0.04), higher rent (p<0.01), and history of child abuse (p<0.02), were associated with initial comorbid anxiety. After BRIDGES, 18 of 45 (40%) women had comorbid anxiety and HAM-A decreased compared to an increase in those without (↓12.2 v. ↑3.9, p<0.0001). After all treatments, the decrease in HAM-A was higher in those with comorbid anxiety compared to those without (↓12.5 v. ↑4.8, p<0.0001) and 18 of 45 (40%) participants had comorbid anxiety. Of the 5 participants who needed all three steps for their mental health needs, all 5 (100%) had initial comorbid anxiety. After BRIDGES, PTSD decreased compared to an increase in those without (↓18.3 v. ↑1.4 , p<0.0018). After all 3 steps, PTSD decreased in those with comorbid anxiety compared to an increase in those without (↓14.4 v. ↑6.3, p<0.0002). There were no significant differences between the comorbid anxiety group and those without, for either the IPC or medication steps. **Conclusion:** Comorbid anxiety is common among depressed women in primary care, and associated with prior trauma and financial stressors. Those with comorbid anxiety were helped by stepped care. Particularly, for them BRIDGES significantly reduced depression, anxiety, and PTSD, more so that IPC and medication. However, after stepped care, comorbid anxiety remained a problem for 4/10 women, perhaps in part due to ongoing adverse life conditions. Further research is needed

to better understand comorbid anxiety, and additional intervention components may be needed.

No. 70

A Combined Digital and Biomarker Diagnostic Aid for Mood Disorders: The Delta Trial

Poster Presenter: Tony Olmert
Lead Author: Sabine Bahn
Co-Authors: Sung Yeon Han, Jakub Tomasik, Dan-Mircea Mirea

SUMMARY:

Background: Mood disorders affect hundreds of millions of people worldwide, imposing a substantial medical and economic burden. Existing diagnostic methods for mood disorders often result in a delay until accurate diagnosis, exacerbating the challenges of these disorders. Advances in digital tools for psychiatry and better understanding of the biological basis of mood disorders offer the potential for novel diagnostic methods that facilitate early and accurate diagnosis of patients. Objective: The Delta Trial was launched to develop an algorithm-based diagnostic aid combining symptom data and proteomic biomarkers to reduce the misdiagnosis of bipolar disorder (BD) as a major depressive disorder (MDD) and achieve more accurate and earlier MDD diagnosis. In addition, we hoped to gain insight into the actions of participants after receiving a personal report describing their most likely psychiatric condition. Methods: The protocol for this study has been published in full. Participants for this ethically approved trial were recruited through the internet, mainly through Facebook advertising. Participants were then screened for eligibility, consented to participate, and completed an adaptive digital questionnaire that was designed and created for the trial on a purpose-built digital platform. A subset of these participants was selected to provide dried blood spot (DBS) samples and undertake a World Health Organization World Mental Health Composite International Diagnostic Interview (CIDI). To provide statistical power and validation sets for the primary and secondary objectives, 840 participants were required to complete the digital questionnaire, submit DBS samples, and undertake a CIDI. Results: The Delta Trial is now complete. More than 3200 participants completed the digital questionnaire, 924 of whom also submitted DBS samples and a CIDI, whereas a total of 1780 participants completed a 6-month follow-up questionnaire and 1542 completed a 12-month follow-up questionnaire. Our preliminary analyses that are currently in press show an excellent ability (AUC 0.94) to distinguish between participants who have a previously established MDD diagnosis and meet the threshold for current depression from those with low mood that do not meet the criteria for depression; this model shows good ability (AUC 0.80) to distinguish participants with new onset MDD from those with low mood who do not meet the criteria for depression. Combining digital and biological variables results in a superior model to either used alone. Results for the objectives of distinguishing participants with BD from those with MDD and participant action after receiving a non-diagnostic results report are forthcoming. Conclusion: If a diagnostic aid is able to improve the diagnosis of BD and MDD, it may enable earlier treatment for patients with mood disorders. The Delta Trial was supported by Psyomics, Ltd.

No. 71

Flexibility Versus Stability in the Structure of Impulsivity in Hospitalized Patients With Severe Mental Illness

Poster Presenter: Christopher Gurguis, M.D., M.S.
Co-Authors: Jonathan Findley, M.D., Ana Ruiz, B.S., Sarah K. Hernandez, B.S., Teresa Pigott, M.D.

SUMMARY:

Introduction: Impulsivity is a key feature in many psychiatric disorders[1] and has been associated with outcome measures such as suicidality, substance use relapse, length of hospitalization, and hospital readmission. The Barratt Impulsiveness Scale-11 (BIS) is the most widely used self-report measure of impulsive personality traits. The BIS explores three major domains of impulsivity, namely attentional/cognitive (AI), motor impulsivity (MI), and non-planning impulsivity (NI).[2] Prior work has shown that the total BIS and its subtraits are stable in individuals over time.[3] **Methods:** 704 patients meeting DSM-IV-R criteria for a primary diagnosis of severe mental illness [Bipolar (BPD), Bipolar NOS (BPD-NOS), Major Depressive Disorder (MDD), or

Schizophrenia and related disorders (SCZ)] consecutively admitted to the same unit at an academic psychiatric hospital in Houston, TX provided data for the current study. The BPD-NOS group was more likely to have comorbid substance use disorders than those with BPD diagnosis. All patients completed the BIS at least once and a subset completed the BIS at admission and on discharge. Total BIS and subscale scores were also compared in the inpatients completing BIS at admit and discharge using pairwise t-tests. General linear models were used to examine potential group differences in total and subscale BIS with age, race, and sex as covariates. Lastly, a principal component analysis (PCA) was used to compare the potential relationship between diagnostic group (BPD, BPD-NOS, MDD, and SCZ) and BIS subscales in the same subset. All analyses were performed in SAS Studio v3.8. **Results:** Impulsivity as measured by the BIS total score was significantly lower at discharge compared to admission (N=476, mean difference=-1.078, paired t-value=2.02, p<0.05). Although the total BIS score at admission was similar across diagnostic groups (N=704, F=1.42, p=0.2344), there was a significant group difference at discharge (N=557, F=3.60, p<0.05). In addition, the factor structure of impulsivity differed across the diagnostic groups. The first principal component (PC1) at admission showed high loadings for all three sub-traits (AI=0.8951, MI=0.8522, NI=0.8013) in the BPD group, whereas highest loading for the PC1 occurred only for NI (0.9238) in the BPD-NOS group and only MI in the SCZ and MDD groups (0.9328 and 0.9322) respectively. In contrast, at discharge, the highest loading in PC1 was for NI (0.9448) in the BPD group while MI consistently demonstrated the highest loading in BPD-NOS (0.9212), MDD (0.9715), and SCZ (0.9302) groups. **Conclusions:** Consistent with previous results, the impulsivity measure was relatively stable over the course of hospitalization. However, PCA of the subscales revealed significant group differences at admission and discharge. Moreover, these results suggest that the BIS may be helpful in rapidly identifying psychiatric inpatients more likely to have a primary diagnosis of BP NOS than BPD.

No. 72

Using Delay Discounting to Predict Length of Stay and Readmission for Inpatient Psychiatric Patients

Poster Presenter: Caroline Woods, M.S., B.A.
Co-Authors: Navroop Kaur, M.D., Anita S. Kablinger, M.D.

SUMMARY:

Background: The purpose of this research is to assess impulsivity through delay discounting (DD) in inpatient psychiatry patients at admission to the inpatient unit and at discharge to see if impulsivity can be predictive of a patient's length of stay or readmission rate. DD is a behavioral economics phenomenon used to assess impulsivity in humans. DD can be described as the devaluation of a consequence when the consequence is delayed. For example, would you rather have $500 now or $1000 in a month. DD has not been extensively studied in inpatient psychiatric populations. **Methods**: We are administering the 5-trial adjusting DD task on an iPad via REDCap to patients who are voluntarily admitted to the inpatient psychiatric unit at Carilion Clinic approximately 24 hours after admission. Additional information collected and stored via REDCap at time of admission testing includes: PHQ-9 survey of depression, the AUDIT-C alcohol assessment, the Fagerstrom smoking survey, and the DAST 10 drug abuse screening. We are also collecting socioeconomic data (education, income, employment status, housing status). At discharge we administer the 5-trial DD as well as the PHQ-9 survey for a second time. For a year after discharge we are following readmission to the inpatient unit and admissions to the emergency department (ED). **Results**: We received IRB approval in March of 2020 and started consenting patients in August 2020. Our initial statistical analysis is going to be a logistic regression plotting the DD score against 3 dependent variables: 1. readmission to inpatient psychiatry OR admission to the ED (yes/no); 2. Utilization of the ED specifically for mental health/substance use purposes (yes/no); 3. Utilization of the ED for any purpose (yes/no). We will also be doing a generalized regression looking at the DD score and number of readmissions. Finally, we will be doing a non-parametric Spearman correlation looking at DD score and length of stay in inpatient psychiatry. **Conclusion**: Our hypothesis is

that a higher DD score will correlate to more readmissions to inpatient psychiatry and admissions to the ED over the year following discharge. We hope that the DD task and score can be used as an interdisciplinary treatment tool in the future care of psychiatric patients.

No. 73

Are You Going to That Funeral? How Psychiatrists Navigate the Decision to Attend a Patient's Funeral

Poster Presenter: Ashley J. Pettaway, M.D.
Co-Author: Gabrielle R. Marzani-Nissen, M.D.

SUMMARY:

Death is a natural process and inevitable. Physicians from various disciplines have described attending funerals (Kim, Churilov, & Weinberg, 2019). In the United states, literature published over the last 10 years available through Google Scholar, Pubmed, Cochrane Review, and PsycINFO yielded case reports from physicians in the fields of pediatrics, family medicine, and anesthesiology which provided various perspectives on funeral attendance. An Australian review published in 2017 reported that 67% of psychiatrists surveyed attended funerals (Zambrano, Chur-Hansen, & Crawford, 2016). There is a paucity of literature related to psychiatrists attending funerals in the United States. Given the nature of their profession, it is no surprise that psychiatrists would be presented with questions regarding funeral attendance. There are no published guidelines on how to proceed in these circumstances. An informal survey of supervising psychiatrists at the University of Virginia found that 5 of 12 physicians reported going to at least one patient funeral during their career. This is notable in that 10 of the 12 had an individual who was under their care at some point pass away. Of those who attended funerals, attendance was often based on the doctor-patient/family relationship or an established presence in the community; they therefore attended as a community member. Junior faculty noted that they would be more hesitant to attend and stated that they would not attend without a formal invitation from the family. Those who had been practicing longer considered it more from a perspective in which an invitation was not required. Themes that emerged included continued respect for patient's confidentially, the funeral as a celebration of a patient's life, and following family's guidance regarding introductions. None of the 12 surveyed had been given official training or guidance on funeral attendance at any point in their career. According to the Clinical Handbook of Psychiatry and Law, outreach following the loss of a patient can be an approach to prevention of lawsuits as well as helpful with dealing with losses (Appelbaum & Gutheil, 2020, p.152). This may offset concerns regarding the legality of attendance. Thus, there are no specific rules. It appears to be based on a psychiatrist''s clinical intuition, personal choice, and years in practice. Of those who were interviewed, attendees tended to be more senior and have a relationship with the family. These psychiatrists did not breech confidentially as their level of interaction was guided by the family or the psychiatrist were established members of their community and their presence as a psychiatrist would not be noted. Therefore, until formal recommendations have been established, increased conversation on this topic should be part of residency programs in order to help navigate these complex situations.

No. 74

"Acquired" Pedophilia in Frontotemporal Degeneration: Case Report and Review of the Literature

Poster Presenter: Julio Cesar Nunes
Lead Author: Catarina Prado
Co-Authors: Pedro Maranhão Lopes, Thiago Paranhos, Ricardo de Oliveira-Souza

SUMMARY:

Pedophilia is the persistent erotic attraction to prepubescent children as shown by fantasies and urges that may be acted upon, in which case a diagnosis of a pedophilic disorder is made. Acquired pedophilia is the emergence of a pedophilic disorder due to cerebral damage in a previously normal individual. To date, only 22 valid clinicoanatomical reports of acquired pedophilia have been recorded in the medical and forensic literature. With the exception of 1 patient with a left hemisphere lesion, the responsible lesions were bilateral or localized to the right hemisphere. The lesions fell within the limits of an extensive region that encompassed the

frontotemporal lobes and the insula. Here we present a new case of pedophilic disorder that became manifest in the sixth decade of life in a patient with a diagnosis of frontotemporal degeneration. This 69-year-old right-handed married man was criminally charged with libidinous attempts to kiss and touch children of either sex on different occasions. He denied the allegations and tried to cover up his misdeeds, albeit with little success. Twelve years earlier, he sexually abused his daughter repeatedly as she entered puberty. Over the four years that preceded his troubles with the law, his initiative and spontaneity had slowly declined, as shown, for example, by social withdrawal at home and in family gatherings. He became emotionally indifferent even to things that might do him lasting harm, such as the possibility of spending several years in prison. His neurological exam was normal as was his global cognition; however, tasks that engage working memory and the mental manipulation of sensory information were impaired. MRI showed bilateral atrophy of the anterior frontal and temporal lobes. A 99TC-SPECT showed bilateral reduction of blood flow in the frontal lobes, which was more marked on the right hemisphere. The patient became progressively abulic and apathetic, and passed away four years later from complications of diabetic ketoacidosis and sepsis. He did not develop overt dementia throughout the course of his illness. Accordingly, he scored 28/30 on the Mini-Mental State Exam a few weeks before his death. We conclude that the emergence of pedophilia following brain damage may represent (i) the conversion of a sexually normal individual into an individual with a pedophilic disorder (true acquired pedophilia), or (ii) the exposure of a hitherto concealed developmental pedophilia owing to an impairment of executive functions, emotional reactivity (apathy), and initiative (abulia), which reflected the underlying frontotemporal injury (apparent acquired pedophilia). The distinction between true and apparent acquired pedophilia must be systematically pursued in every medical or forensic case in which a temporal nexus can be established between the emergence of sexual attraction to children and adolescents and an injury to the brain.

No. 75

Use of Antipsychotics Involuntarily in a Prison Inmate in Forensic Unit: A Dilemma a Case Report

Poster Presenter: Ghulam Sajjad Khan, M.D.
Co-Author: Mohammed Faizur Rahman, M.D.

SUMMARY:

Use of psychotropic medications in mentally ill patients involuntarily always raises some questions of medico legal issues. Especially, it is always challenging for psychiatrists to use antipsychotics in a correctional institute in terms of patients' autonomy and beneficence. Many cases till date are taken as examples to aid psychiatrists to provide medical decisions conserving patients' benefit and convenience of law enforcing authorities. Among them, two cases are very popular despite of some dilemmas- Washington v. Harper and Sell v. United States. These two avenues help correctional psychiatrists to pursue authorization of administering antipsychotics involuntarily among prison inmates. According to the first case antipsychotics could be administered involuntarily to the convicted mentally ill inmate who poses a likelihood of serious harm to himself, prison staff or the property. There is no need of judicial verdict, hospital administrative hearing is sufficient. The Sell case on the other hand is more complicated. It requires court determination whether the inmate should have antipsychotic who has committed a serious crime that is under the domain of judicial system. Proposed antipsychotic is the least intrusive alternative to restore pretrial defendant's competence to face trial and medically appropriate. Case: A 38-year-old male with past psychiatric history of Bipolar disorder and Alcohol use disorder was admitted to our facility in prison unit with persecutory delusion. Patient was recently faced the judicial trial for criminal offence and had been convicted with 12 months imprisonment. During his hospital staying he got severely agitated and paranoid towards staff. He was verbally abusive to other residents and staff and got involved in multiple physical altercations. Patient was forced medicated with short-acting haloperidol, followed by long-acting IM haloperidol deaconate. His acute agitation subsided but still remained paranoid. We thought of alternate antipsychotic to haloperidol or in addition to the current treatment for better outcome. And

here we faced the dilemma of using a new antipsychotic in a psychotic, non aggressive, already convicted inmate who did not show expected outcome with the initial antipsychotic. Conclusion: There is no unambiguous answer is available for correctional psychiatrist in many cases due to lack of judicial clarity. From both legal and ethical perspective treating psychiatrist should be very careful while administering forced medication to inmates whose human rights are already diminished as a result of incarceration. Further prospective studies need to be undertaken incorporating both medical and judicial experts to formulate a treatment protocol for inmates considering all the aspects.

No. 76
Self(ie)-Recognition: Authenticity, Passing, and Trans Embodied Imaginaries
Poster Presenter: Teddy Gould Goetz, M.S.
Co-Author: Michael Devlin

SUMMARY:
Background: Coming out as trans involves the melancholic, ambivalent loss of intentionally forsaken objects and illusions. Creating replacement fantasies for one''s gender expression requires navigating tensions between trying to visualize one''s authentic internal truth in the mirror (self-recognition) and seeking the affirmation and safety associated with external recognition, often referred to as passing. Ascribing to hegemonic binary gender norms can increase one''s legibility, but may impair self-recognition and one''s ability to form intimate connections with others, due to erasure of the authentic self. This can be particularly salient for non-binary individuals, for whom passing necessitates choosing a least harmful form of misrecognition. Methods: I explored these themes in loosely-structured ethnographic interviews with 28 transgender and/or non-binary individuals about how they experienced their faces, with and without the digital distortion of the “gender swap” photographic filters on the Snapchat cell phone application. Results: Participants (binary and non-binary) overwhelmingly fantasized about having facial features more stereotypically incongruent with their assigned-gender-at-birth (e.g., assigned-female-at-birth seeking angular jaw and cheekbones). They found presence of such elements in their faces affirming or imagined a lack thereof to promote misrecognition. Paradoxically, these same persons were dissatisfied when such hypermasculinity or hyperfemininity was projected onto their faces by digital filters, due to loss of self-recognition. Discussion: These results help mental health providers to better understand the distinct goals of self-recognition compared to external legibility during gender transition, and specifically inform treatment of transgender and/or non-binary individuals.

No. 77
Swapping Gender is a Snap(chat): Limitations of (Trans) Gendered Legibility Within Binary Digital and Human Filters
Poster Presenter: Teddy Gould Goetz, M.S.
Co-Author: Michael Devlin

SUMMARY:
Background: In May 2019, the photographic cell phone application Snapchat released two company-generated image filters that were officially dubbed “My Twin,” though users and media labeled them as “gender swap” features. These digital imaginaries represent a unique opportunity to consider what features contribute to classification of faces into binary gender buckets. They modify whichever face is in the photograph according to pre-programmed algorithmic re-inscriptions of reductive gendered norms, regardless of the imaged person’s gender identity or transgender history. When interacting with a novel face, humans similarly implement algorithms to assign a gender to that face. The “My Twin” filters—which are not neutral, but rather human-designed—offer an analyzable projection of one such binarization, which is otherwise rarely articulated or visually recreated. This project aims to characterize how transgender and/or non-binary individuals assign gender to facial features, which features they find theoretically desirable for their own gender presentation, and how those fantasies are perceived when implemented by photographic filter. Methods: Here I pair an ethnographic exploration of 28 transgender and/or non-binary individuals’ embodied experiences of facial gender

legibility throughout life and with digital distortion, with a quantitative analysis of the "My Twin" filter distortions. Results: Two-thirds of participants identified as a non-binary gender and one-third as a binary gender, and 82% were assigned-female-at-birth with 18% assigned-male-at-birth. Increased forehead size, jaw width, neck width, nose width, and eyebrow thickness were all identified by participants as legibly masculine features—along with the presence of facial hair—and similarly reflected in the masculinizing Snapchat filter output. Sharper chin angle, fuller lips, and larger eyes—along with the presence of long hair and make-up—were described as feminine-coded features, and observed in the feminized Snapchat filtered images. All participants reported desiring some combination of features not associated with their assigned-gender-at-birth; yet, those same participants expressed dissatisfaction with those features when added by the filters, due to the "extreme", "fake," "hyper"-masculine/feminine, "caricature" quality of those images. Discussion: These results underscore the disjunction between the fantasy transgender and/or non-binary individuals hold for their gendered features and legibility and the discomfort associated with filters accentuating such stereotyped features, which suggests that self-concept improvement and patient satisfaction may be higher with gender-affirming care that results in more subtle enhancement of gendered facial features. This work helps mental health providers to better understand the role of technology in reimaginations of who and what we see in the mirror, and specifically informs treatment of transgender and/or non-binary individuals.

No. 78

Traditional Masculinity Associated With Behavioral Risk Factors in Adolescent Males

Poster Presenter: Anna J. Sheen, B.S.
Co-Author: Faisal Kagadkar

SUMMARY:

Objectives: In the United States, men are the demographic group most at risk of being victimized by violent crime and disproportionately commit 90% of homicides. They are 3.5 times more likely than women to die by suicide. There has been increased research seeking to understand possible cultural causes for these troubling discrepancies. This literature review examines the impact of traditional masculinity on behavioral risk factors in adolescent-age males. Methodology A search of Google Scholar and PubMed electronic databases was conducted using search terms including "masculinity", "traditional", "mental health", "depression", "violence", "suicide", "adolescent", "school age", in various permutations. We selected 8 of the 34 initial search results that pertained to the effects of traditional masculinity on the mental health and behavior of young adult men to perform our narrative review. Results In the context of U.S. dominant ideology, traditional masculinity can be defined as a set of hegemonic norms including qualities such as heterosexuality, physical strength, control over situations, competitiveness, emotional restriction, and aggression. Adolescent males are often exposed to this cultural image in a multitude of forms during childhood: primarily male family members, but also from peers and media. Individuals who do not conform to these traditional mandates experience significant verbal and physical forms of social pressure. Such prevalent exposure is indicative of the highly pervasive nature of this cultural risk factor. Emerging quantitative studies have shown an association between traditional masculinity and suicide amongst men and young adults. This suggests a web of further indirect effects. This may include mood risk factors, such as anger and depression, school performance issues, maladaptive conflict resolution styles, and objectification of the body. Adolescents of color are particularly vulnerable - facing racial stereotyping in the form of harsher punishment in schools and by law enforcement. Gender and sexual minorities, many of whom identify as gay, bisexual and queer/questioning (GBT), are exposed to additional pressures regarding expected behaviors leading to emotional trauma and struggles of gender expression. Conclusion: Traditional masculinity, from a U.S. centric perspective, is hypothesized to be a behavioral risk factor for a multitude of stressors, including suicidality, aggression, emotional dysregulation, and many others. Because of the limited number of studies, there is a tremendous need for further study, especially given the potential for significant change in the role of masculinity in

modern society. Provider-specific prevention and intervention techniques should also be explored.

No. 79
Cognitive Behavioral Therapy for Mood and Insomnia in Persons With Dementia: A Systematic Review
Poster Presenter: Jeff Wang Jin

SUMMARY:
Background: Cognitive behavioral therapy (CBT) is a goal-oriented intervention that aims to improve detrimental emotional or behavioral distress through the modification of individuals' thought processes. To date, there are no reviews that examine adaptations made in CBT for persons with dementia. This systematic review evaluates the efficacy and specific adaptations of CBT in persons with mild cognitive impairment (MCI) and dementia. Methods: A systematic literature search was conducted from 2019 to 2020 in the following databases: PubMed, Embase, and PsycINFO. Search terms included "Cognitive Behavioral Therapy", "Dementia", and their representative variations. Quality of the studies was assessed according to the Cochrane risk of bias criteria. Results: Twelve publications were identified. Seven of the studies demonstrated CBT efficacy to improve depression, anxiety, and/or quality of life. One study's positive post intervention outcome became insignificant with longer term follow up. Additionally, two of the studies improved sleep outcomes. Four studies integrated caregivers into intervention delivery. Three studies utilized content, memory, and adherence adaptations aimed to improve intervention efficacy. Two studies included adaptations to address caregiver burden and depression. Conclusion: There is strong evidence to suggest that CBT is associated with improvements in anxiety, depression, and quality of life in persons with MCI and dementia. Furthermore, CBT showed a reduction in insomnia and improvements in sleep quality. However, the lack of studies analyzing the effects of CBT on insomnia suggest that there is insufficient evidence to draw conclusions on overall efficacy. These results may inform the design of future clinical trials in dementia and warrant further investigation into insomnia outcomes.

No. 80
Challenges and Burden of the Psychological Impact of COVID-19 Pandemic on Relationships and Family Systems: A Literature Review
Poster Presenter: Aiman Tohid, M.D., M.P.H.
Lead Author: Syed Murtaza
Co-Author: Fauzia Zubair Arain, M.D.

SUMMARY:
Background: Research has shown that natural disasters impact relationships and marriages directly or indirectly. Pandemics create an environment that can increase the risk of domestic abuse or violence. COVID-19 pandemic also has severe impacts on relationships and family systems. Due to social distancing protocols, the household members stay together for extended periods of time. Some people have been fired from jobs and have financial stress. This has provided opportunities for increased cohesion and confronting challenges for families together. We did a systematic review to explore the vulnerabilities of couples/relationships due to the COVID-19 pandemic. **Methods**: We reviewed twenty-five articles and included five in this systematic review. First study developed the COVID-19 Household Environment Scale (CHES) and conducted an online survey of 3,965 adults. The second article used the theoretical framework to prove that stressors related to the COVID-19 pandemic can likely impact relationships and family lives. Third study assessed the clinical presentation, injuries and radiology findings of patients who reported physical abuse from Intimate partner violence (IPV) in 2020, compared with the previous three years. Fourth and fifth studies were a systematic review/meta-analysis of articles on impact of COVID-19 on families and family violence. **Results**: First study showed that cohesion and conflict subscales of the CHES are essential stress related factors globally. The second study described that COVID-19 will create multiple external stressors that may lower the quality and threaten the stability of the relationships. It also showed that preexisting vulnerabilities like depression and anxiety can also harm the quality of relationships. Third study results revealed a higher incidence and increased rates of physical intimate partner violence (IPV) during the

pandemic compared with the previous three years. The results of the fourth article showed increased rates of divorces, conflicts and disputes in families. Fifth study described that physical distancing and shelter in place may dramatically upsurge the risk of family abuse and violence. **Conclusion**: Social distancing and isolation are the key public health approaches in response to the COVID-19 pandemic. Most people are working and studying from home often without personal space. Unemployment and financial vulnerability due to the pandemic may also increase the stress. COVID-19 can increase the external stressors and in turn lower the quality of the relationships. Pre-existing vulnerabilities including depression and anxiety can also harm the stability of relationships. COVID-19 is also likely to exacerbate the risks of abuse and violence as the families are spending longer periods of time together. There is a greater number of physical intimate partner violence (IPV) victims during the pandemic.

No. 81

Gay Versus Anti-Gay: A Review of the Efficacy and Harms of Conversion Therapy, and How Activism Influenced the Field

Poster Presenter: David Tyson, M.S.

SUMMARY:

Objective: The aim of this paper is to examine the reciprocal relationship between advocacy and Psychiatry as it relates to the topic of Sexual Orientation Conversion Therapy or "Conversion Therapy". Over time, researchers have studied the efficacy, benefits, and risks of conversion therapy and these efforts have led to advocacy efforts both to allow or ban conversion therapy. Similarly, advocacy and activism have led to increased scientific interest in the topic. Critical events include the 1973 reclassification of Homosexuality in the DSM, NARTH and the "Ex-Gay" Movement, and actions of organized medicine organizations such as the American Psychiatric Association. Methods: On May 31, 2020 and June 1, 2020, a literature search of PubMed was performed using the search terms "((gay conversion therapy) OR (reparative therapy)) OR (sexual orientation change therapy)" plus MeSH terms, and a total of 13,860 articles were found. The articles were reviewed and 101 items related to conversion therapy were extracted. 22 studies that offered original data of multiple patients, or surveys of mental health professionals were included. Data directly related to reported efficacy of conversion therapy, harms, or practitioner attitudes towards conversion therapy were extracted. Large number of articles were commentary only, and did not contain original data. PsycINFO search was conducted on June 6, 2020 using the terms "conversion therapy or reparation therapy or reparative therapy" AND "harms or negatives or cons or dangers or risks" OR "benefits or advantages or positive effects" Results: A total of 101 article met the initial inclusion criteria of discussing conversion therapy. Of these, 15 were major research studies that look at patients and outcomes of efficacy, benefits, or harms. 7 studies were found that surveyed views of mental health professionals. Studies published prior to 1974 were exclusively focused on potential efficacy, with no research into potential harms. The first study that examined harms was published in 2001. After 2011, all studies examined potential harms. Potential harms included increased rates of depression and anxiety, reduced self esteem, and increased rates of suicide attempt. Discussion: Psychiatry has a long history of interaction with activists and advocacy work. Often, scientific discovery influences activism, and sometimes the reverse is true. The growing regulation of conversion therapy offers a compelling example of the importance of advocacy in the field of Psychiatry. Advocacy in favor of conversion therapy increased scientific interest starting in the early 2000s, but may have resulted in increased research into potential harms, and increasing regulation of the practice.

No. 82

The Inverted Pyramid: A Referral and Triage System for the Delivery of Mental Health Services in Refugee Camps

Poster Presenter: Ariella Maghen, B.A.
Co-Authors: Mohammad Herzallah, M.D., Ph.D., Essam Daod, M.D.

SUMMARY:

Background: As of November 2019, there are 70.8 million individuals who were forcibly displaced

worldwide. Of these, 6 million Syrian refugees have been seeking safety since 2011. Aside from the lack of basic human needs such as shelter, food, and financial resources; these refugees have almost nonexistent psychosocial support to prevent the development of trauma-related mental ill-health. For millions of children in this population, the risk for developing mental ill-health is even more pronounced given their young age during the traumatic displacement process. At Humanity Crew, an international aid organization, we develop innovative models to deliver mental health interventions to refugees to reestablish order and stability in displaced communities. We combine social, behavioral, and neuroscience-backed approaches to combat the continuous exposure to toxic psychological trauma. Methods: We developed a unique approach, The Inverted Pyramid, as a referral system to address the psychosocial needs of displaced individuals. It encompasses three stages of actions: community-based activities, focus-group sessions, and individual sessions. These stages serve as a hierarchical triage for defining psychosocial needs and identifying the most vulnerable cases in need of interventions. Community-based activities recreated a safety context using sensory modalities, including familiar smells (food) and sounds (music) to rejuvenate collective well-being. Following the establishment of a sense of well-being, we introduced the focus-group sessions for individuals with pronounced distress to implement context-dependent coping skills. This leads to stage three, where individual cases in need of immediate intervention are uncovered and attended to, ultimately through a top-down approach representing an inverted pyramid. Results: Our sample included 1,100 Syrian adults' participants in the Divata refugee camp, Greece. We found that 800 camp residents (73%) actively participated in the community-based activities, thus recreating a sense of community well-being. Through these activities, we detected 440 refugees (55%) with pronounced distress who would benefit from more in-depth interventions in the form of focus group sessions led by a licensed therapist. These initial two stages led to the identification of 35 vulnerable refugees (8%) in need of immediate specialized treatment through individual sessions. Such cases are the least likely to seek mental health support due to stigma and cultural reservations. Discussion: Our Inverted Pyramid Model is an effective referral system to recreate a sense of social well-being, remediate symptoms of distress, and detect and serve individual cases in dire need of mental health interventions. Humanity Crew's Inverted Pyramid Model can serve as a guideline for healthcare professionals, humanitarian aid workers, social workers, and mental health experts to aid in their development of practices and support resources for refugees.

No. 83

Verstehen and Erklaren: Make Use of Jaspers' Phenomenology in Contemporary Psychiatric Practice

Poster Presenter: Moein Foroughi, M.D.
Co-Author: Amvrine Ganguly, M.D.

SUMMARY:
Karl Jaspers' General Psychopathology published in 1913, is one of the first and most essential works in descriptive psychopathology and psychiatric phenomenology. In contrast to his contemporary dogmas of psychiatry, Kraeplinian biological reductionism and Freudian Orthodox psychoanalysis, Jaspers introduced a bi-dimensional approach into psychopathology; Erklaren (explanation) and Verstehen (understanding). Erklaren is causal explanation of objective connections; It is a scientific research method which defines a population of subjects, then seeks to find demonstrable features among individuals which might be attributed to a common cause shared by the group. It translates to modern-day evidence-based psychiatry and DSM classification. Verstehen, on the other hand, is the perception of meaning. It is a way of knowing the meaning of an event in a person's life and the meaning of their behaviors that depends not on objective measures, but empathy and intuition. Psychoanalytic and psychodynamic methods are examples of the Verstehen approach. Erklaren and Verstehen offer different understandings of human psyche and Jaspers emphasized both approaches'' complementary role. However, in contemporary psychiatric practice, Verstehen is mostly ignored or overlooked. Although the initial versions of DSM were based on phenomenology influenced by

Jaspers'' legacy, throughout the development of its successors, emphasis on phenomenology decreased. Descriptive psychopathology and comprehensive history taking have been replaced by DSM checklists. The form of signs and symptoms has replaced the content. It appears that psychiatry has been shaped by DSM and DSM has been highly influenced by exogenous factors such as insurance and medical reimbursements, pharmaceuticals, legal and educational entities, which all favor the feasibility of Erklaren. Re-introducing Verstehen into the education syllabus of mental health professionals would help to understand the symbolic importance of events for a particular individual. It also helps to better empathize with the persons and individualize the care based on the content of the persons' behaviors.

No. 84

The Effect of Low Socioeconomic Status on Mental Health in the Military: A Systematic Review and Discussion

Poster Presenter: Zachary Robert Arnold, M.D.
Co-Author: Walter J. Sowden, Ph.D.

SUMMARY:

Background: Military service members are exposed to a number of unique stressors, and they are prone to mental health conditions. There are a variety of factors that could influence this from environment to genetic both prior to and during military service. Of note, there is a marked increase in suicide risk during the first several months of military service even prior to deployment.1 This increase necessitates the question of what service members may have experienced prior to service that could have increased this risk. Prior research has demonstrated the link between low socioeconomic status and mental health condition in the general population.13 However, this link has limited research in the military environment. The goal of this project was to systematically examine this relationship to better understand what effect low socioeconomic status has on mental health in the military. Methods: A systematic review was performed utilizing EBSCO, Pubmed, Embase, DTIC, Google Scholar, Ovid, and PsychINFO. The search terms were as followed: 1st field poverty or low-income or low socioeconomic or disadvantaged, 2nd field military or veterans or armed forces, and 3rd field mental health or mental illness or psychiatric illness. The inclusion criteria were studies that included American Service members from 1992 to current and results relating to mental health risk as related to poverty within this population. Results: 170 articles were found with 9 articles relevant to this presentation. 1/3 of post-enlistment suicides are associated with pre-enlistment mental health disorders.6 For male service members, the military may be seen as a viable escape from difficult socioeconomic circumstances.11 Current literature examines proxy measures for poverty, and these proxy measures demonstrate an independent and dose-dependent risk for major depressive disorder.2 Exposure to poverty and low socioeconomic status increases risk for mental health conditions including depression, suicide risk, and substance use2,3,7,10 Conclusions: The literature available for the effect of poverty on mental health in the military is limited and requires further research. This would allow for better understanding of deficits in capability that may be related to poverty. Additionally, more research would allow development of both sensitive and specific questions in screening for poverty and by extension the effects of poverty. The views expressed in this abstract are those of the authors and do not reflect the official policy or position of the Department of the Army, Department of Defense , or the US Government.

No. 85

Eugenics and the Beginnings of Psychosurgery

Poster Presenter: Julio Cesar Nunes
Lead Author: Ricardo de Oliveira-Souza
Co-Authors: Catarina Prado, Pedro Maranhão Lopes

SUMMARY:

The influence of the eugenics movement on the initial acceptance of psychosurgery as a valid treatment for severe mental illness may have been largely underestimated. Here, we evaluate this association. In the 1930s, the current belief was that chronic psychosis and fixed ideas reflected abnormal activity in thalamofrontal connections. Originally, psychosurgery aimed to inflict circumscribed injuries to thalamofrontal projections while leaving the

cortex intact. Surgical disruption of these fibers would supposedly dampen the abnormal activity with consequent mitigation of pathological ideas and behaviors. The eugenic ideas postulated by Francis Galton in the XIX century permeated the cultural environment and would have a lasting impact in the decades yet to come. Galton defined eugenics as "*(...) the science which deals with all influences that improve the inborn qualities of a race; also with those that develop them to the utmost advantage*". At the time, policymakers were concerned about the economic burden on society of the steep rise of mental illness. Hence, an urgent need to care for the growing number of patients suffering from severe mental illnesses that overcrowded nursing homes, colonies, and mental hospitals. The initial hasty acceptance of psychosurgery may have been catalyzed by the eugenics climate that prevailed in the northern hemisphere up to World War II and by the alarming costs of mental illness at the time. The advent of psychoactive drugs in the late 1950s quickly overshadowed the then celebrated achievements of psychosurgery. However, from 1970 to 1990, enthusiasm gradually faded because a growing number of patients were shown to be resistant or had lost the initial response to drug therapy. Henceforth, in the 1990s psychosurgery began to make its way back into clinical practice. This revival resulted from (i) the recognition that, despite the lack of reliable selection criteria in the past, many cases had remarkably improved; (ii) carefully selected pharmaco-resistant patients may benefit from modern psychosurgery, (iii) the high inter-observer agreement on diagnosis owing to the Diagnostic and Statistical Manual of Mental Disorders, (iv) the unprecedented precision in targeting neural structures thanks to the incorporation of stereotactic devices into surgical practice, (v) the gradual replacement of ablative surgery with deep brain stimulation (DBS), and (vi) the success of functional neurosurgery in the treatment of movement disorders, epilepsy, and chronic pain, which conform to the same general principles of psychosurgery. Psychosurgery provides testimony to how ominous political ideologies may exert a far-reaching influence on the practice of medicine by distant generations. **The chief lesson to be drawn from "the psychosurgery affair" is that its unfortunate beginnings should not unwittingly undermine its current applications and further developments.**

No. 86
WITHDRAWN

No. 87
Psychiatric Co-Morbidities in Adults With Neurofibromatosis: A Nationwide/National Inpatient Sample (NIS) Analysis
Poster Presenter: Kanwarjeet Singh Brar, M.D.
Co-Authors: Mahwish Adnan, Hiren Patel, M.D., Muhammad Khalid Zafar, M.D.

SUMMARY:
Background: Neurofibromatosis is a group of inherited neurocutaneous disorders that includes Neurofibromatosis type 1, Neurofibromatosis type 2, and schwannomatosis. Neurofibromatosis type 1 is the most common type seen in about 96% of all neurofibromatosis cases (1-4). Our primary objective was to assess the prevalence of psychiatric comorbidities in neurofibromatosis patients. The secondary objective was to evaluate the predictors associated with psychiatric comorbidities. **Methods**: We used the Healthcare Cost and Utilization Project 2010-2014 NIS database, sponsored by the Agency for Healthcare Research and Quality (5). Patients with age ≥ 18 with the primary or secondary diagnosis of Neurofibromatosis were queried from the dataset. Also, we queried data on specific as well overall psychiatric comorbidities. Univariate and multivariate logistic regression analysis was performed to evaluate the variables associated with psychiatric comorbidities. **Results**: A total of 43270 patients with a mean age of 48.7 years (female: 55.7%, white race: 16.9%) were included in the study. Mood disorder (22.1%) and anxiety disorder (12.2%) were highly prevalent among this patient population. Overall psychiatric comorbidities were present in 46.5% of patients. Age, female, moderate to extreme loss of function based on illness severity, and non-white race were predictors of psychiatric comorbidities. However, in multivariate analysis, age did not show any association. Female and non-white race were associated less with psychiatric comorbidities (OR: 0.868, and 0.689, respectively, $p < 0.001$). Moderate to extreme loss of function

illness severity category was associated with 1.35-times higher odds of having psychiatric comorbidities compared to mild to moderate or no loss of function ($p < 0.001$). Total length of stay was similar in patients with and without psychiatric comorbidities [4.98 (95% confidence interval, 4.72 - 5.24) vs 4.83 (95% confidence interval, 4.60 - 5.07) respectively, p-value: 0.34]. Almost one-third of the patients were discharged to other healthcare facilities (p:0.30) in both groups. The mortality rate during the hospital stay was 2.1% and 2.6% in patients with and without psychiatric comorbidities (p-value: 0.15). **Conclusion**: In adult patients with neurofibromatosis, 46.5% of cases were found to have at least one psychiatric comorbid diagnosis. The most frequent psychiatric comorbid disorder was mood disorder (22.1%) followed by anxiety disorder (12.2%), substance-related disorders in 6.0% , and alcohol-related disorders were present in 4.1%. Female sex and non-white race predicted a lower likelihood of having a psychiatric disorder. Age was not a risk factor for psychiatric disorders. The prevalence of psychiatric comorbidities was proportional to the severity of the illness. There was no statistically significant difference in discharge to other healthcare facilities, mortality during hospitalization, or average cost during hospitalization.

No. 88
WITHDRAWN

No. 89
The Effects of Different Pain Dimensions on Mood and Activity Interference Using a Visual Analogue Scale
Poster Presenter: Nicolette Lee

SUMMARY:
This was a retrospective study of 60 chronic pain patients from an academic psychiatry practice who completed VAS pain, mood, and activity interference questionnaires. To our knowledge, this is the first study to have looked into associations between mood or activity interference with different dimensions of pain over time; these being current pain, least severe pain and most severe pain in the last 2 weeks. We conducted the statistical analysis using SAS 9.4. We ran mixed models for our regression equations with patient ID as a random effect, to account for within-patient correlation between repeated measures. For pain severity, we used multiple models looking at the effects of the patient's current pain, most severe pain in the last 2 weeks, and least severe pain in the last 2 weeks. This structure of mixed model was used with both VAS current mood and VAS activity interference as outcome variables. Current pain ($F_{1, 546} = 125.61$, $p < 0.0001$), most severe pain ($F_{1, 620} = 20.50$, $p < 0.0001$), and least severe pain ($F_{1, 502} = 100.67$, $p < 0.0001$) were all significantly associated with mood. Increases in current pain had the largest effect on worsening mood, with least severe pain closely coming in having second largest effect. Most severe pain had the smallest effect on mood. Current pain ($F_{1, 515} = 132.54$, $p < 0.0001$), most severe pain ($F_{1, 615} = 58.59$, $p < 0.0001$) and least severe pain ($F_{1, 476} = 96.86$, $p < 0.0001$) were all significantly associated with activity interference. Current pain had the largest effect on activity interference and least severe pain had the next largest effect. Pain type (neuropathic versus nociceptive) was not found to have significant associations with mood or activity interference. However, when biological sex was included, males with neuropathic pain were significantly associated with both a lower mood and activity interference score than women with neuropathic pain ($F_{1, 54.1} = 10.10$, $p = 0.0024$; $F_{1, 42.9} = 6.40$, $p = 0.0152$). The primary aim of this study was to understand the significance and degree of associations between mood/activity interference and three pain dimensions: current pain, most severe pain in the last two weeks, and least severe pain in the last two weeks among patients with chronic pain. The results showed that while current pain had the greatest degree of association to mood, least severe pain came quite close to the same degree of association. Moreover, while most severe pain was significant in its own correlation to mood, it had much less of an impact compared to current and least severe pain. These findings indicate that among patients with chronic pain, it is noteworthy to focus on discovering ways to lower a patient's current and least severe pain level to improve a patient's mood. Similar findings were found when looking at correlations

between activity interference and the three different pain scores.

No. 90
The Neurology of Acquired Pedophilia
Poster Presenter: Julio Cesar Nunes
Lead Author: Pedro Maranhão Lopes
Co-Authors: Catarina Prado, Thiago Paranhos, Ricardo de Oliveira-Souza

SUMMARY:
Aims: Pedophilia consists of the persistent erotic attraction to prepubescent children, as shown by fantasies and urges that may be acted upon, in which case a diagnosis of a pedophilic disorder is made. In the present article the clinicoanatomic cases of acquired pedophilia that have been published in English, French, Portuguese and German in the medical and forensic literature up to 2019 are reviewed. Main findings: Twenty-two cases fit our inclusion criteria (Table). All but one were men. The lesions were right-sided in 7 and bilateral in 14; in only one case the injury was localized in the left hemisphere (Figure 1). Hypersexuality was present in 18 cases (Figure 2). The damaged areas were represented by a variable combination of lesions (i) in parts of the frontal, temporal and insular cortices, and (ii) the subcortical nuclei with which these cortices are connected; in most cases, the anterior hypothalamus was presumably spared. Interpretation: The valid cases indicate that damage to the right hemisphere is critical for the emergence of acquired pedophilia. This cortical region is connected to the anterior temporal lobe and brainstem nuclei by means of the uncinate fasciculus and middle forebrain bundle, respectively. As a working hypothesis, we propose that lesions of right frontotemporoinsular circuits in acquired pedophilia (i) specify the pedophilic preferences depending on the particular lesion pattern in individual cases, and (ii) provide the abnormally heightened sexual drive (hypersexuality) by releasing the dopaminergic reward system that runs in the medial forebrain bundle from its normal cortical modulation.

No. 91
Construct Validity of Personality Prototype Ratings for Adolescent and Young Adult Outpatients: Relationship With the Beck Youth Inventory
Poster Presenter: Andrew Lloyd Silverman, M.D.
Co-Authors: Shane Castro, M.D., Winnie Tsai, D.O., Meena Azizi, M.D., Greg Haggerty, Ph.D.

SUMMARY:
Background: Spitzer and colleagues found that prototype rating method is preferred by clinicians to assessing personality disorders. Prototype diagnosis has three main advantages, which include: it fits the thought process and categorization process that humans naturally use, it has greater clinical utility as compared to using the more familiar DSM classification system, and it allows for easier observation and communication with other mental health providers. The present study investigated the relationship between personality prototype ratings and the BYI. Methods: 121 patients being seen for treatment in a large teaching hospital's child/adolescent outpatient clinic and their parents were consented to a large assessment and treatment outcome study. The sample consisted of 55% female with an average age was 18.77 (SD=3.2). Their ethnicity is 35.3% Caucasian, 31.9% African American, 23.3% Hispanic, 2.6% Asian, and 6.9% identified as other. Diagnostically, 55% had a mood disorder, 19.3% ADHD, 8.3% Conduct Disorder/Oppositional Defiant Disorder, 8.3% PTSD, 0.9% Psychosis, and 8.3% other. Patients and their parent/legal guardian consented to participation in this assessment and outcome IRB-approved study. We compared 45 patients who had the clinician-rated Shedler Westen Assessment Procedure Personality Prototypes (Westen, 2002) with patient-rated Beck Youth Inventory (BYI) completed at the intake visit. BYI is a self-report that assesses adolescents on five domains: self-concept (BSCI); depression (BDI); anxiety (BAI); anger (BANI); disruptive behavior (BDBI). The Shedler-Westen Assessment Procedure-Adolescent Prototypes (SWAP-A-P) were completed by the intake clinician after a 1.5-hour psychiatric assessment interview. The SWAP-A-P contains 6 personality prototypes and 1 personality health index that the clinicians' rate from 1-5 according to fit with their assessment of the patient's personality. The intake clinician was

either the outpatient psychologist, psychology intern, or child and adolescent psychiatry fellow. The Beck Youth Inventory was completed during the patient's intake appointment. Both study measures were part of a large battery of patient self-reports, parent-reports and clinician ratings. Results: Antisocial personality prototype was negatively related to BAI scale (r=-.26). Emotionally Dysregulated PD was negatively correlated to BSCI (r=-.33), positively correlated with BAI (r=.37), BDI (r=.50), and BANI (r=.35). The Avoidant PD was related to BAI (r=.23) and BDI (r=.30). The Inhibited Personality prototype was related to BAI (r=.27) and BDI (r=.32). The Personality Health Index was related to BSCI (r=.42). Conclusions: The prototype ratings showed good construct validity when compared to the patient-reported Beck Youth Inventory. Some of our results were limited because of a small number (45) of patients we had both completed BYI and personality prototype ratings.

No. 92

Malignant Self-Regard: Relationships With Psychopathology, Anger, Attachment Styles and Perceived Social Support in a Cardiology Outpatient Clinic

Poster Presenter: Nida Khan, D.O.
Co-Authors: Greg Haggerty, Ph.D., Cassandra Mary Nicotra, 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/Narcisistic 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), Experiences in Close Relationship-Short Form (ECF-S), the Multidimensional Scale of Perceived Social Support (MSPSS), and the SPECTRA: Indices of Psychopathology. Results: Results show that malignant self-regard was negatively correlated with perceived social support from family, friends and overall social support. Malignant self-regard was also found to be positively correlated to anger, depression, anxiety, social anxiety, post traumatic stress, severe aggression, antisocial personality, paranoid ideation, general psychopathology index scores and negatively correlated with SPECTRA's psychosocial functioning. Malignant self-regard was also positively correlated to attachment avoidance and anxiety. 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. 93

WITHDRAWN

No. 94

Physician Well-Being Amidst Covid-19: Analysis of Resource Provision by National Medical Societies

Poster Presenter: Chris Ferry

SUMMARY:

Background: Prioritization of physician well-being amidst the COVID-19 pandemic has garnered acknowledgment and support from many corners of the medical community. However, this voice must continue to become stronger and more consistent across all medical specialties, regardless of whether they serve in a point-of-care capacity. The objective

of this systematic review was to assess the extent and timeliness for which national medical societies have addressed physician well-being amidst the COVID-19 pandemic via the provision of online/digital resources. **Methods**: A systematic review of the official websites of national medical societies was performed, specifically the specialty societies in the American Medical Association (AMA) House of Delegates (n=123). Each organizational website was screened for COVID-19 content, as well as content specific to physician well-being amidst COVID-19. When available, the release/posted dates for these content/resources were recorded and the earliest identifiable dates were noted. The nature of the well-being content and all unique resources were recorded. **Results**: Public COVID-19 related content was identified on 85.4% of websites. A dedicated COVID-19 resource/information page was identified on 74.0% of websites. Of those organizations that acknowledged COVID-19, 39% provided content related to physician well-being. Earliest COVID-19 related content was 56.9±13.1 days after confirmation of the index U.S. case, versus 70.8±17.2 days for earliest posted well-being content (p<0.01). Those organizations that included well-being content displayed a significantly shorter time to earliest COVID-19 content (p=0.03). Earlier COVID-19 content was associated with earlier well-being content (p= 0.03). Collectively, 269 discrete external resources involving well-being were referenced across 31 organizations. The Headspace phone application was most common (11 societies). Five organizations provided helpline (i.e. suicide) contacts. **Conclusion**: Most organizations provided COVID-19 related content/resources, however, only a minority provided physician well-being content/resources. Medical organizations must continue to prioritize physician well-being in the form of readily available online resources, regardless of specialty.

No. 95

Pregnancy and Motherhood Among Creighton Resident Physicians

Poster Presenter: Rebecca J. Leval, M.D.
Co-Authors: Amanda Emmert, D.O., Stephanie Bennington, D.O., Alisandrea Elson, M.D.

SUMMARY:
Background: Medical residency poses unique challenges to resident-physician parents, particularly mothers. According to a national survey, approximately 40% of residents planned to have children during their training.1 Despite the frequent occurrence of pregnancy and parenthood during residency, leave policies are often ill-defined, inadequate, and unstandardized.2 Most studies evaluating the challenges faced by resident mothers have been department specific, but the majority disclose poor awareness of program policies and a lack of uniformity regarding policies relating to such matters as length of leave, childcare availability, and the availability of lactation support.3 As a consequence of the challenges faced by female resident mothers, as compared to those faced by male colleagues, female residents are more likely to perceive the potential of having a child as career-threatening, less likely to plan to have children during residency, and more likely to postpone having children.4 Objective: To determine whether the creation of a digital manual containing all institutional parental leave/return-to-work policies improved knowledge of policies and decreased stress for resident physicians. Methods: We created a single manual for all university resident physicians which contained all parental leave and return-to-work policies. A pre- and post-intervention, cross-sectional, anonymous, online survey was sent to all residents at our local institution to evaluate the current understanding of university policies/procedures regarding parental leave/return-to-work accommodations. The survey included questions regarding challenges and perceived stress for resident mothers. IRB approval was obtained for this project through Creighton University. The survey is currently active. Once closed, we will use statistical analysis to determine whether our intervention increased awareness of leave policies for resident physicians. Results & Conclusions: Based on similar studies, we anticipate low levels of awareness of parental leave/return-to-work policies/procedures amongst residents pre-intervention, and an improved level of understanding post-intervention. We also anticipate a better understanding of the challenges faced by female residents including: increased risk of complications for pregnant residents as compared to

male colleagues, lower satisfaction with decreased length of maternity leave, obstacles surrounding lactation upon return-to-work resulting in earlier termination of breastfeeding, and increased stress in relation to child care and guilt relating to perceived increased workload on resident colleagues. Final conclusions will be drawn based on an analysis of the results of the pre- and post- intervention surveys.

No. 96

Short-Term Psychological Impact Among Physicians During the Covid-19 Pandemic

Poster Presenter: Natalie Martinez-Sosa
Co-Author: Dante Durand, M.D.

SUMMARY:

In December 2019 multiple cases of pneumonia caused by a novel coronavirus (COVID-19) emerged from the city of Wuhan, China[1], which has since spread worldwide. This pandemic has brought many challenges, particularly, early identification and isolation of suspected and diagnosed individuals, treatment consensus, and provision of medical supplies[2]. The introduction of quarantines and "shelter in place" orders bring with themselves an unpleasant experience for those who undergo it as there is a change in daily life routines, relative loss of freedom, and uncertainty about disease status[3]. Literature on the consequences of epidemics on mental health has usually been limited to the sequelae of the disease itself[4] and rarely examines the effects of social distancing and other restrictions imposed to limit spread of infection. Preliminary studies indicate that symptoms of anxiety, depression, and self-reported stress are common psychological reactions to the current pandemic[5]. An important aspect of this pandemic that might be easily overlooked is the psychological impact it brings to healthcare workers, as they are facing greater risks of exposure, heavier workloads, in addition to the social and emotional stressors faced by all people[6]. The primary aim of this study is to assess the level of anxiety among physicians working in a non-profit, tertiary care hospital and teaching facility during the COVID-19 pandemic, as there is a void in the literature related to psychological effects in healthcare workers. An anonymous online survey will be distributed to residents and fellows to obtain demographics and measure anxiety using a validated tool (the Hamilton Anxiety scale). Participants will be asked to identify their level of concern with possible sources of anxiety. This study is currently ongoing, however we hypothesize anxiety will be increased in physicians working during the pandemic, as well as sleep disturbance and fear, regardless of COVID status. We posit that anxiety might be more severe if there is a prior history of anxiety disorder. We also hypothesize that level of concern with access to appropriate personal protective equipment, exposure to COVID-19 at work, and availability of testing, will be elevated and may contribute to distress.

No. 97

WITHDRAWN

No. 98

Comparing Outcomes of Oral Antipsychotics Versus Long-Acting Injectable Antipsychotics

Poster Presenter: Austin Goebel, D.O.
Co-Authors: Suporn Sukpraprut-Braaten, Ph.D., Robert Wooten, M.D., Ronald Wauters, M.D.

SUMMARY:

BACKGROUND Schizophrenia and Schizoaffective disorders are relatively common diagnoses. Both disorders feature periods of delusions, hallucinations, disorganized speech, disorganized behavior, and negative symptoms1. Schizoaffective disorder is similar, but also has mood symptoms for the majority of the duration of the active and residual periods of the illness1. Several studies have looked at comparing the efficacy of oral versus long-acting injectable antipsychotic medication in the past however the results have been inconclusive2-4. Our hypothesis was that the patients who were discharged on a long-acting injectable antipsychotic would have a significantly lower readmission rate since medication non-compliance is a very serious problem for this population and the LAI guarantees that they have medication for most or all of the 30 days after discharge. METHODS This study was a retrospective cohort study designed to compare readmission rates between injectable long-acting antipsychotics vs. oral antipsychotics. The

population of interest was adults ages 18-65 who were admitted at an inpatient psychiatric facility, were diagnosed with either schizophrenia or schizoaffective disorder, and received either oral Abilify® (aripiprazole), Aristada® (Aripiprazole Lauroxil), Risperdal® (Risperidone), and Invega Sustenna® (Paliperidone Palmitate). The measurable outcomes were 30-day and 90-days readmissions, hospital length of stay (LOS), and hospitalization cost. Patients were separated into four groups based on their treatments. We compared the outcomes of Aristada® vs oral Abilify®, and Invega Sustenna® vs oral Risperdal®. RESULTS There were 307 patients included in this study. Of the 307 patients, 36 (12%) received Aristada®, 81 (26%) received oral Abilify®, 132 (43%) received Invega Sustenna®, and 58 (19%) received oral Risperdal®. There was no evidence to conclude that the likelihood to 30 days readmission for Aristada® is lower than Abilify® group, after adjusting for age, sex, and smoking status (OR=0.667; 95% CI=0.064, 6.95; p=0.735). There was no evidence to conclude that likelihood to 30 days readmission for Invega Sustenna® is lower than Risperdal® group, after adjusting for age, sex, and smoking status (OR=0.101; 95% CI=0.353, 4.38; p=0.734). There was evidence that giving Aristada® instead of oral Abilify® increased both the LOS (p=0.0247) and hospitalization cost (p=0.0184). There is no evidence to show that giving Invega Sustenna® instead of Risperdal® increased the LOS and cost. CONCLUSION Our study did not find conclusive evidence that giving either Aristada® or Invega Sustenna® could reduce 30 or 90-day readmission rates. For Aristada®, the average LOS and hospitalization costs increased significantly compared to Abilify®. Some patients required 45-day court-ordered holds in order to obtain a long-acting injection, which lead to longer LOS. The study is limited to three years of data.

No. 99
WITHDRAWN

No. 100
Tianeptine an Evolving Mechanism of Action for the Treatment of Depression
Poster Presenter: Garrett Rossi, M.D.

SUMMARY:
Major depressive disorder (MDD) is a chronic, debilitating psychiatric illness, the etiology of which has yet to be fully elicited. It's been over 50 years since the monoamine hypothesis of depression was described. Majority of the current psychopharmacological interventions for depression are based on this hypothesis. However, remission rates for MDD remain low, and often there is significant delay between starting a medication and clinical improvement in depressive symptoms. As a result, there is great interest is finding new drug targets and alternative mechanisms of action (MOA) to treat depression. Tianeptine is considered to be an atypical drug based on its mechanism of action. It provides anxiolytic and antidepressant effects, with minimal sedation, anticholinergic, or cardiovascular side effects. It does not increase or decrease the reuptake of serotonin like many traditional antidepressants. Research on tianeptine has revealed several potential explanations for its antidepressant effects. Tianeptine may work through indirect alteration and inhibition of glutamate receptor activity at the AMPA and NMDA receptors. It may also affect neural plasticity by increasing the release of brain-derived neurotrophic factor (BDNF). More recent research has described weak agonist activity at the Mu opioid receptors which may explain the release of dopamine and modulation of glutamate activity. Tianeptine provides a novel MOA for the treatment of depression that may provide future targets for drug design.

No. 101
Connecting With One's Transplant Recipient: Adding a Burden or Creating a Positive Relationship?
Poster Presenter: Ariella Maghen, B.A.
Co-Authors: Sarah Connor, M.P.H., C.H.E.S., Lorna Kwan, M.P.H., Sally Maliski, Ph.D., R.N., Jeffrey L. Veale, M.D.

SUMMARY:
Background: Non-directed donors (NDDs) play a pivotal role in addressing the substantial need for kidney transplants in the United States (U.S.) by donating to a stranger in need. Currently, the process for a donor-recipient pair to meet each

other post-transplant surgery is conditional. While some NDDs prefer to remain anonymous to avoid emotional issues or disappointment if donor expectations are not met when seeking contact with their recipient. However, there is little research regarding the impact of these donor-recipient relationships on NDD's post-donation emotional well-being. The purpose of this study was to examine the expectations and experiences of 31 NDDs with their transplant recipient and the impact of this donor-recipient relationship on their post-donation experience. Methods: A trained qualitative interviewer conducted in-depth telephone interviews with participants to explore their kidney donation experiences. We carried out content analysis to create and define categories relating to the NDD donation experience to code the interview transcripts. Results: We identified experience with transplant recipient as a major category in the participants' donation process. We found that 16 NDDs expressed no expectations or desire in meeting their recipient, to avoid forming an emotional attachment or imposing on their recipient. However, we found that out of 18 NDDs who were in contact with their recipient, 10 of these NDDs mentioned that communicating with their recipient was a positive experience that contributed to their emotional stability post-donation. Discussion: The decision for a living kidney donor to interact with their recipient may be difficult to make, especially post-surgery, given the possibility of finding out that the transplant resulted in a poor outcome for the recipient. Moreover, given the altruistic motivations of NDDs, they may experience more hesitation to connect with their recipient, as they do not wish to burden their recipient or receive recognition for donating. However, the NDDs who chose to connect with their recipient reported that forming this relationship enhanced their post-donation experience and reaffirmed their decision to donate. Our findings can inform mental health professionals on the need to provide more support for NDDs who might struggle with the decision to respond to their recipient, as forming a donor-recipient relationship may positively contribute to a NDD's emotional well-being post-donation.

No. 102

Greater Feelings of Conflict About Donating: How Can We Better Support Potential Non-Directed (Altruistic) Living Kidney Donors?

Poster Presenter: Ariella Maghen, B.A.
Co-Authors: Sarah Connor, M.P.H., C.H.E.S., Sally Maliski, Ph.D., R.N., Jeffrey L. Veale, M.D., Lorna Kwan, M.P.H.

SUMMARY:
Non-directed (altruistic) living kidney donors (NDDs) play a valuable role in alleviating the overburdened kidney transplant waiting list. Aside from donating to a stranger in need of a kidney transplant, NDDs can help initiate kidney donation chains, which can extend the generosity of their single kidney donation to help resolve organ incompatibility issues between established donor-recipient pairs. Thus, NDDs play a pivotal role in reducing the wait time for patients awaiting transplantation. To donate, NDDs undergo a psychosocial evaluation with a transplant psychiatrist in the U.S. to minimize concerns about informed consent, coercion, and post-donation psychosocial outcomes. During the decision-making process, NDD candidates often also seek advice and support from family and friends to make an informed decision to donate. Our sample consisted of 31 NDDs who donated a kidney to a stranger in need and 22 potential NDDs (PNDDs) who did not successfully complete the donation process. A trained qualitative interviewer conducted in-depth telephone interviews with participants to explore their kidney donation decision-making process and administered quantitative surveys to collect demographics and decisional conflict data. Participants' perceived uncertainty of their kidney donation decisions was measured using the Decisional Conflict Scale, which contains five subscales that cover perceptions about having felt (1) informed, (2) uncertainty, (3) clarity about personal values, (4) social support, and (5) that they made a practical decision. Each subscale was scored by first converting the Likert responses to a 0-100 scale, and then summing and averaging the responses. Scores range from 0 to 100, where higher scores indicate a worse perception about the category. Our results indicate that during the decision-making process, PNDDs felt greater decisional conflict overall and less certainty about

having made the best decision to donate than the NDDs. These findings can help advise psychiatric and transplant teams to improve access to support services for PNDDs undergoing the decision-making process, which can assist these individuals in making an informed and appropriate decision to reduce conflict associated with their decision to donate.

No. 103

Resident Mental Well Being During the Covid-19 Pandemic: A New York City Safety Net Hospital Experience

Poster Presenter: Anca E. Toma, M.D.
Co-Author: Sonu Sahni, M.D.

SUMMARY:

Background: The novel coronavirus (Covid-19) pandemic has caused an unprecedented strain on healthcare systems with the USA being the global leader in cases. East Brooklyn was one of the hardest hit areas with Brookdale Hospital (BUHMC) a designated safety net hospital at the center. Enormous strain was placed on healthcare workers including resident physicians with initial focus was placed on management/outcomes. However, little emphasis was placed on resident mental health and emotional wellbeing. We decided to study the mental health and emotional well-being along with contributing factors of resident physicians at BUHMC. Materials and Methods: To assess resident mental, emotional and physical wellness during the Covid-19 pandemic, as part of a wellness workshop across five ACGME residency programs, a hybrid multiple-choice survey (Strongly Disagree (1) to Strongly Agree (5)), Likert scale (Scale of 1-10)) was created assessing demographics, training program, as well as mental health and emotional wellbeing. Data was collected on clinical status of Covid-19 infection status and any symptomatology as well. We used the Pearson's $\chi 2$ tests of independence to examine the difference, if any, between means of questions and demographics for the dichotomous variables and the Student t-test for independent groups and the continuous variables. Results: There were a total of 105 (62 Males, 41 Females, 1 N/A) residents, average age of 32.6±4.3, across 5 residency programs (65 Internal Medicine (IM), 20 Psychiatry, 8 Emergency Medicine (EM), 3 Surgery/OMFS), 9 N/A). Emotional wellbeing was 5.7±2.1 out of 10 with a significant difference between IM vs others (5.4 vs 6.5, $p<.001$). Overall burnout was 7.74±2.2 out of 10. There was a significant difference in burnout between IM residents vs others (8.2 vs 6.8, $p<0.01$). Burnout was higher in females than males (8.3 vs 7.4, $p=0.04$). Nearly all stated that they or someone they knew lost someone to Covid-19. Job satisfaction was 2.6±1.3 out of 5 and similar across all programs with residents neutral on if they consider themselves a better physician (3.3±1.3). Only 41% (42/103) of residents were tested for Covid-19 with 48% (20/42) being positive. Nearly all respondents experienced at least one coronavirus symptom. An increase of negative emotions including fear (47%), hopelessness (43%), anger (34%), loneliness (30%) with 2 reporting suicidal ideation was noted. Availability of mental health resource was found to be neutral amongst all residents (3.0±1.2) with psychiatry residents having a significantly more knowledge of available mental health resources. Conclusion: Mental health and emotional well-being of residents were greatly affected by the Covid-19 pandemic with significant differences between programs and subgroups. Presence of negative emotions as well as psychiatric symptoms were present in nearly all residents. The authors have no financial disclosure to report.

No. 104

Associations Between Sleep Quality and Loneliness in Schizophrenia: The Mediating Role of Psychopathology

Poster Presenter: Simone P. Phillips
Co-Authors: Dilip V. Jeste, M.D., Ellen Lee, M.D.

SUMMARY:

Loneliness is the distress that arises from a perceived lack of social connectedness and has been linked with increased morbidity and mortality in the general population. Loneliness predicts poor sleep quality in non-psychiatric populations, and sleep may be a key driver of the health consequences associated with loneliness. Less is known about the loneliness-sleep relationship among individuals with schizophrenia, a particularly high-risk population for both loneliness, poor sleep, and negative health

outcomes. This cross-sectional study examined loneliness, sleep, and potential mediators (depression, positive, and negative symptoms). **Methods**: Participants were recruited from a longitudinal study on aging in schizophrenia in the San Diego area. The present study includes 110 people with schizophrenia (mean age=51.2, 45.5% female age range 27-69) and 92 age and sex matched non-psychiatric controls (NCs) (mean age=50.5, 53.3% female age range 28-68). Staff administered the UCLA Loneliness Scale (UCLA) to measure loneliness, specific sleep-related questions to measure sleep quality, Patient Health Questionnaire-9 (PHQ-9) for depression and Scales for the Assessment of Positive and Negative Symptoms (SAPS and SANS respectively). Statistical analyses included t-tests and chi-squared analyses to compare demographic variables as well as general linear models to assess the loneliness-sleep link. **Results**: Individuals with schizophrenia had significantly worse sleep quality (p=0.004, d=.42) and higher loneliness scores (p<0.001, d=-1.09) compared with NCs. In the entire sample, poor sleep quality was significantly associated with higher loneliness scores (B =-2.47, SE =.77, p=0.002, ηp2 =.05), controlling for age, diagnostic group, sex, race, and sleep medication use. The association between sleep quality and loneliness was no longer significant when depression was added to the model. In people with schizophrenia, the loneliness-sleep relationship remained significant when controlling for negative symptoms (B =-1.99, SE =.88, p=0.03, ηp2 =.05), but not when controlling for positive symptoms. **Conclusion**: Individuals with schizophrenia have worse sleep quality and higher loneliness scores. There is a strong link between sleep quality and loneliness in both diagnostic groups. Depression and positive symptoms (in schizophrenia) appear to mediate the observed relationship between sleep and loneliness. Further investigation with objective sleep measures and longitudinal assessments are warranted to better understand the sleep-loneliness relationship and associated health outcomes.

No. 105

Sleep Disturbances and Loneliness: Objective Sleep Measures and Links to Loneliness Scores

Poster Presenter: Neha Viseshasai Kidambi
Co-Authors: Ellen Lee, M.D., Dilip V. Jeste, M.D.

SUMMARY:
OBJECTIVE: Sleep disturbances are a well-characterized feature of schizophrenia1, and have also been linked to loneliness in the general population2. However, research is sparse on the link between loneliness and sleep among persons with schizophrenia (PwS). This cross-sectional study examined objective and subjective sleep assessments as well as loneliness scores in PwS and non-psychiatric controls (NCs). We hypothesized that PwS would have worse sleep measures and higher loneliness scores than NCs, and worse loneliness scores were associated with worse sleep measures in both groups. METHODS: The study sample included 25 PwS (mean age 52.0, age range 32-69 years, 48% women) and 38 age- and sex-comparable NCs. Objective sleep assessment was derived from wrist-worn actigraphy for 12 consecutive nights (total sleep time (TST), sleep efficiency, wake after sleep onset (WASO), bedtime (BT), and wake time (WT)). Variability of sleep was calculated as the standard deviation of the objective sleep measures. Subjective sleep was assessed with the Pittsburgh Sleep Quality Index (PSQI). The loneliness variables included UCLA Loneliness Score. Demographics and ESS Emotional score were also assessed. SPSS was used to conduct T-tests, non-parametric Mann-Whitney U- tests, and linear models, for the sleep and loneliness variables.

No. 106

The Impact of Cannabidiol on Psychotic Symptoms and Cognitive Impairment in Patients With Early Psychosis

Poster Presenter: Sreeja Kodali, B.S.
Co-Authors: Suhas Ganesh, M.B.B.S., Deepak Cyril D'Souza, M.D., M.B.B.S., Mohini Ranganathan, M.B.B.S.

SUMMARY:
Background/Aims: Only around 60% of patients with schizophrenia respond to current treatments (Stone, Raffin, Morrison, & McGuire, 2010). Emerging literature demonstrates that cannabidiol (CBD), found in cannabis, may have potential to improve psychotic symptoms and cognition in schizophrenia although the results have been mixed (Boggs et al.,

2018; Leweke et al., 2012; McGuire et al., 2018). CBD may potentially be more beneficial in early stages of schizophrenia, but this is yet to be systematically tested. We aimed to study the antipsychotic and cognitive effects of CBD in patients with early psychosis. Methods: Seventeen subjects were enrolled in an eight-week, 2-period, randomized, placebo-controlled crossover trial to assess CBD's impact on psychosis and cognition. Psychosis symptoms were measured using the Positive and Negative Syndrome Scale (PANSS). Cognition was measured using the MATRICS Consensus Cognitive Battery (MCCB). Secondary outcomes included Clinical Global Impression of Severity (CGI-S), Clinical Global Impression of Improvement (CGI-I), and Quality of Life Scale (QLS). Statistical analyses were conducted using linear mixed models and longitudinal nonparametric tests. Psychophysiological measures of information processing were collected for exploratory EEG analyses. Results: Seventeen subjects (mean age 25, mean baseline total PANSS 83) were included in the final analyses. Placebo treatment over time (not CBD) was associated with improved total and general PANSS ($p = 0.0151$ and $p = 0.0195$). CBD over time was not associated with any significant change in positive PANSS ($p = 0.0843$), negative PANSS ($p = 0.5702$), CGI-S ($p = 0.700$), CGI-I ($p = 0.927$), MCCB composite score ($p = 0.895$), MCCB Neurocognitive subscore ($p = 0.132$), or QLS total score ($p = 0.237$). Conclusions: This cross-over pilot study on CBD treatment in early psychosis patients demonstrated no significant improvement in psychosis symptoms, cognitive domains, or quality of life. We previously demonstrated no psychotic symptom or cognitive benefits of CBD in a sample of chronic schizophrenia patients, while others have shown some benefits. Further investigation into CBD's antipsychotic and cognitive enhancing potential, particularly in early psychosis is needed.

No. 107

Underutilization of Clozapine and Clinical Outcomes in Schizophrenia Spectrum Disorders in a Population-Based Sample

Poster Presenter: Jinal Desai, M.D.
Co-Authors: Balwinder Singh, M.D., M.S., James L. Roerig, Pharm.D.

SUMMARY:
Background: Clozapine is approved for treatment-resistant schizophrenia (TRS) and reduction in risk of recurrent suicidal behavior in patients with schizophrenia/schizoaffective disorder. Despite its proven efficacy, actual rates of prescriptions have remained low. **Methods**: We conducted a population-based historical cohort study where we used ICD-9 code 295 to identify adult patients (≥18 years old) with schizophrenic disorder who received care between June 1, 2009, and June 30, 2014, at a regional Human Service Center in Fargo, North Dakota. The schizophrenia diagnosis was confirmed after reviewing medical records by trained psychiatry residents in collaboration with a board-certified psychiatrist, according to the (DSM)-IV-TR or DSM-V diagnostic criteria. As per standard guidelines, the diagnosis of TRS was defined as "an inadequate response to sequential treatment with two different antipsychotics at an adequate dose, duration and adherence." Only patients with a diagnosis of schizophrenia and schizoaffective disorder were included. Inter-rater reliability for diagnoses of schizophrenic disorder between the two reviewers was excellent, $\kappa = 0.93$ (agreement of 97.5 %). Inter-rater reliability in making diagnosis of TRS for final clozapine impression among the two reviewers was excellent, $\kappa = 0.77$ (agreement of 95%). **Results**: A total of 490 adult patients met the inclusion criteria; 65% were male, 85% Caucasian, mean age 48.6±13.5 years, mean BMI 31.3±8.3, 44.3% had schizophrenia and 55.7% had schizoaffective disorder. Clozapine was prescribed to only 13.9% (n=68) of patients with schizophrenic disorder. Of the patients who met the criteria for TRS (n=338), only 20.1% of patients were prescribed clozapine. Of the patients who met the TRS criteria, patients on clozapine were older (51.2±12.4 vs 47.6±13.0 years), had lesser psychiatric hospitalizations (4.3±3.8 vs 6.0±8.1, $p=0.02$), lower prevalence of comorbid substance use disorder (33% vs 53%, $p =0.006$), higher prevalence of OCD (7% vs 2%, $p=0.049$), longer duration of illness ≥ 10 years (93% vs 84%, $p=0.06$), on higher number of psychotropic medications (mean 3.0±1.5 vs 2.5±1.5, $p=0.032$), and antipsychotics medications (1.6±0.6 vs 1.2±0.6, $p=<0.001$) as compared to patients who were not on clozapine. **Conclusion**: The study findings are consistent with the national trend of

underutilization of clozapine. The patients on clozapine had lower rates of substance use disorder and lesser inpatient psychiatric hospitalizations. These findings highlight an urgent need to explore avenues to increase access to clozapine such as training residents in a clozapine clinic as a center of expertise.

No. 108

Viral Respiratory Infections and Psychosis: A Review of the Literature and the Implications of Covid-19

Poster Presenter: Stephanie Susan Kulaga, M.D.
Co-Author: Christopher Miller, M.D.

SUMMARY:
Background: The historical association between respiratory infections and neuropsychiatric symptoms dates back centuries, with more recent literature highlighting a link between viral infections and schizophrenia. Neuroinvasive and/or systemic infections are thought to increase risk for psychopathology via inflammatory mechanisms, particularly when exposure occurs during critical neurodevelopmental windows. Maternal influenza infection during pregnancy has been associated with the development of schizophrenia in offspring via maternal immune activation. Viral infections in neonates, children, and adolescents have also been associated with later development of schizophrenia. Several human coronaviruses (HCoVs) have been associated with psychotic disorders and increasing reports of the neuropsychiatric manifestations of COVID-19 suggest it has neuroinvasive properties similar to those of other HCoVs. These properties, in conjunction with its ability to generate a massive inflammatory response, suggest that COVID-19 may also contribute to future psychopathology. This poster will review the neuroinvasive and inflammatory properties of COVID-19 thought likely to contribute to later development of psychotic disorders. Methods: A search was conducted of the PubMed database with search term "COVID-19" from December 1, 2019 to April 30, 2020. Titles and abstracts were reviewed for articles relevant to neuroinvasive properties, neuropsychiatric sequelae, or inflammatory properties of COVID-19. Hand searches of the references lists of selected articles were then conducted to find additional sources. Articles were then reviewed with the aim of identifying properties of COVID-19 with potential to contribute to the pathogenesis of schizophrenia. Results: Among the HCoVs, the SARS-CoV-2 virus has both neuroinvasive and inflammatory properties implicated in the pathogenesis of schizophrenia. Its cell entry receptor (ACE2) is expressed in neurons and glia, somewhat preferentially in areas of the brain implicated in schizophrenia, and it has been reported to cause central demyelination. The anosmia widely reported as a symptom of the virus may indicate neuroinflammation. COVID-19 causes a systemic inflammatory response with elevation in inflammatory markers linked to schizophrenia, including in some pediatric cases. Pregnant mothers with COVID-19 were found to have elevated inflammatory markers, suggesting potential neuroimmunomodulatory effects on the fetus via maternal immune activation. Placental ACE2 expression and inflammatory/vascular placental pathology in COVID-19 may also have implications on fetal neurodevelopment. Conclusion: COVID-19 shares many of the inflammatory properties linking other respiratory viruses to the development of psychosis and has potential to lead to similar long-term sequelae, particularly in those exposed in utero or early life.

Poster Session 8

No. 1

Attitudes of Patients and Public Regarding Psychiatric Electroceutical Interventions for Treatment-Resistant Depression

Poster Presenter: Maryssa Mary Catherine Gilbert, M.A.
Co-Authors: Eric Achtyes, M.D., M.S., Robyn Bluhm, Ph.D., Aaron McCright, Ph.D., Laura Y. Cabrera, Ph.D.

SUMMARY:
Background: Psychiatric Electroceutical Interventions (PEIs)—designed to treat psychiatric conditions with electrical stimuli—may be especially prone to misconceptions and stigma. Knowledge of individuals' attitudes and beliefs about PEIs is important for at least two reasons: (1) these views influence help-seeking behavior and (2)

professionals likely should consider these views in their treatment recommendations. Methods: As part of a larger study to assess different stakeholders' ethical views about PEIs, we conducted semi-structured key informant interviews with 16 individuals living with depression and 16 non-depressive members of the general public. We used a purposive sampling approach to recruit potential participants based on eligibility criteria. We performed qualitative content analysis of interview transcripts to identify major themes on important neuroethical considerations across the groups. In this poster, we will focus on experience with, knowledge of, and attitudes toward the use of three PEIs for treatment-resistant depression (TRD): electroconvulsive therapy (ECT), transcranial magnetic stimulation (TMS), and deep brain stimulation (DBS). Results: Six patients (6/16) had some experience with at least one PEI. The majority of the public (14/16) had minimal-to no-knowledge of PEIs. Overall, both patients (6/16) and members of the public (8/16) had mixed and cautionary attitudes about PEIs. Patients had the most experience with ECT, and the public had the most knowledge about ECT, and both groups expressed an overall negative attitude toward ECT. Patients commonly described the treatment as scary, traumatic, or intense, while members of the general public often referenced One Flew over the Cuckoo's Nest. Patients with TMS experience were more likely than were patients without such experience to hold a positive attitude toward the intervention. Each member of the general public asked about TMS (4/4) stated that TMS may be a viable option only if medication was not effective. Two-thirds of patients (6/9) asked about DBS had a negative attitude toward the treatment, commonly describing it as scary or invasive. The other three patients asked about DBS, including the only one with experience, viewed it positively. Each member of the general public asked about DBS (3/3) held cautionary views toward the treatment, questioning its safety and efficacy, while also perceiving its familiarity to a cardiac pacemaker. Conclusion: The majority of patients had experience with at least one PEI, yet there was an overall lack of knowledge of PEIs among the general public. The notion that not all PEIs are viewed equally by patients and the general public suggests the need for unbiased education to fill the gaps in knowledge among popular media, the scientific literature, and perceptions of those who may benefit from these treatments. This study was supported by the National Institutes of Health BRAIN Initiative.

No. 2

Intermittent Theta Burst Stimulation (iTBS) Has Similar Effectiveness to 10 Hz Repetitive Transcranial Magnetic Stimulation (rTMS) in Treating Major Depressive Disorder

Poster Presenter: Nathen Spitz

SUMMARY:

Intermittent Theta Burst Stimulation (iTBS) Has Similar Efficacy to 10 Hz Repetitive Transcranial Magnetic Stimulation (rTMS) in Treating Major Depressive Disorder Nathen Spitz, Patrick Ten Eyck, Krystal Nizar, Nicholas Trapp Introduction: Repetitive transcranial magnetic stimulation (rTMS) is an FDA-approved therapy for major depressive disorder. Transcranial magnetic stimulation generates magnetic fields that induce electrical currents to increase activity and excitability in regions of the brain, like the left dorsolateral prefrontal cortex (DLPFC), that are hypoactive in people with depression. The 10 Hz rTMS protocol includes 3,000 pulses over a 37.5-minute session. Intermittent theta burst stimulation (iTBS) delivers 600 pulses in just over three minutes. Our study aims to investigate if there are any potential differences between 10 Hz rTMS and iTBS in treating major depressive disorder. Methods: This retrospective cohort study consisted of 105 participants who received 20 to 36 open-label 10 Hz rTMS or iTBS treatments to the left DLPFC between December 2017 and February 2020. Participants included patients (age ≥ 18) with a diagnosis of major depressive disorder that were receiving psychiatric care at the University of Iowa Hospitals and Clinics. Exclusion criteria included age ≤ 18, patients with epilepsy, or patients with implanted ferromagnetic equipment in their face or skull. Results: The final patient population was comprised of 105 adults (59% female, mean age 52.08 ± 16.25) with a diagnosis of major depressive disorder. Scores from the PHQ-9 were our primary outcome measure. Using Chi-Square analyses to compare categorical

outcomes of treatment efficacy, we found no significant differences in response to treatment, defined as a > 50% improvement from baseline, X2 (1, N = 105) = 0.064, p = 0.800; for those who had achieved remission, defined as a score less than 5, X2 (1, N = 105) = 0.744, p = 0.389; and for those who had achieved a minimum clinically important difference (MCID), defined as a change from baseline of more than 5 points, X2 (1, N = 105) = 0.364, p = 0.546. To investigate differences between continuous outcomes of treatment efficacy, we used Independent Sample t-Tests and found that the overall score change of the PHQ-9 from baseline to end of treatment in 10 Hz rTMS (M = -7.38, SD = 6.778) and iTBS (M = -7.89, SD = 7.098) was non-significant, t(103) = 0.362, p = 0.718, and we found that the percent change in the PHQ-9 from baseline to end of treatment in 10 Hz rTMS (M = -41.94, SD = 36.15) and iTBS (M = -39.00, SD = 38.55) was non-significant, t(103) = -0.270, p = 0.788. Conclusion: Our study determined that there were no discernable differences between 10 Hz rTMS and iTBS therapy when delivered to the left DLPFC in treating patients with major depressive disorder. As no significant differences were found, expanding the option of the more time efficient iTBS modality could greatly increase capacity to treat patients.

No. 3
WITHDRAWN

No. 4
Correlation Between Internet Search Engine Queries and Suicide Rates in Brazil
Poster Presenter: Matheus Flores
Co-Authors: Bianca Flores, Bruna Campos Souza, Larissa Yano Souza Martins, Tatiana Mourao-Lourenco, M.D.

SUMMARY:
Background: Suicide represents a major public health issue, which affects people in almost all stages of life. Close to 800 000 people die due to suicide every year and it is the second leading cause of death among 15-29 year olds globally (1). Evaluating suicide risk is important to promote effective and timely prevention strategies, however, the usual lag of official reports limits the response capability. Several studies have looked at internet searches to propose real-time methods to access suicide trends with conflicting results (2,3,4,5,6,7,8). In this study, we evaluated the correlation between suicide-related keywords internet searches and suicide rates in Brazil. Methods: monthly suicide rates were obtained from DataSus (oficial Brazilian Health Ministry data platform). Search queries volumes were extracted from Google trends. The terms selected were "suicídio" (suicide) and "depressão" (depression) due to recurrence and efficacy found on related works. We performed a time series analysis with data from 01/2014 to 12/2019, running Pearson correlations with the STATA software. Results: We found a moderate correlation between suicide rates on general population and the term suicide (correlation coefficient = 0.4904, P < 0,00001) and a strong correlation with depression (correlation coefficient = 0.6343, P < 0,00001). When considering the younger age group (10 to 29 years old) the correlations were higher for both terms: suicide (correlation coefficient = 0.5365, P < 0,00001) and depression (correlation coefficient = 0.7258, P < 0,00001). Conclusion: We found a significant correlation between the search queries and the suicide rates, which may serve as evidence for the potential of this method to evaluate in real-time the suicide risk in Brazil. The higher correlations found in the younger group may indicate that they manifest a higher propension to engage in web searches related to personal mental health issues. Thus, this real-time suicide assessment method could be especially efficient when applied to this specific age group. Further research should be developed to validate and enhance this method. One possibility for future studies is to complement the Google trends data with data mining from social networks such as Twitter, Instagram and Facebook.

No. 5
Firearm-Related Internet Searches as a Correlate of Future Firearm Suicides: Cross-Correlation Analyses of Google Search Volumes and Suicide Rates
Poster Presenter: Angeline Pham, M.D.
Co-Authors: Jooyoung Lee, M.D., M.S., Christopher Miller, M.D.

SUMMARY:
Background: No previous study has investigated correlations between monthly Google search volumes (MGSVs) of suicide-related search terms and suicide-method specific monthly suicide rates (MSRs). This study examined if the trends in MGSVs of suicide-related terms preceded the variations in method-specific MSRs. Methods: MGSVs of 97 candidate suicide-related terms were obtained by averaging 10 time-series data per term retrieved from Google Trends. Robust time-series analysis methods were applied to MGSVs and firearm-, poisoning-, and asphyxiation-specific MSRs in the United States between 2004 and 2017. Cross-correlation coefficients between MGSVs and method-specific MSRs were calculated at lags of -3 to -1 (months). In the main analysis, the Benjamini-Hochberg procedure was applied to determine significant correlations while minimizing false-positive findings. Afterwards, a sensitivity analysis identified the cross-correlations reproducible in two different time spans. Results: Fifty-six search terms with no invalid MGSV data were analyzed. MGSVs of 14 terms correlated with firearm-, poisoning-, or asphyxiation-specific MSRs in one or more lags. In the sensitivity analysis, two terms consistently showed significant positive cross-correlations: gun suicide (with firearm-specific suicides; lag -3) and “laid off” (with poisoning- and asphyxiation-specific suicides; lag -2). Limitations: Age- or gender-specific search volumes, lags outside the one- to three- month range, non-English searches, and confounding factors of MGSV and MSR were not explored. Conclusions: MGSVs of one firearm-related term (gun suicide) correlated with future firearm-specific MSRs. MGSVs of one method-neutral term (“laid off”) correlated with future poisoning- and asphyxiation-specific MSRs. These terms may be incorporated in novel forecasting models for method-specific suicides. Keywords: suicide, firearm, online search, Internet, Google Trends, time-series analysis

No. 6

Religiosity as a Protective Factor for Suicidality Among Inpatients With Bipolar Disorder

Poster Presenter: Carolina Olmos, M.D.
Co-Author: Marsal Sanches, M.D., Ph.D.

SUMMARY:
Background: The relationship between religiosity and suicide risk has been regarded as an area of great interest, not only from an academic perspective but also due to its potential clinical implications. While several studies indicate that religiosity is a protective factor against suicidal behaviors, it is not clear if that protective effect is consistent across specific diagnostic categories. We carried out a study to assess the impact of religiosity on suicidal behavior among inpatients with bipolar disorder (BD). Methods: the sample consisted of 346 inpatients (174 males, 172 females; mean age = 32.71 +-10.70 years) who met DSM-IV criteria for BD. All patients completed the Duke University Religion Index questionnaire (DUREL) upon admission. Patients with and without a history of suicidal attempts were compared with regards to the different dimensions of the DUREL: organizational religiosity (ORA), non-organizational religiosity (NORA), and intrinsic religiosity (IR). The statistical analysis was performed using the Student “t” test, and a 0.05 significance level was adopted. Results: 55.2% (191) of the patients had no history of suicide attempts, while 44.8 % (155) reported one or more past suicide attempts. The statistical analysis revealed significantly higher religiosity scores among patients without a history of suicide attempts compared to the ones with a positive past history of suicidal attempts, according to the ORA (3.92 vs. 3.28, respectively; p<0.001), NORA (3.85 vs. 3.24, respectively; p<0.002), and IR (11.95 vs. 10.90, respectively; p<0.006) scores. Conclusions: Our results are in agreement with previous findings supporting the role of religiosity as a protective factor against suicidal behavior, and indicate that this protective role is specifically present among inpatients with BD. Key words: Bipolar Disorder, Religiosity, Suicide, Suicide attempts

No. 7

Replacing Lorazepam With Lora and Pam: Using Smartphone Apps to Help Reduce the Use of Benzodiazepines for Anxiety Management in C-L Settings

Poster Presenter: Shuchi Khosla, M.D.

SUMMARY:
The prevalence of anxiety in hospitalized patients is higher than that in the general population. Studies estimate that anywhere between 30 to 70 percent of patients hospitalized at any given time have moderate to severe anxiety causing significant distress and impairment in functioning. This is further worsened with the additional stressors of the current socio-political environment and COVID19. For the management of symptoms of anxiety, it is a common practice among primary teams (IM, Hospitalists, Surgery) to use benzodiazepines as an approach for the management of the symptoms. However, the risk versus benefit analysis must always be considered when initiating benzodiazepine therapy particularly in patients with substance use disorders, major neurocognitive disorders, metabolic abnormalities. Constant liaison psychiatry at its unique position at the intersection of medicine and psychiatry has encountered unprecedented challenges in these times including increased demands of consults for management of these symptoms. This facilitates the need for new and innovative methods, which would improve both quality and efficiency. Mindfulness and self-guided CBT have been accepted as a cost-effective and clinically effective intervention in mood and anxiety disorders. This poster describes an intervention made at a university-affiliated community hospital with a 500-bed tertiary care level I trauma center by the constant liaison psychiatry team. The intervention consists of using six smartphone apps. MY3- for suicide safety plan, UCLA mindful for mindfulness meditation, See- Betty for self-guided CBT, Triangle of life - for introduction to CBT, Esteem builder- for positive affirmation, Worry kit- for distraction techniques. The average time required for the intervention was between 90 and 120 seconds. The intervention was subjectively met with a positive response from the patients, families, and other healthcare providers. The interventions may be a cost-effective tool to provide equitable access to learning coping skills among patients that do not have access to psychiatrist or psychotherapist in the community. The intervention assisted in reducing the need for use of benzodiazepines by the service. There are plans to do a prospective study comparing these interventions in order to ascertain the statistical significance of the intervention...

No. 8
The Challenges Associated With Neuromodulation Research in Suicidal Populations
Poster Presenter: Mehdi Elmouchtari
Co-Author: Anita S. Kablinger, M.D.

SUMMARY:
BACKGROUND: Suicidality is a complex construct that extends across several domains of behavior and cognition. A Research Domain Criteria (RDoC)-centered approach to mental illness allows for specific targeting of the cognitive-behavioral domains associated with suicidality[1]. Neuromodulation, the specific targeting of neurological targets via physical means, is a promising avenue for research in the context of acute and chronic suicidality. There are significant technical, ethical, and financial challenges in conducting this research. We aim to review and summarize the literature concerning the challenges that are unique to neuromodulation research in suicidal subjects. FINDINGS: We have found a variety of challenges specific to suicidal populations. The targeting of neural pathways requires the use of cutting-edge technologies such as MRI tractography[2], and the identification of targetable pathways requires new dimensional approaches to defining and categorizing mental illness. Studies regarding neuromodulation and mental illness require large samples, long-follow up times, and deliberate selection of outcome measures: the financial burden of these studies partially led to the demise of the RECLAIM[3] and BROADEN[4] trials for DBS in treatment-resistant depression. The ethical challenges of this research involve the attainment of informed consent in acutely suicidal patients, the need to break confidentiality in the event of relapse of suicidality, and the ethical issues of measuring suicidality as an endpoint in these studies. CONCLUSIONS: Neuromodulation serves as a promising new RDoC-informed modality for the treatment of suicidality. While the challenges in conducting these research are considerable, many of them are not specific to studying neuromodulation, and can be overcome with careful, deliberate study design. The recent FDA approval of esketamine in acute suicidality, while not a neuromodulatory

intervention, provides hope that these challenges can be overcome.

No. 9

Medical Student Wellness: Prognostic Factors & Perceived Barriers to Resource Utilization

Poster Presenter: Kathryn H. Bennett
Co-Authors: Shawna Chan, Anju Hurria, M.D., Gabrielle Stetz

SUMMARY:

Abstract Title: Medical Student Wellness: Prognostic Factors & Perceived Barriers to Resource Utilization   Background: Medical schools across the country have implemented wellness curriculums in response to high rates of mental health concerns among medical students. The study's primary objectives were to assess medical student mental health needs and prognostic factors for mental health conditions. The secondary objective was to assess perceived barriers to mental health resource utilization to identify unmet needs in the existing wellness curriculum.   Methods: Medical students at the University of California, Irvine, were surveyed regarding their mental health needs and experiences. Responses were cross-tabulated, and bivariate and multivariable regression analyses were used to assess the association of demographic characteristics with mental health outcomes. Results: 190 (38.0%) medical students completed the survey. The most commonly self-reported mental health conditions while in medical school were anxiety (60.0%) and depression (29.5%). Prognostic factors associated with significantly increased risk of mental health concerns included increasing years in medical school, Hispanic/Latino ethnicity, first-generational graduate student, and LGBTQ identity. Only 51 (27%) students had received mental health services while in medical school; the most frequently cited perceived barriers were time (74%), feeling one's problems were not important (41%), financial cost (38%), and concerns regarding confidentiality and/or negative impact on career (32%).   Conclusions: Mental health concerns remain prevalent among medical students despite the implementation of wellness curriculums. Efforts to increase usage of wellness resources, tailor resources for at-risk subgroups, and better target underlying causes of anxiety and depression should be considered to optimize medical school wellness programs.

No. 10

Association of Childhood Trauma Exposure With Inflammatory Biomarkers Among Midlife Women

Poster Presenter: Julia K. Nguyen, M.D.

SUMMARY:

Background: Childhood abuse has been associated with poor health outcomes in adulthood. However, the physiologic pathways by which abuse is linked to health are not fully elucidated. Inflammation plays a significant role in the pathophysiology of multiple chronic diseases. We tested whether childhood trauma exposure was related to increased systemic inflammation in midlife women. **Materials and Methods**: Participants were 304 nonsmoking perimenopausal and postmenopausal women aged 40 to 60 years and free of cardiovascular disease. They completed questionnaires assessing psychosocial and behavioral factors, including childhood trauma, anthropometric measures, wrist actigraphy sleep measurements, and a fasting blood draw for inflammatory markers high-sensitivity C-reactive protein (hsCRP) and interleukin-6 (IL-6). Associations between childhood trauma and inflammatory markers were tested in linear regression models controlling for age, race/ethnicity, education, body mass index, anti-inflammatory medication use, and alcohol consumption. Other covariates considered included sleep continuity and depressive symptoms. **Results**: A total of 44.8% of the sample experienced at least one type of childhood abuse/neglect. Women with a history of emotional abuse had higher IL-6 levels than women without this history in multivariate models ($\beta = 0.077$, standard error = 0.032, $p = 0.017$). Results were not accounted for by covariates and persisted additionally controlling for depressive symptoms and sleep. Childhood abuse/neglect was not related to hsCRP. **Conclusions**: Childhood emotional abuse was associated with higher levels of IL-6 in midlife women. Assessing childhood trauma exposure along with inflammatory markers may be important for the development of prevention strategies at midlife to prevent chronic diseases later in life.

No. 11
Brexanolone for Postpartum Depression: A Systematic Review
Poster Presenter: Kripa Balaram, M.D.
Co-Authors: Hajra Ahmad, M.D., Ricardo Escobar, M.D., Joel Dey, M.D., Lendita Haxhiu-Erhardt, M.D.

SUMMARY:
Background: Postpartum depression, or major depressive disorder with peripartum onset, is one of the most common comorbidities of pregnancy and childbirth. Estimated to affect anywhere from 10 to 25% of all new mothers, postpartum depression can have widespread consequences for the mother, the infant(s), and the family. These negative outcomes include, but are not limited to, poor pregnancy outcomes, low birth weight, difficulty in forming secure attachments, and increased risk of depression in the child as they age. Until recently, the mainstay of treatment for postpartum depression included supportive psychotherapy and pharmacologic interventions with SSRIs. Recently, the FDA approved brexanolone as the first medication solely for the treatment of postpartum depression. Administered over 60 hours as an intravenous infusion, brexanolone is a neuroactive steroid, synthesized from various steroid hormone precursors, that are active modulators at the GABA-A receptors. The purpose of this review is to systematically review the literature on the efficacy and tolerability of brexanolone for the treatment of postpartum depression. Methods: We performed a literature search of PubMed, MEDLINE, Cochrane, and Google Scholar. Double-blinded, randomized, placebo-controlled trials published in English were included. Results: Two studies that evaluated the use of brexanolone infusion for symptomatic treatment of postpartum depression were identified. One of the articles was composed of two separate double-blinded, randomized, placebo-controlled trials so this was considered as two separate studies. The studies all primarily utilized self-reported scales to assess changes in the core symptoms of postpartum depression immediately after infusion with brexanolone and subsequently after seven and thirty days. Conclusions: This review indicated that brexanolone infusion was effective in treating the symptoms of major depressive disorder with peripartum onset. These results were measured primarily by changes in HAM-D scales to assess symptoms of depression and by subjective reports of symptomatic improvements. Given the prevalence of postpartum depression, these results are promising for clinicians seeking effective treatment modalities.

No. 12
Contraception Use in Acute Inpatient Psychiatric Patients
Poster Presenter: Katrina M. Lepthien, D.O.

SUMMARY:
Background: Unplanned pregnancies are a public health issue within the United States. In 2011, 45% of pregnancies in the United States were reported to be unintended. Current research identifies lower rates of contraceptive use among patients with a psychiatric illness than in the general population. Numerous medications used to treat serious mental illness have been associated with teratogenic effects, necessitating the need for planned pregnancies to try to avoid these complications. Additionally, contraception can complicate psychopharmacology, because oral contraception can decrease the effectiveness of certain medications used to treat mental illness, while causing blood concentrations of other medications to increase. In this study, we sought to investigate contraception use in women admitted to an acute psychiatric inpatient hospital and compare the findings to available data for nationwide contraception use. Study Design: This is a retrospective analysis of electronic medical record data from admissions to an urban inpatient psychiatric hospital in the Southwest United States serving a large metropolitan area. Contraception use among female patients between the ages of 20 and 49 years who were admitted to inpatient psychiatry units during the years 2015, 2016, and 2017 were compared to nationwide data for the same period. The proportion of patients using contraception, contraception types used and response rate for demographic questions were determined with 95% confidence intervals. Results: Among women ages 20-29 who were admitted to the hospital from 2015

to 2017, the contraception use rate was 88.4% compared to 61.9% for the nationwide study. Among women ages 30-39, the contraception use rate in the psychiatric inpatient sample was 92.9%, compared to the national average of 72% for the same age group. For women ages 40-49, the contraception use rate for hospitalized patients was 95.9%, compared with 73.7% in the national dataset. Condom was the most common method reported by the sample (24.6%), followed by surgical with (16.7%). 82% of the original 1,251 sample size did not have a documented response for contraception use. The contraception use question had a higher rate of non-response than any other social history or sexual history question collected during the hospital admission process. Conclusions: Contraception use frequency in female psychiatric inpatients was higher for all age groups than for women in the general population; however, a significant number of patients did not have a documented response for contraception. When compared to all other demographic data obtained during the admission process, contraception use was most often unanswered (82% of the sample). Ongoing efforts to improve knowledge about available and safe contraception and recommendations for use in this vulnerable population are warranted. This research did not receive any grant from funding agencies in the public, commercial, or not-for-profit sectors.

No. 13

Advancing Collaborative Care to Improve Equity in Adversity

Poster Presenter: Mehreen Khan
Co-Authors: Paresh Jaini, D.O., James Haliburton, M.D., Dustin DeMoss, D.O., Nekesha Oliphant, M.D.

SUMMARY:

The psychiatric population has been negatively impacted by limited guidelines and facility options for psychiatric management during COVID-19 (Talevi, 2020). Mental healthcare workers are trained to support, redirect and de-escalate patients, and provide therapeutic measures in the milieu (Price, 2015). Patients that need inpatient hospitalization for acute stabilization may not be able to participate in these services if they require COVID-19 isolation (Abbas, 2020). The following cases describe the challenges that affect equity of treatment for physically asymptomatic Covid-19 positive patients with acute psychiatric symptoms. Cases: Patient 1, a 17-year-old female with depression and active suicidal ideation was admitted to the adult medical floor due to lack of local adolescent psychiatric facilities accepting Covid-19 positive patients. The adult Consult-Liaison (C-L) psychiatry service was challenged to create a therapeutic environment suitable for an adolescent patient that included pediatric dosing of medications, adolescent-focused psychological interventions, and regular family psychoeducation. Patient 2, a 20-year-old male with severe mania admitted to the medical floor was a challenge because of his acute agitation on a medical floor without the therapeutic milieu of a psychiatric hospital. Patient 3, a 66-year-old female with dementia-related behavioral disturbances and psychosis needed acute agitation management as well as placement, but her Covid-19 infection prevented appropriate dispositions. Conclusions: The C-L psychiatry service assumed the role of an inpatient psychiatric team for Covid-19 positive patients with acute psychiatric symptoms out of necessity. Psychiatric emergency, inpatient, outpatient and C-L providers came together to promote therapeutic interventions traditionally found on inpatient units. For adolescents, the child and adolescent psychiatrist was consulted for medication management. There was limited group therapy or peer engagement so social workers, psychologists, and providers wore personal protective equipment and engaged directly with isolated patients. As C-L volumes became overwhelming, outpatient teams lent additional support by sending providers to the C-L service. Also, as patient flow became a concern as medical beds were being occupied by asymptomatic psychiatric patients, psychiatric transitional coordinators were repositioned to not only help with discharge planning but also provide supportive therapy. Further measures included improved and effective technology to help patients speak with healthcare teams and family. Additional interventions are being made by monitoring guidelines, educating, adapting, modifying, continuously working towards teamwork and collaborative effort to bring equity towards our patients affected by the pandemic.

No. 14

Beyond the Duty of Call: Examining Psychiatry Residents' Experiences of On-Call Supervision

Poster Presenter: Karen Wang, M.D.

SUMMARY:

Background: Competency-based medical education (CBME) in psychiatry training emphasizes the importance of close, direct supervision. On-call supervision, however, has been an understudied area in educational scholarship. Residents often report call to be burdensome and difficult, and describe a lack of clear expectations and difficulties with supervisors. During on-call hours, residents are thrust into a decision-making position without clear guidelines for supervision and learning objectives. Residents express a lack of clarity about the call expectations; for example, whether or not they should call for help and whom and when to call (Benson et.al, 2018; Farnan et.al, 2009). Residents may view calling their supervisors as a show of lack of competence and opt not to do so in favour of receiving a more positive evaluation. They also might deem on-call as a service they need to survive rather than learn from (Walzak et al, 2019).As there are no clear policies or guidelines for call supervision, there is considerable variability in the regulation of residents' hours, responsibilities and experiences. In our exploratory study, we sought to examine psychiatry residents' attitudes and perspectives of on-call supervision. Methods: we distributed a cross sectional survey to 62/168 psychiatric residents at a large Canadian university. Survey questions focused on topics relating to their on-call experience, supervision, support and communication. The results were analyzed and residents were subsequently recruited for focus group interviews. Semi-structured interviews were conducted at three major hospitals. Residents described the educational environment, their supervisor's role, and their positive and negative experiences. Interviews were recorded, transcribed, and coded for themes relating to perceived benefits, challenges, and the nature of supervision on call. Results: 62/108 psychiatry residents responded to the online survey. 65% reported never receiving direct observation or feedback on clinical assessments. Majority of residents indicated a strong desire for more supervision and expressed hesitation at contacting their supervisors for fear of being seen as lacking competence or impinging on their supervisors time. Qualitative analysis for the focus group revealed 3 key themes: 1. The Learning Environment. 2. Features of the Learner. 3. Trainee supervisor relationship. Developing Resident Autonomy Conclusion: Supervision on-call has significant challenges in terms of managing residents' need for psychological safety, staff availability, need for resident autonomy while ensuring efficiency and maintaining patient safety. These diverse goals create a complex learning environment and indicate the need for more evidence-based recommendations for supervision on-call.

No. 15

Burnout Assessment in Psychiatric Residents Using Copenhagen Burnout Inventory (CBI)

Poster Presenter: Kaushal Shah, M.D., M.P.H.

Co-Author: Clayton Morris, M.D.

SUMMARY:

Background: Several studies have examined burnout in physicians, but it is still an unaddressed issue. According to APA, about two out of five psychiatrists experiences burnout. We aim to assess burnout in psychiatric residents using the Copenhagen Burnout Inventory (CBI) scale. **Methods**: In December 2020, the authors conducted a survey to evaluate burnout amongst residents of the state psychiatric facility, Griffin Memorial Hospital in Norman, Oklahoma. A standardized CBI questionnaire consisting of 19 items used to assess three domains, personal burnout, work burnout, and client burnout. Scoring for each question ranges from 0 to 100. A higher score corresponds to burnout. The analysis evaluated burnout by determining the prevalence and scoring for each item. The correlation of overall and domain-specific burnout was examined with post-graduation year level and resident's age through correlation and regression analysis for significance level at 95% using SPSS v26. **Results**: The survey response rate was 100% (N=20). Participants consist of psychiatry residents from the post-graduate year (PGY) 1 to 4. Respondents include 60% males and 40% females. About 25% possess a degree for Doctor of Osteopathic Medicine (D.O.), and the rest are Doctor of Medicine (M.D.). Nearly 40% of

the residents completed medical school in the United States (U.S.). Almost 65% of the participants are married. The age of residents ranges from 27 years to 51 years, and about 55% are under the median age of 32. Our findings indicate that residents experience a higher level of personal (M=47.92, SD=16.14) and work-related (M=42.32, SD=8.52) burnout compared to client-related (M=26.04, SD=9.53). The PGY 1 residents experienced higher personal burnout (M=54.86, SD=20.99) compared to any other PGY. Work-related burnout was observed more in PGY 1 (M=45.24, SD=12.6) and PGY 3 (M=45.41, SD=8.92) residents. The results did not find any significant correlation between overall burnout score with the post-graduate year level (r(18)=-.72, p>.05). Regression analysis shows that PGY level is not a significant predictor of burnout (p=.764, R2=.005). However, the regression analysis with predictor as age found that a resident's age is a significant predictor of burnout (p=.02, R2=.263). We found a significant inverse correlation between overall burnout score and age of residents (r(18)=-.513, p<.021). **Conclusion**: This study helps us to understand the burnout level concerning PGY and age of residents. Personal and work-related burnout is prevalent in residents. Findings from this study help to design appropriate interventions to limit burnout in psychiatric residents. Further large-scale studies are needed to understand factors contributing to resident's burnout.

No. 16

Coaching Healthcare Workers To Bolster Wellness and Resilience a During COVID-19 Pandemic

Poster Presenter: Benjamin Rosen, M.D.
Co-Authors: Robert Maunder, M.D., M.Sc., Mary Preisman, Heather Read

SUMMARY:
Background: Healthcare workers providing care during COVID-19 face unprecedented risks that pose a threat to mental health and resilience. Supporting healthcare workers requires an approach that is both evidence-based and adaptive. Based on experience supporting colleagues through SARS in 2003, mental health clinicians from the Psychiatry Department at Sinai Health have designed and implemented an initiative to support colleagues' wellness and resilience, called "resilience coaching". The goals are to bolster resilience in healthcare workers (HCWs), helping them keep their heads in the game so they can maintain the focus and rigor that their jobs require. Coaches are equipped with principles of pandemic resilience rather than a packaged curriculum. They offer opportunities for emotional expression (almost always anger and fear), decompression, collaborative advocacy and provide education about stress reduction skills.There are currently 15 coaches working with 17 units and clinical teams at Sinai Health which encompasses Mount Sinai Hospital and Bridgepoint Active Health in Toronto, Ontario, Canada. Methods: This project assesses the implementation and impact of coaching. It also measures the trajectory of psychological variables (burnout, posttraumatic symptoms, sleep disturbance, psychological distress) over time (every 3 months for 18 months) in members of departments that receive coaching. We are using a mixed-methods approach to describe and evaluate the impact of the resilience coaching intervention: qualitative interviews with participants (coaches and recipients), and secondary analysis of quantitative data from CIHR-funded study of support for staff at Sinai Health (Peer Champion Support for Hospital Staff during and after the COVID-19 Pandemic Outbreak: Maunder et al). Individuals participating in interviews are (1) coaches, and (2) staff and physicians of Sinai Health who are recipients of coaching. Results: Preliminary analysis of early qualitative data suggests that coaching is perceived to be successful in mitigating severity of threats to mental health that health care workers face. Results suggest that some challenges to providing coaching include: fitting it into a busy hospital schedule; adapting support to differing occupational cultures of diverse health care workers; maintaining awareness of importance of coaching as COVID numbers fluctuate. Aggregate results of the research and lessons learned during its implementation will be made available to be shared with senior management and hospital staff knowledge users in various forms (e.g. staff town hall, grand grounds, in-service teaching, and online resources), in addition to conventional dissemination to colleagues outside the hospital. Conclusion: Resilience coaching provided by internal staff can be

an effective means to support hospital health care workers during a public health emergency.

No. 17
Cold Pressor Task Across Impulsive Disorders
Poster Presenter: Stephanie Valle
Co-Authors: Jon Grant, M.D., Eve K. Chesivoir, B.A.

SUMMARY:
Background: Several psychiatric conditions are characterized by impulsivity (i.e. an inability to resist a sudden urge to engage in a behavior) and include Gambling Disorder (GD), Binge Eating Disorder (BED), Trichotillomania (TTM), Skin Picking Disorder (SPD), and Borderline Personality Disorder (BPD). People with impulsive problems commonly report stress as a trigger to their behaviors and this may involve activation of the sympathetic system and the hypothalamic-pituitary-adrenal axis. One means of understanding the stress response is by examining pain perception via the cold pressor task (CPT). We hypothesized that adults with impulsive control problems would exhibit a dampened autonomic response to pain compared to healthy controls. **Methods**: We assessed demographic and clinical differences in adults (ages 18-65) with TTM (n=22), SPD (n=18), GD) (n=15, BPD (n=12), BED (n=16), and Healthy Controls (n=24). Using the CPT we measured pain tolerance, heart rate, blood pressure, and time to recover across these groups. **Results**: A One-Way ANOVA showed a significant effect of condition on time to recover, $F (5,100) = 2.680$, $p < 0.05$. Post hoc tests showed that relative to controls, ($M = 66.0$ s, $SD = 35.8$), individuals in the TTM ($M = 113.0$ s, $SD = 93.5$; $t(44) = 2.1$ $p < 0.05$), SPD ($M = 121.7$ s, $SD = 91.1$; $t(40) = 2.3$, $p < 0.05$), and GD ($M = 118$ s, $SD = 100.4$; $t(37) = 2.1$, $p < 0.05$) conditions took significantly longer to recover after the task. An additional Repeated-Measures ANOVA showed that there was a significant main effect of time on heart rate, such that heart rate increased as time went on, $F(7, 259) = 5.193$, $p < 0.001$. However, there was no significant effect across conditions $F(5, 37) = 1.000$, $p > 0.05$. The interaction between condition and time was not significant $F(35, 259) = 1.418$, $p > 0.05$. An additional Repeated Measures ANOVA showed a significant main effect of time on blood pressure, $F(3, 195) = 47.73$, $p < 0.05$. There was no significant effect across conditions ($F(5, 65) = 2.201$, $p > 0.05$), and the interaction between condition and time was not significant $F(15,195) = 1.253$, $p > 0.05$. **Discussion**: The data show that recovery time following the CPT in individuals with TTM, SPD, and GD conditions differed significantly compared to healthy controls. Further research should continue exploring the role of stressors across ICDs as we may learn more about the similarities and differences across these disorders.

No. 18
Development and Implementation of Integrative Psychiatry Curriculum
Poster Presenter: Krishna Smriti Taneja, M.D.
Co-Authors: Amelia K. Villagomez, M.D., Brendan McClafferty, Noshene Ranjbar, M.D.

SUMMARY:
Educational Objectives: 1. To describe an elective curriculum that targets resident knowledge in integrative psychiatry; 2. To delineate aspects of the curriculum which address common program requirements for physician well-being; 3. To discuss how this iterative design curriculum has developed based on feedback from trainees over a four-year period. Methodology: All psychiatry residents and fellows who completed in IPC from 2015-2019 were interviewed using standardized questions at the end of each academic year. Interviews were then transcribed using an online transcription tool and analyzed based on overarching themes and trends. Results: Since 2015, 35 of 37 trainees who enrolled in IPC, completed the curriculum requirements. The IPC currently consists of an online 95-hour interactive curriculum, a weekly in-person experiential curriculum and supervision for the outpatient Integrative Psychiatry Clinic. The online curriculum was developed by excerpting existing material designed to teach integrative medicine to primary care residents. Participants had a positive experience and were able to implement the course material into their personal life, clinical care, and for educating their colleagues and peers. Participants largely benefited from the experiential portion due to its interactive and collaborative approach, and most residents stated that the online portion was also invaluable to provide a framework and

supporting evidence base for various integrative medicine approaches. Many residents commented that although useful, the online curriculum could be improved by developing additional psychiatry-specific content. Earlier cohorts reflected having insufficient time to complete the modules; based on that feedback, weekly reading time was inculcated into the trainee's schedule in the following years. Since the online curriculum is self-paced, many participants found themselves procrastinating and suggested having more clear deadlines. Participants reported that the clinical supervision was vital in building confidence to incorporate integrative medicine approaches in clinical care. Despite its challenges, the large majority of participants found the program feasible to complete during their residency/fellowship. All participants highly recommend the curriculum to other residents and recommend this course to be a partial requirement for all psychiatry residents/fellows. Conclusion: The pilot IPC program at the University of Arizona has been feasible to implement, rated highly among residents/fellows, improved every year based on feedback, and addresses components of well-being both for patients and residents/fellows. Future directions include further developing psychiatry-specific content.

No. 19

Drivers of Subspecialty Choices Among Psychiatry Residents: A Pilot Study

Poster Presenter: Sivaranjani Ayyanar, M.B.B.S.
Co-Authors: Marusa O. Obele, M.B.B.S., M.P.H., Ijendu Peace Korie, M.D., Sayeda Basith, M.D., Ulziibat Shirendeb Person, M.D., Ph.D.

SUMMARY:
In view of the ongoing SARS-CoV-2 pandemic, soaring rates of suicide in the country (1), growing aging population with mental health needs (2), rising opioid epidemic (3), amidst other mental health problems, there is a growing demand for Psychiatrists. Sub-specialty experts in the field of Child and Adolescent Psychiatry, Addiction Psychiatry, Geriatric Psychiatry, and others are constantly in demand. However, the factors that drive the choice of specialty among the psychiatry residency graduates are less discussed in the current literature. Exploring these factors may facilitate effort directed towards increasing the number of trainees in certain subspecialties in order to address ongoing shortage. Our pilot study in a community hospital residency program highlights some of the driving forces of specialty choices among psychiatry residents with the goal of creating awareness in this less discussed topic. Objective: To explore the factors that influence sub-specialty choices among psychiatry residents in a community teaching hospital. Method: A survey containing short close ended questions was designed following a literature search for articles related to the subject of interest. Input and contribution was also obtained from the program director and a few randomly selected residents. The survey was edited and feedback on the wording and the appearance was obtained from some residents. The printed survey was distributed to psychiatry residents and fellows at the journal club, didactic sessions and at the grand rounds. Responses were anonymous. Results: Out of 34 responders, 30 (88.2%) chose a subspecialty while 4 (11.8%) did not. Among the total responses 47.1% chose Child and Adolescent Psychiatry, 17.6% Consult Liaison, 14.7% Addiction psychiatry, 5.9% Forensic psychiatry, 8.8% Community psychiatry and 2.9% Geriatric psychiatry, Interventional psychiatry and others respectively. The factors influencing the choice of subspecialties included patient population preferences (96.7%), “feeling called” (76.7%), mentor influence (56.7%), demand for the specialty (56.7%), flexible work schedule (56.7%), ability to fast track (26.7%) and monetary compensation (33.3%). Reasons for not pursuing a sub-specialty included, “not necessary”, additional years of training, immigration, and personal reasons. Conclusion: In our study, a higher proportion of participants chose a psychiatry subspecialty. A further look at the reasons for choice may be informative and may help understand the reason for the scarcity of certain psychiatry subspecialists. Expanding this study across other residency programs will also provide more inclusive data. In addition, our data may serve as the starting point to address the evolving changes in mental health requirements of our community and may better inform the subspecialty training programs about program development and support and guide trainees interested in a subspecialty.

No. 20

Further Investigation of Inter-Rater Reliability as an Outcome of a Self-Directed Online Training Curriculum for Evaluators Conducting the ABPN CSE

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

Co-Authors: Michael D. Jibson, M.D., Ph.D., Katharine J. Nelson, M.D.

SUMMARY:

Background: The American Association of Directors of Psychiatric Training (AADPRT) assembled a task force shortly after the American Board of Psychiatry and Neurology (ABPN) clinical skills evaluation (CSE) requirement was instated with the goal of creating CSE rater training curricula. Each session provided three video vignettes featuring real physician-patient interviews in which the evaluators were trained to apply standardized criteria to each vignette. In 2009, psychiatric educators gathered at the annual AADPRT meeting and established consensus ratings for each of the video vignettes, utilizing an ABPN approved CSE rubric. This established an opportunity to create a training curriculum that would be available online and would not necessitate in-person training. Therefore, we designed a self-directed, online module intended for psychiatry residency program directors and/or evaluators of psychiatry graduate medical trainees, poised to conduct the ABPN CSE's. The goal of this module was to teach the standardized criteria for assessment of CSE candidates and improve inter-rater reliability. This curriculum was designed to be easily disseminated and has been piloted in several programs to assess feasibility and efficacy. **Methods**: This online module contains a brief introduction about the importance of the CSE, video vignettes, and a rubric to assess each vignette. This was made available to psychiatry residencies with AADPRT members. The videos contained real psychiatric patients who provided limited consent for the use of these videos for educational purposes. ABPN Certified Psychiatrists completing this module underwent a process of informed consent to allow their responses within the module to be used in a de-identified manner for the purposes of educational quality improvement. Through the data collected we examined responses to questions assessing the level of variability of resident performance ratings when compared to consensus ratings. **Results**: Results were obtained from the early version of the online training module to demonstrate feasibility and generate pilot data. Analysis was carried out by examining absolute differences between participant responses and the consensus ratings. Initial pilot data N=19 demonstrated improved inter-rater reliability in wo subsequent vignettes (Mean difference for video 1 = 1.93 vs. video 2 = 0.1). Smaller mean differences demonstrate a hypothesized increasing agreement among participants ratings and consensus ratings in a small sample size. Now that the new and improved module is available to AADPRT members, we hope to conduct further data analysis with greater power as additional users participate in this curriculum. **Conclusion**: These results provide early insight into the effectiveness of this teaching module and its ability to produce consistent responses in rating the resident-patient vignettes. This also shows that the module is feasible and potentially effective initiative in improving inter-rater reliability for assessment of CSEs by ABPN Certified Psychiatrists.

No. 21

How Do Learners Perceive Group Feedback Versus Combined Individual and Group Feedback During Their Clerkship?

Poster Presenter: Usman Hameed, M.D.

Co-Author: Ahmad Hameed, M.D.

SUMMARY:

Background: Our psychiatry clerkship is a 4 week rotation and all students attend a mid-clerkship feedback (MCF) session. While our clerkship has been well received by our learners, usefulness of mid-clerkship feedback remained an area of improvement. We hypothesized that replacing group feedback with a hybrid model utilizing group and individual feedback meetings, incorporating educational alliance with the learner should address this concern. Objectives: We aimed to improve the utility of MCF for students to assess their performance at mid-point during the clerkship and improve the quality of their educational experience. Method: We developed a feedback session including a 20 minute group followed by a 10 minute

individual meeting with each student, to replace the former process. The individual session began with student's self-assessment of their strengths and an area of improvement which were aligned with faculty feedback and the clerkship objectives. The outcome measures were data provided by the institution tri-annually, using metrics from student evaluation of the clerkship. The specific items used were: 1. "Were you provided with mid-clerkship feedback?" 2. "The mid-clerkship feedback I received was useful in helping me know how I was performing in the clerkship," and 3. "My performance was assessed against the learning objectives." The results were compared before and after the revised mid-clerkship feedback format was instituted, keeping institutional goals for the clerkships in mind. Results: The students who "Agreed" and "Strongly agreed" with the item 1 regarding provision of feedback improved from 97% to 100%. Item 2 regarding usefulness on performance improved from 64% to 91% and item 3 regarding performance being judged against learning objectives improved from 67% to 91%. The quality for educational experience improved from 87% to 94% of students rating our clerkship as "Good" or "Excellent." Our clerkship achieved the institutional goals with all measures being above 85%. Discussion: Effective feedback focusing on performance has to be clear, specific, and should include measures for improvement (1). Based on student evaluation of our clerkship, a small minority mistakenly felt they had not received MCF, while others found it unhelpful with improving their performance. Our institutional goal for clerkship quality metrics is > 85% of students agreeing or strongly agreeing with these measures. We therefore reviewed the group feedback process already in place. Some studies suggested importance of group feedback (2) while others supported individual feedback (3) and focus on an educational alliance (4). Since some of the components of the MCF meeting are the same for all students, we revised the process to continue to include general group-based feedback, supplementing it with individual, student specific feedback. The new feedback process resulted in positive evaluations on clerkship quality measures.

No. 22

Mental Health First Aid Training in Pre-Clinical Medical Students

Poster Presenter: Anfal Marafie, M.S.
Co-Authors: Zakia Alavi, M.D., Mohammad Tuleimat

SUMMARY:

Introduction: The prevalence of mental health disorders in primary care patients is approximately 20%, with 50-75% of these cases being undiagnosed and untreated. This creates a vital need for medical students to have a baseline knowledge of mental health disorders. Mental Health First Aid (MHFA) training has been seen to effectively improve the knowledge of nursing, pharmacy, and medical students abroad in recognizing and responding to mental health crises. **Objective**: The goal of this study is to assess medical students' self-perceived change in knowledge, attitude, and behavior in responding to the signs of mental illness and substance use disorders in the community after completing a MHFA training course. **Methods**: Medical students were recruited to voluntarily sign up for the medical student-tailored MHFA course. Prior to the course, students were instructed to complete a pre-course survey. The course entailed 2 hours of pre-work via online modules and 6 hours of a synchronous, instructor-led, virtual session. Upon the completion of the session, the students were instructed to complete a post-course survey. The pre- and post-course surveys were identical and were designed to assess students' self-perceived knowledge, attitude, and behavior change in recognizing and responding to a mental health crises. **Results**: We found that MHFA does increase medical students' perceived knowledge, positive attitude towards mental health disorders, and positive perceived behavior change in a mental health crisis (p-value<0.001). **Discussion**: Medical students are trained in Basic Life Support upon their acceptance into medical school. Yet when faced with persons undergoing a mental health crisis, medical students are reluctant to react as they have no equivalent training. Mental Health First Aid is not a requirement for student during their medical education, despite the positive outcomes of improving people's attitude, knowledge, and behavior around individuals with mental health illnesses. It is imperative that future physicians have

this baseline knowledge regardless of their specialization, considering the high prevalence of depression among patients in the primary care setting. **Conclusion**: Mental Health First Aid is a beneficial component of the medical education for every medical student upon entry into medical school. MHFA is efficacious in increasing pre-clinical medical students' knowledge, positive attitude, and positive behavior change.

No. 23

Novel Overdose Prevention Resident Education Program: Louisiana

Poster Presenter: Britney Lambert, M.D.
Co-Authors: Elizabeth Whitham, M.D., M.A., Katherine Marie Folse, M.D., Dipen Patel, M.D., Mark Harold Townsend, M.D.

SUMMARY:
Background: Opioid overdoses have become a pressing local issue over the last five years: according to the Orleans Parish Coroner's office, there was a 105% increase in fatal overdose deaths related to opioids from 2015 to 2016. New Orleans EMS reported more than 780 emergency service overdose calls in 2016 that required naloxone administration. Despite known data that increases in prescribing patterns lead to reduction in overdose deaths, and a national push by the CDC and addiction psychiatry guidelines to prescribe naloxone, less than 1% of physicians nationally prescribe the medication to at risk patients. Although legislation across the country has increased access to naloxone significantly, prescribing patterns among psychiatry trainees is not known. This study aims to elucidate the current understanding, attitudes, and knowledge of psychiatry trainees as it pertains to this public health concern. **Methods**: A systematic review was conducted utilizing PUBMED database with the following MESH terms: (("Psychiatry"[Mesh] OR "Internship and Residency"[Mesh])AND ("Attitude"[Mesh] OR "Health Knowledge, Attitudes, Practice"[Mesh] OR "Attitude of Health Personnel"[Mesh])) AND "Naloxone"[Mesh]. The search yielded 5 studies that were reviewed by independent co-investigators. Only one study was found to be relevant to the research question, others were eliminated. A survey was created, with permission from similar prior efforts (Winograd 2017), and completed by psychiatric trainees (N=21). **Results**: Survey items were grouped into 4 categories: (1) general knowledge of naloxone (2) clinical attitudes toward naloxone (3) ability to educate patients regarding use of naloxone and (4) barriers to prescribing. 47% of psychiatry residents reported good to excellent knowledge regarding naloxone. However, only 29% of psychiatric trainees reported prescribing naloxone in the past month and 70% reported naloxone prescribing was primarily the responsibility of the physician prescribing opioids to the patient. **Conclusions**: Unlike previous studies completed in internal medicine trainees, psychiatric trainees reported strong knowledge of naloxone and non biased clinical attitudes toward its use. Given our findings, there is a need for focused educational initiatives that mitigate barriers to prescribing for psychiatric trainees. This survey can be used by other psychiatry residency programs, to identify potential deficits in naloxone training that can be addressed formally at an institutional level.

No. 24

Psychiatric Comorbidities in Inpatient Adults With Intellectual Disability: A Nationwide/National Inpatient Sample (NIS) Analysis

Poster Presenter: Uzma Beg, M.B.B.S.
Co-Authors: Pranita Mainali, M.D., Kanwarjeet Singh Brar, M.D., Muhammad Khalid Zafar, M.D.

SUMMARY:
Introduction: Patients with intellectual disabilities have high levels of needs and generic services have difficulty responding to these needs due to a range of patient, professional and service system factors.(1) An assessment of the underlying medical and psychiatric co morbidities for ID individuals, helps to formulate and implement effective management plans, and to reduce overall morbidity. Studies have shown that psychiatric comorbidity can correlate with age and psychiatric disorders are present in up to 40% of older adults with Intellectual disability.(2) We conducted an exploratory investigation to understand the trends in ID patients admitted to the hospital and their co morbid conditions in different age ranges. Methods: The

Nationwide Inpatient Sample (NIS) for the year 2005-2017 was used for this study. The NIS database has a 20% stratified random sample of all hospital discharges in the United States, and it includes all patients irrespective of the insurance status (3). Data was obtained from the National Inpatients Sample (NIS) database for 2002-2014 using ICD, Clinical Modification [ICD-9] code based on the Clinical Classification Software (CCS) for Intellectual Disability (codes 317-319) and ICD 10 Codes (F70-F79). Data on Psychiatric and medical comorbidities was obtained about inpatients with intellectual disabilities. The trend analysis was performed by dividing the study period into multiple age groups as age 20-34, 35-49, 50-64, 65-79 and more than 80 years of age. We also looked at psychiatric comorbidities with regards to different categories of severity for intellectual disabilities. Results: Mood disorders were most prevalent across all age groups, followed by Schizophrenia and spectrum disorders. Intellectual disability patients between ages of 20-34 had prevalence of mood disorders at 29.60%, schizophrenia and other psychiatric disorders at 23.50 % whereas anxiety disorders were 12.10%. For patients, between ages 35-49, Mood disorders were 24.10%, Schizophrenia and other psychotic disorders 22.60% and anxiety disorders were 10.30%. Between the ages of 50-64 years Mood disorders were 22.60%, Schizophrenia and other psychotic disorders were 20.70% and anxiety disorders remained at 10%. Between the ages of 65-79, these percentages showed a decrease as Mood Disorders were 19.8%, Schizophrenia and other psychotic Disorder at 16.10% and anxiety disorder at 9.30%. Comparing the prevalence according to the severity of intellectual disability, Mood and Psychotic disorders were more prevalent in individuals with Mild Intellectual Disability (37.8% and 34.2%) whereas they were found to be low in the severe group with Mood disorders at 12.6%, psychotic disorders at 8.2% in the Severe category whereas Mood disorders were noted to be at 9% and psychotic disorders at 4.2% in the Profound Intellectually disabled category. There was an inverse association of psychiatric comorbidities with severity of intellectual disability. Almost 50% of diagnosis were unknown type of severity. Conclusion: The trend of existence of psychiatric co morbidity in adult patients with intellectual disability remained similar in different age groups with regards to common co morbid psychiatric disorders. These trends appear to change when they are considered in terms of severity of intellectual disability.

No. 25

Psychiatrists, a Rare Commodity?

Poster Presenter: Tooba Qadir, M.D.
Co-Authors: Kishan B. Shah, M.D., Bellanirys Acosta Arias, M.D.

SUMMARY:

Mental illness has become the most costly condition in the United States, at $201 billion annually, with one in every five adults in America experiencing some form of a mental illness, and nearly one in 20 adults in America (13.6 million) living with a serious mental illness. With the United States being amongst the world leaders in healthcare, it is expected that mental health providers and psychiatrists must be growing proportionally to the expanding requirements. Yet, numbers remain disappointing. Approximately 41,133 psychiatrists are actively practicing in the U.S. within 1,397 counties (44.4% of all counties), with California being the state with the highest number of psychiatrists (5,935) Wyoming having the fewest [3] The county with the most psychiatrists was New York, New York (1,802). 1446 out of a total of 3,135 counties in the United States, (ie 46%) had at least one psychiatrist, thereby meaning that they majority of counties had no psychiatrists. Psychiatrists of all categories, child and adolescent psychiatrists (CAPs), addictions psychiatrists (APs), geriatric psychiatrists (GPs), were primarily located within the northeastern U.S. and within some counties along the west coast, [3] with about 40% psychiatrists practicing exclusively in cash-only private practices, the second highest among medical specialties after dermatologists. As of Dec 2018, 9,956 CAPs were actively practicing within 828 counties (26.3% of all counties), 1,265 GPs were actively practicing within 321 counties (10.2% of all counties), and 836 APs were actively practicing within 230 counties (7.3% of all counties.) With 55% of the total psychiatrist workforce expected to retire within the next ten years, the number of psychiatrists leaving the workforce exceeds the number entering by a multiple of two,

confirming that the contraction of the workforce will continue through 2024. SOLUTIONS PROPOSED: Some solutions proposed in recent years to address the current and impending shortage are: · Developing/bolstering programs that recruit/incentivize providers to practice in underserved areas; · Strengthening ties between psychiatric residency programs and rural practice sites to encourage new psychiatrists to later practice in those sites; · Removing barriers that prevent telepsychiatric services in rural areas. · Adequate Staff Support to Increase Psychiatrist Efficiency · Improving Capacity to Share Information · Reducing Excessive Documentation Requirements · Undertaking /beginning subspecialty training in the fourth year of psychiatry training · Increasing the time devoted to the care of older adults or children in undergraduate and graduate medical education · developing alternative training pathways such as mini-fellowships

No. 26

Structural Determinants of Help-Seeking as a Domain of Professionalism: A National Survey of Psychiatry and Neurology Trainees

Poster Presenter: Aaron Wolfgang, M.D.
Co-Authors: Walter J. Sowden, Ph.D., Dorthea Juul, Christopher Thomas, Larry Faulkner

SUMMARY:

Introduction: Self-Awareness and Help-Seeking (PROF-3) has been proposed by the ACGME as a sub-competency of professionalism [1]. Over the past decade, medical errors [2] and physician well-being [3] have been reconceptualized as now not only matters of personal responsibility but also as structural problems (environment and systems) with structural-level solutions. This paradigm shift has yet to occur with medical professionalism [4]. Our research question sought to determine the extent to which trainees' psychological barriers to help-seeking associated with their internal motivation versus structural determinants. Methods: 1,401 trainees (12.6% response rate) across 628 ACGME-accredited programs in psychiatry and neurology took a 32-question online survey that included an examination of structural determinants of professionalism. The current analysis used three questions from the survey. Psychological barriers to help-seeking (PBHS) across two performance domains (clinical responsibilities and wellbeing) were explored in relationship to locus of motivation (LM). PBHS was defined as trainees' concern of burdening or being negatively perceived by others, and uncertainty of when and how to seek help. Internal LM was defined as trainees' attitudes of help-seeking as a personal priority. External LM was defined as trainees' attitudes of their program's supportiveness and empowerment for help-seeking. We ran one-way ANOVAs between the four LM levels (high or low; internal or external) and the PBHS variable. We used a multiple linear regression model examining the ability for internal and external LM to independently predict and explain variation in PBHS. Results: A one-way ANOVA with subsequent post-hoc comparisons demonstrated that there was a statistically significant difference between the trainees with high internal, high external (HI;HE) LM and those with high internal, low external (HI;LE; $p < .001$) and low internal, low external (LI;LE; $p < .001$), but not low internal, high external (LI;HE; clinical responsibilities: $p = .17$; wellbeing: $p = .15$) LM for both performance domains. Moreover, our regression models revealed that both the Beta coefficients (b), indicating strength of relationship, and R-squared (R^2) statistics, indicating goodness-of-fit, demonstrated the importance of external LM when compared to internal LM. Of the nearly 18% of the variance in PBHS explained by LM, almost all of it (17.5%) is accounted for by external (vs internal) LM for help-seeking for both performance domains. Conclusion: Lower psychological barriers to help-seeking with clinical responsibilities and well-being are more strongly associated with trainees' perceptions of strong support and empowerment by their program to seek help and less strongly associated with help-seeking being a strong personal priority. Interventions to address help-seeking as a domain of professionalism may need to consider also exploring structural determinants of behavior.

No. 27

The Need for Standardized ECT Training During Psychiatry Residency and a Curriculum Proposal

Poster Presenter: Omar Pinjari, M.D.

SUMMARY:
The need for standardized ECT training during psychiatry residency and a curriculum proposal Authors: Salih Selek 1 , Omar F Pinjari 1 , Luis A Fernandez 1 Iram F Kazimi 1 Louis A. Faillace, MD, Department of Psychiatry and Behavioral Sciences, The University of Texas Health Science Center at Houston Objective: To propose a standardized ECT training and discuss benefits of standardization Background: Although American Psychiatric Association (APA) Task force on ECT has certain recommendations on ECT training there has not been any standardized training during psychiatry residency so far. Design/Methods: UTHealth ECT Clinic has one month PGY-2 ECT training combined with inpatient rotation that is mandatory and one-month elective neuromodulation elective in PGY-4. The rotations have standard curriculum and log chart to document the trainee activities. The standardized curriculum includes both didactics including not only ECT details but also various topics such as treatment resistant depression, esketamine/ketamine treatments and clinical hand-on training such as assistance and observations. Results and Conclusions: A standardized ECT training for residency programs might promote better ECT related practices in psychiatry.

No. 28
WITHDRAWN

No. 29
Trends in Ethnicity, Race, and Sex Among Psychiatry and Non-Psychiatry Residency Applicants, 2008–2019
Poster Presenter: Ingrid Chen, M.D.
Lead Author: Matthew Hirschtritt, M.D., M.P.H.
Co-Authors: Issam Koleilat, M.D., Krystina Choinski, M.D., John Phair, M.D.

SUMMARY:
Objective: The objective of this study was to examine trends in racial/ethnic and gender representation among US psychiatry residency applicants compared with all other applicants. Methods: Using publicly available applicant data, racial/ethnic and gender distributions of psychiatry residency applicants from 2008-2019 were examined and compared with non-psychiatry residency applicants. Both longitudinal trends within both cohorts and cross-sectional, between-group differences were examined. To examine longitudinal trends from 2008-2019 in the representation of each ethnic and racial group and sex, a chi square test for trend in proportions (with multiple degrees of freedom) of each category within both cohorts (psychiatry and non-psychiatry applicants) was employed. To examine differences in the cross-sectional distribution of ethnic and racial groups and sex within each year, Z-test for proportions was employed. Results: From 2008 to 2019, the percentage of female, American Indian/Alaskan Native (AIAN), Black, Hispanic, and Native Hawaiian/Other Pacific Islander (NHPI) psychiatry and non-psychiatry residency applicants increased ($p<.001$). Within each year, Black and Asian applicants comprised a larger percentage of psychiatry applicants compared with non-psychiatry applicants ($p<.001$). Between 2008 and 2019, Black psychiatry and non-psychiatry applicants increased from 9.1% to 11.6% and 6.6% to 7.6%, respectively; Asian psychiatry and non-psychiatry applicants decreased from 39.5% to 30.5% and 27.5% to 26.6%, respectively; White psychiatry and non-psychiatry applicants increased from 26.7% to 38.2% and 42.7% to 49.2%, respectively. Conclusions: Racial/ethnic and gender characteristics of US psychiatry residency applicants represent the future of the US psychiatric workforce. While the US psychiatry residency applicant pool has become increasingly diverse from 2008 to 2019, minority groups remain underrepresented at various points of the psychiatric workforce pipeline. Initiatives should work to increase the number of psychiatry applicants from historically marginalized backgrounds, and simultaneously to recruit and retain a diverse psychiatric workforce following residency training.

No. 30
Approach and Obstacles to Treatment of Cannabis Withdrawal Syndrome During Pregnancy
Poster Presenter: Ramy Elsawah, M.D.
Co-Authors: Fatima Ahmad, Tony Juneja, M.D.

SUMMARY:
Cannabis is the most used dependent substance in pregnancy, though the long-term effects of cannabis on perinatal and childhood outcomes are not well studied. Due to potential harm, is recommended that cannabis be avoided in the prenatal period. Although there is no definitive or gold-standard treatment for Cannabis withdrawal syndrome (CWS), various medications have been proposed for symptom alleviation. However, much of the proposed treatments are limited during pregnancy, and there is a scarce amount of literature on this matter. This narrative focuses on a review of literature regarding the current pharmacologic approaches to CWS, including the possible pregnancy contraindications, teratogenicity, and obstetrical and neonatal complications associated with the treatments. Furthermore, it will provide recommendations for approaching CWS during the prenatal period. The Pubmed database was used to perform the relevant search. The data collected highlights effective interventions, as well as the challenges that current pharmacotherapy could pose for pregnant patients experiencing cannabis withdrawal syndrome.

No. 31
At the Crossroads of Care: Integrating Addiction Psychiatry Into a Consultation Framework
Poster Presenter: VaKara Monique Meyer Karre, M.D.
Co-Author: Alena Alekseyevna Balasanova, M.D.

SUMMARY:
Introduction: Psychiatric and substance use disorders (SUDs) are major contributors to the global burden of disease, involving substantial social and economic costs. In the United States, an estimated 9.2 million adults 18 years or older suffer from co-occurring psychiatric and SUDs (NSDUH, 2018). This same population is overrepresented in general medical settings. Although SUDs are highly prevalent, and a large driver of costly inpatient medical care, they have historically gone unaddressed during the hospital stay (Weinstein, 2018). The lack of addiction psychiatry training in general psychiatry training programs, particularly in the medically ill or inpatient population, has been recognized as a barrier to early intervention for patients with co-occurring medical, psychiatric, and SUDs (Schwartz, 2018). The development of inpatient addiction consultation services are necessary to adequately prepare physicians to evaluate and treat SUDs in order to take advantage of the reachable moment of hospitalization to engage patients and initiate SUD treatment. Methods: We developed an addiction psychiatry consultation-liaison service where medical students and trainees from various specialties rotate from 1 week to several months. It was designed to teach clinical skills necessary for management of patients with psychiatric and SUDs, including completing comprehensive psychiatric and substance use evaluations, motivational interviewing, withdrawal symptom management, and initiation of Medication Assisted Treatment. Conclusion: Prior to this rotation, students and trainees had no exposure to management of addiction in the medically hospitalized patient population; the integration of addiction psychiatry into a consultation framework is unique within our institution and state. Positive feedback from learners completing this rotation shows that a novel addiction psychiatry consult service can bridge the gap in addiction psychiatry training, leading to an increase in competence and confidence in treating patient with SUDS.

No. 32
Beyond Benzodiazepine Detoxification. Management of Post-Acute Withdrawal During the COVID-19 Pandemic
Poster Presenter: Rigoberto Leyva, M.D.
Co-Authors: Melinda S. Lantz, M.D., Patrick E. DiGenova, M.D., Jenna Hartman

SUMMARY:
Post-acute withdrawal, also described as protracted, extended or persistent withdrawal, refers to a syndrome that includes anxiety, irritability, hostility, mood instability, fatigue, insomnia and increased physical complaints often related to gastrointestinal symptoms, pain and weakness. Unlike acute withdrawal, where treatment guidelines and practices are highly predictable and protocol driven; post-acute interventions are highly symptom driven and individualized. Attention to co-occurring medical

and psychiatric disorders is vital as well. It is well-known that benzodiazepines pose greater risks to older adults including confusion, ataxia, syncope, risk of falls, fractures, delirium and excess hospitalizations. Even with these known risks about 20-25% of all inappropriate prescriptions for benzodiazepines are given to older adults. There is limited literature on managing post-acute withdrawal syndromes in older adults, with few available guidelines for medication management of emerging symptoms. The additional challenges of the COVID-19 pandemic have increased both the stress on older adults in need of care and of providers seeking to engage patients in therapeutic relationships. We focus on representative cases of older adults seeking treatment related to benzodiazepines withdrawal and describe flexible treatment approaches for their evolving and complex needs. We found that patients often entered treatment as a result of prior providers either refusing to continue prescribing benzodiazepines or limiting their practice. Patients responded well to engagement but under the increased stress of COVID-19 quarantine conditions symptoms increasingly emerged. Our population included patients who were also receiving MAT for sustained remission of Opioid Use Disorder and faced greater risks related to benzodiazepine use. Patients were receptive to educational interventions regarding the risks of continuing use and were able to engage in treatment. Despite the proven negative outcomes of chronic use providers continue to prescribe benzodiazepines inappropriately to older adults. The need to care for patients treated with these agents is high. Post-acute withdrawal syndrome is poorly understood and under recognized in older adults. Efforts such as de-prescribing, patient centered approaches to rational prescribing and use remote education programs should be increased. COVID-19 pandemic conditions lead to an increase in overall symptoms reported but did not prevent patients from engaging in successful treatment.

No. 33

Cannabis Use Disorder in a Nationwide Inpatient Sample of Adults With Schizophrenia

Poster Presenter: Ritvij Satodiya, M.D.

SUMMARY:

Introduction: Cannabis use disorder (CUD) is one of the common co-morbid disorder in schizophrenia and affects the disease phenomenology(1). Given the heterogeneity of the illness with a chronic course, it is important to obtain knowledge about the impact of CUD on healthcare utilization and outcomes in adults with schizophrenia spectrum disorder. Objective: We aim to study the demographic differences in cannabis use disorder within an inpatient sample of adults with schizophrenia and analyze its impact on the length of hospitalization. Methods: We used the nationwide inpatient sample (NIS) from the years 2012-–2014(2). We identified patients with diagnosis of schizophrenia spectrum disorder and cannabis use disorder using validated International Classification of Diseases, 9th Revision, and Clinical Modification (ICD-9–-CM) codes. Pearson chi-square test and student's t-test were used to assessing categorical and continuous variables, respectively. Results: We analyzed 4,93,458 inpatient adults with diagnosis of schizophrenia spectrum disorder from 2012 to 2014. The prevalence of CUD in these inpatient adults was 1.6%. There was a decreasing trend of CUD in adults from 1.6% to 1.4% during 2012 to 2014. The mean age for adults with schizophrenia and CUD is 34.52 ± 12.15 years ($p<0.00$). CUD was higher in males (77.7%) than females (22.3%) ($p<0.00$) with predominance in African American (43.6%) and white (40.1%) race. The mean length of hospitalization was 9.19 ± 12.24 days ($p<0.00$). We further categorized this sample with comorbid suicidal ideations and found that 3.2% (n=1,878) of them had CUD. The mean age for schizophrenia + suicidal ideation adults with CUD is 35.53 ± 11.54 years ($p<0.00$). CUD was higher in males (77.2%) than females (22.8%) ($p<0.00$) with predominance in African American (43.5%) and white (42.9%) race. The mean length of hospitalization was 7.31 ± 8.1 days ($p=0.005$). Conclusion: Our study found reducing trends of CUD in adults with schizophrenia between 2012 to 2014, which needs to be compared with the rising legalization of cannabis in different states(3). The is a need to explore the biological and psychological mechanisms behind the preponderance of cannabis use in males and identify the gender-specific risk factors to mitigate the long-term adversities(4).

No. 34

Comorbid Substance Use and Mental Health Disorders: Prior Treatment/Admission as a Predictor of Criminal Arrest Among American Youths

Poster Presenter: Stanley O. Nkemjika, M.D., M.P.H.
Co-Author: Oluwole Jegede, M.D., M.P.H.

SUMMARY:

Background: We aimed to examine the association between recurrent or prior substance use disorder (SUD) treatment and criminal arrest in 12- 24 years old Americans. Methods: The 2017 US Substance Abuse and Mental Health Services Administration (SAMHSA) Treatment Episode Data Set- Admissions (TEDS-A) (n=333, 3220) were used for this analysis. Prevalence odds ratios from the multivariate logistic regression analyses were used to determine associations between recurrent or prior SUD treatment and criminal arrest, adjusting for selected independent variables. Results: Prior history of SUD treatment remained statistically significant with an adjusted OR=0.972 (95% CI: 0.954- 0.991; P=.004) after adjusting for gender, marital status, employment status and source of income. SUD-Mental Disorder (MD) comorbidity was associated with past crime arrest [OR=1.046 (95% CI: 1.010-1.083; P=.012)], after adjusting for gender, marital status, employment status, education and source of income. Conclusion: Our study shows that there is a protective association between history of previous substance treatment re-admissions and its relationship with criminal arrest.

No. 35

Do Hallucinogens Have a Role in the Treatment of Addictions? A Review of the Current Literature

Poster Presenter: Kabir Bahadur Nigam

SUMMARY:

The utility of hallucinogenic drugs within psychiatry is an emerging topic, although not entirely a novel idea. After their introduction to western society in the mid-20th century, psychologists and psychiatrists studied their properties for use as adjunctive therapy in the treatment of psychiatric illness. Unfortunately, their classification as Schedule 1 drugs by the Drug Enforcement Administration in the 1970s put an end to this research. In the past decade, however, interest in hallucinogens has been reignited. The psychiatric community has begun to reinvestigate their role in mental health treatment, with addiction being one focus. Though there is a growing pool of research surrounding the use of hallucinogens in addiction treatment, there have been few reviews focusing on this topic. This poster will serve to summarize this data, focusing specifically on the following hallucinogenic agents: lysergic acid diethylamide, psilocybin, ketamine, ibogaine, and ayahuasca. It will review both the basic pharmacology of each of these chemicals as well as studies assessing their use in treating various addictions including alcoholism, nicotine addiction, opioid use disorder, and cocaine use disorder. Though more robust research is needed before the use of these drugs can be effectively adopted into clinical practice, the current data is promising and suggests the potential for a new and unique avenue for the treatment of addiction.

No. 36

Does Comorbid ADHD Influence the Severity of Cannabis Use Problems in Adults Receiving N-Acetylcysteine Treatment for Cannabis Use Disorders?

Poster Presenter: Christopher J. Hammond
Co-Authors: Ariel Pollack, Junpei Tarashi, Keri S. Rosch, Ph.D., Stewart H. Mostofsky, M.D., Ph.D.

SUMMARY:

Background: Attention deficit/hyperactivity disorder (ADHD) is associated with elevated rates of cannabis use, and is common in adults seeking treatment for cannabis use disorder (CUD). The impact of comorbid ADHD on the presentation, severity, and treatment course for CUD is poorly understood. **Methods**: The current study compared baseline clinical profiles between adults with CUD with (N = 65) and without (N = 237) comorbid/co-occurring ADHD enrolled in the Achieving Cannabis Cessation-Evaluating N-Acetylcysteine Treatment (ACCENT) study, a double-blind randomized placebo-controlled 12-week trial of N-acetylcysteine (NAC) in combination with contingency management for treatment of CUD (NIDA-CTN-0053). Variables of

interest included the cannabis withdrawal scale (CWS), marijuana craving questionnaire (MCQ), marijuana problem scale (MPS), obsessive compulsive drug use scale (OCDU) for cannabis along with sociodemographic characteristics assessed at baseline (BSL) and negative urine cannabinoid tests during treatment. **Results**: Participants with CUD and comorbid ADHD reported greater cannabis cravings (MCQ scores: 59.0 vs. 47.5, $p<0.001$), cannabis-related problems (MPS scores: 12.5 vs. 7.8, $p < 0.001$), and compulsivity of cannabis use (OCDU scores: 25.0 vs. 20.5, $p < 0.001$). Post-hoc analyses showed that relationships between ADHD and cannabis related variables were driven primarily by elevated cannabis cravings, problems, and compulsive use among individuals with the inattentive presentation of ADHD and were not seen in relation to hyperactive/impulsive or combined presentations which were less frequent in the sample. Participants with and without ADHD did not differ on cannabis withdrawal symptoms, nicotine dependence, depressive/anxiety symptoms, or other baseline characteristics. **Conclusions**: These findings indicate that adults with CUD and comorbid ADHD may present for treatment with more severe and impairing cannabis-related problems compared to adults with CUD without ADHD. Furthermore, they suggest that inattentive symptoms compared to hyperactive/impulsive symptoms may be more central to ADHD/CUD comorbidity. Based upon these findings, integrated treatment targeting co-occurring ADHD and CUD and focusing on inattentive symptoms may improve clinical outcomes in adults with CUD and comorbid ADHD.

No. 37
WITHDRAWN

No. 38
Effective Transitioning Opioid Use Disorder Patients From the Emergency Room to Outpatient Buprenorphine Treatment: A Primary Data Collection Analysis

Poster Presenter: Jayson Tripp, D.O.
Co-Authors: Scott Klenzak, Joe Shortall, Ngu Aung

SUMMARY:
Background: The opioid crisis continues to devastate patients and communities across the United States. In 2018 there were nearly 47,000 deaths from opioid overdose, averaging 128 per day. Despite proven efficacy at reducing morbidity and mortality of opioid use disorder (OUD), medication-assisted treatment (MAT) remains underutilized. The emergency room (ER) represents a critical access point for identifying patients who could benefit from MAT. Methods: This project had approval from the Institutional Review Board and it involved collecting data over a 6-month period on patients with OUD that were seen in the ER by emergency medicine residents, psychiatry residents, and psychiatrists with the goal of determining the best way to transition the patient into outpatient MAT. Patients being treated for OUD were given information regarding MAT and asked to make their own outpatient appointment or had an appointment made for them while they were at the hospital. Data was tracked if the patient was administered the partial opioid agonist, buprenorphine/naloxone (BupNx) during their visit, if they were given a script for BupNx upon discharge, and if they filled the script. The patient was followed over 30 days upon leaving the ER to see if they followed up as an outpatient for MAT. Results: 35 patients were tracked with an average age of 33.6 years old. 15 of these patients were seen solely by non-psychiatric providers. 0 of 14 (0%) of patients that were asked to make their own appointment followed up with outpatient treatment with the majority of these patients having been seen by non-psychiatric providers. 14 of 21 (66.7%) of patients that had an appointment made for them while in the ER and received a BupNx followed up for MAT. 7/10 (70%) of patients that filled their buprenorphine prescription also followed up with outpatient treatment. Conclusion: Within the ER, scheduling an outpatient MAT appointment, administering BupNx, and providing a BupNx script positively correlated with patient follow up with outpatient MAT treatment. Since many patients did not require a psychiatric evaluation during their ER visit, this study shows the importance of working collaboratively together with other specialties in helping all OUD patients transition into outpatient MAT treatment.

No. 39
WITHDRAWN

No. 40
Efficacy and Safety of Antipsychotics in Treating Amphetamine-Induced Psychosis
Poster Presenter: Dimy Fluyau, M.D.

SUMMARY:
The use of antipsychotics for the treatment of amphetamine-induced psychosis is sparse due to fear of side effects and the belief that the psychotic episode is self-limited. However, without treatment, some individuals may not fully recover from the psychotic event and may develop full-blown psychosis, emotional, and cognitive disturbance. Treatment of amphetamine-induced psychosis is medically necessary to prevent the development of a full-blown psychosis and neuropsychiatric complications. The investigation of six randomized controlled trials of 314 participants showed that aripiprazole, haloperidol, quetiapine, olanzapine, and risperidone were able to reduce or control both negative and positive psychotic symptoms induced by amphetamine. There was no adverse event. Although there were variations in their side-effect profile and clinical efficacy, aripiprazole, haloperidol, quetiapine, olanzapine, or risperidone were no safer or clinically superior to others. Overall, antipsychotics were well tolerated and efficacious in treating amphetamine-induced psychosis. Practitioners need to tailor their use based on risks for side effects individually.

No. 41
Exploring the Incentive Salience Domain of the Addictions Neuroclinical Assessment Using a Hypothetical Alcohol Purchase Task in Alcohol Use Disorder
Poster Presenter: Hannah Kim
Co-Authors: Brandon Manor, Tommy Gunawan, Vijay Ramchandani, Nancy Diazgranados, M.D.

SUMMARY:
Introduction Incentive salience, defined as the transformation of substance-related stimuli into cues that become highly associated with the substance and lead to approach behaviors, is a major neurofunctional domain in the Addictions Neuroclinical Assessment (ANA) framework relevant to the neurobiology of addiction. The goal of this study was to examine behavioral economic task-based measures of incentive salience and relationships with craving and consumption in individuals with AUD and controls. Methods Participants (N=254; 42.4% female, 64.9% with current AUD diagnosis) were enrolled in the NIAAA clinical research screening and treatment study and completed the ANA battery (Kwako, 2016) between June 2018 and October 2020. We examined the relationship between alcohol craving (Obsessive-Compulsive Drinking Scale; OCDS), alcohol consumption (90-day Timeline Follow-Back; TLFB), and behavioral economic indices of alcohol demand (Hypothetical Purchase Task; HPT). Indices of alcohol demand include demand intensity (DI), which corresponds to amount of alcohol consumption when alcohol is free, and demand elasticity (DE), which corresponds to sensitivity of alcohol consumption to increasing prices of alcohol (Koffarnus et al. 2015). Results Pairwise correlations showed stronger correlation coefficients between OCDS total scores with number of heavy drinking (HD) days in the past 90 days ($r=.80$) than with total drinks consumed in 90 days ($r=.60$). DI ($r=.58$) and DE ($r=-.42$) were also moderately correlated with HD. We used a moderated multiple regression model to determine whether alcohol demand moderated the relationship between OCDS scores and HD. We found that the positive relationship between OCDS scores and HD decreased as DI increased with a relatively small effect size ($p<.001$, $\beta=-.07$ $r=-.14$). Because craving and DI are not independent of one another (MacKillop et al., 2010) and showed strong correlation ($r=.61$), we also explored whether there was a mediation effect of DI on the relationship between OCDS scores and HD. We found that the relationship between OCDS scores and HD was partially mediated by DI. There was a significant indirect effect of OCDS scores on HD through DI (ab=.33, 95% CI [.11, .56]) as computed for 5,000 bootstrapped samples using procedures outlined by Hayes (2008). The mediator accounted for 12% of the total effect, PM = .12. Discussion The significant mediation effect of DI on the relationship between OCDS scores and HD illustrates that behavioral economic measures provides an important link

between self-reported behavioral measures (craving) and real behavior (drinking). Additionally, as craving is a strong predictor of relapse, behavioral economic measures may play a critical role in identifying risk factors and predicting outcomes for individuals with AUD. Future studies should include behavioral economic indices to prospectively predict treatment outcomes in order to identify groups that may be of higher risk of relapse.

No. 42

Frequently Unrecognized Moral Injury May Be Preferentially Matched to Treatment in Twelve Step Programs

Poster Presenter: James E. Black, M.D., Ph.D., M.P.H.

SUMMARY:

Moral injury (MI) was initially described by Shay in Vietnam veterans whose enduring moral conflicts resulted in demoralization, self-harming, and self-handicapping behaviors. Individuals with moral injury have high rates of substance use, isolation, and suicide. They are often misdiagnosed as having PTSD, depression, burnout, or just the sad consequences of substance use disorder (SUD). Although it was initially described in combat veterans, it has also been described in police, child welfare workers, and psychiatric patients. Each patient has experienced a moment when they broke their moral code or were treated unjustly, and the transgression was severe enough that it could not be forgiven or forgotten. The transgression betrays their sense of self, their trust in others, and their view of the world — it is a spiritual crisis that fits the 12 step model. MI often contributes to substance abuse in veterans. MI and PTSD overlap considerably — both have an initiating event, intrusive memories, addiction, anger, suicide risk, and self-destructive impulses. The distinctions are important — MI results from a transgression of values and the most common emotion is guilt and disgust, whereas PTSD is trauma-related and is experienced as anxiety. For both groups, substance use serves to numb the pain. MI however, imposes suspicions that one deserves punishment or that the world is unjust. Persistent guilt is then compounded by actions and consequences of substance use. SUD treatments should be matched to patient characteristics, such as cognitive abilities, social support, or spiritual needs. Twelve-step programs may be the best match for patients suffering from moral injury, a newly identified risk for SUD. CASE DESCRIPTIONS We will present 10 cases of patients with different aspects of SUD who broke moral codes and suffer from different degrees of MI. In brief, they range from adolescent to elderly, most have comorbid psychiatric disorders, their SUD severity ranges from mild to severe, and some are in recovery. Some do not recognize any problem with their behavior and suffer no guilt. Others may recover from SUD, recognizing their bad behavior years later and only then suffer from MI. In addition, perceived injustice can cause MI, and SUD patients often experience injustice, or start their using because of it. Some protective factors (self-esteem, professional role, forgiving supports, world view). CONCLUSIONS Moral injury is unique in that it causes a spiritual crisis and fundamentally challenges one's sense of self-worth. Twelve-step programs can offer redemption or forgiveness by doing the steps, a higher power can restore one's belief in the world, and meetings can relieve some of the common social isolation. MI treatment has been studied only in veterans. Further research is needed on co-occurring MI and SUD to determine if 12-step programs are a good match for treatment.

No. 43

Gabapentin: The Risks of Its Off-Label Use in the Light of the New 2019 FDA Warning

Poster Presenter: Michael Esang, MB.Ch.B., M.P.H.
Lead Author: Mayank Gupta

SUMMARY:

Gabapentin was initially approved in 1993 as an adjunctive treatment for epilepsy, and in 2002 it was also approved for pain in post-herpetic neuralgia. Following a lawsuit unsealed in 1999, it was revealed that gabapentin was being aggressively marketed for multiple off-label indications, with psychiatrists as primary targets (1). The publication of two negative clinical trials in 2000, however, signaled the beginning of a slow decline in gabapentin prescriptions in certain regions in the US. In this abstract, the authors aim to take a closer look at available scientific literature on the complex

neuropsychiatric effects of gabapentin, especially in the context of comorbid substance use disorder. The authors reviewed published evidence on pharmacodynamic and pharmacokinetic effects of gabapentin. It is inexpensive and therefore frequently misused by patients with problems related to opioid, alcohol, and benzodiazepine use (2). Furthermore, due to its unscheduled status, there is a public perception that it has a lower risk potential. On account of the rising public awareness of the dangers associated with the opioid epidemic, other potentially harmful yet seemingly benign pharmaceutical agents have come under increased scrutiny, gabapentin being one of these. We attempt to underscore the risk factors for respiratory depression and highlight the pharmacovigilance and legislative measures in place to mitigate these risks. It is imperative to realize that the FDA warning comes two-and-a-half decades after gabapentin's approval for adjunctive use in the management of epilepsy. The objective of this presentation is to review the empirical evidence for gabapentin use and abuse. We also explore ongoing research in understanding the role of dopaminergic pathways in the complex interplay between gabapentin and other substances of abuse (3). These findings are applicable in real-world clinical practice, improve long term outcomes, and foster patient safety.

No. 44

Gamma-Hydroxybutyrate: Party and Play With Gina

Poster Presenter: Amit M. Mistry, M.D.
Co-Author: Kapila Marambage, M.D.

SUMMARY:

Background: Gamma-Hydroxybutyrate (GHB) popularity as a recreational and club drug has increased. Users can experience euphoria, sedation, relaxation, and sexual excitation. It is also used within the bodybuilding community for its' stimulation of growth hormone. Withdrawal symptoms are comparable to alcohol withdrawal but with the difference of profound insomnia, and an extremely sudden and severe onset. GHB Withdrawals are known for protracted duration, up to 12 days post-use. Withdrawals are difficult to treat it can develop into delirium, psychosis, seizures, and death. Clinical Case: Ms. G is a 25 years-old female with history GHB, methamphetamine, and alprazolam use who was transferred from addiction residential treatment center to hospital for confusion and agitation. Addiction Psychiatry was consulted and on initial evaluation, she was confused and only oriented to self. Chart review revealed limited history except for recent GHB abuse. She was started on intravenous valproic acid and haloperidol. Collateral information revealed 1 year consistent use of GHB 7.5ml every 4 hours daily together with alprazolam 3mg daily and smoking methamphetamine 3grams daily with last use about 2 days ago. With the addition of lorazepam taper her clinical picture improved. However, on completion of the taper, she reported insomnia for 2 days, and became psychotic and agitated. GHB withdrawal progressed to delirium and she was started on a clonazepam and phenobarbital taper, and her valproic acid was increased. Over the next few days, Ms. G improved and reported "I feel more like myself" and she was ready to return to residential treatment. Discussion: This case demonstrates the acute, severe, and enduring nature of GHB withdrawals. Current practice recommendations are cross tapering with benzodiazepines and phenobarbital which has shown limited efficacy. Baclofen which was not used in this case has been shown in the literature to be promising in management of withdrawals. Even then this case rapidly deteriorated and lead to prolonged hospital course. Early intervention and collaborative care by addiction specialists are key in management.

No. 45

How Does Substance Use and Psychosis Aggravate or Mitigate Insanity Defense Adjudication? Findings From Forensic 100 Study in Canada

Poster Presenter: Shatha Alkatib, M.P.H., M.S.
Co-Authors: Mariwan Husni, M.D., Simon S. Chiu, M.D., Ph.D.

SUMMARY:

Introduction: Criminal code of Canada stipulates Insanity Defense (Not-Criminal Responsible) on account of Mental Disorder (NCR-MD) however, the issue as to whether Substance Use mitigates or aggravates the insanity defense remains controversial. The objective was to review the links

of substance use to criminal offenses in a cohort of forensic patients with serious psychiatric disorders in the context of NCR-MD adjudication. **Methods**: We reviewed 100 clinical histories from patients admitted to Ontario Psychiatric hospital forensic program (St Thomas, Ontario) for Fitness-to-stand trial and NCR-MD assessments from l993-2001 (Forensic 100 study: Ontario). The forensic data were extracted from police files, court proceedings, forensic psychiatric and substance use assessments., comprehensive clinical notes and judicial proceedings **Results**: In our cohort of 100 fitness remands, 23 patients entered NCR-MD plea 23/100 for their alleged offenses (mean age: 38.2 yrs; male/female ratio 19/4) forensic psychiatric patients applied for NCR-MD after they were found fit to stand trial for various violent offenses: assault, murder, arson and robbery. The judicial adjudication accepted and agreed with the forensic psychiatric testimonial evidence (100 % concordance rate). Schizophrenia was most frequent psychiatric disorder (18/23) followed by bipolar and psychotic depression disorders (5/23). Alcohol and Cannabis Use disorders ranked highest in frequency of abuse. Substance use was closely related to the criminal offenses in 19/23 and unrelated in 4/23 cases. No single NCR-MD verdict was recommended on the exclusive criteria of substance-induced psychosis. Substance use appeared to aggravate violence episodes related directly to psychiatric disorders. **Conclusion**: Our findings highlight substance use disorders interact with psychosis and violence in a bidirectional manner regarding NCR-MD adjudication in the Criminal code of Canada. The construct of toxic psychosis driven by the spectrum of substance use disorders remains an unsettled issue at the complex interface of criminal law, addiction and psychiatric comorbidity. In USA , insanity defense has evolved to embrace both 'being INSANE and Mentally ill" as synergistic and highly interactive. We suggest that integrating substance use rehabilitation can improve outcomes and reduce Violence Risk in dual diagnosis offenders. We suggest global collaboration among forensic psychiatrists and legal experts can further clarify the legal and neurobiological underpinnings of substance psychosis in insanity defense , with emphasis on psychosis as the integrative driver cutting across multiple jurisdictions, Our preliminary findings call for follow up study to compare the legal and clinical outcomes of dual diagnosis offenders.

No. 46
WITHDRAWN

No. 47
Improving Harm Reduction Resources Available to Providers at Fenway Health
Poster Presenter: Sherifat Ademola
Co-Author: Vu Pham

SUMMARY:
Background: In order to reduce disease transmission and mortality rates resulting from the opioid epidemic in Boston, MA, Fenway Health aims to incorporate harm reduction education in Opioid Use Disorder (OUD) management. Harm reduction is a set of strategies or tools that can keep one safe when engaging in potentially harmful behavior. Examples of harm reduction practices in the context of opioid use, include but are not limited to, use of clean needles, Naloxone kits, and the use of small amounts of substances in a slow manner. Objectives: The current study aims to improve provider knowledge on harm reduction for opioid use and accessibility to harm reduction resources. With improved knowledge about harm reduction practices, providers will be able to identify high risk patients and include harm reduction education into their plan of care. Harm reduction resources such as handouts accessible through an Electronic Medical Records (EMR) system serves as a primary resource used for patient education. Additionally, the study aims to encourage providers to use a non-judgmental approach to the care and treatment of patients with OUD. Lastly, the study aims to improve providers'' comfort levels in educating their patients on harm reduction practices for opioid use. Methods: The study was conducted quantitatively through the use of pre- and post-intervention surveys. A pre-survey assessing baseline knowledge, comfort levels, and attitude when educating patients on harm reduction with opioid use was given to all medical providers at Fenway Health in Boston, MA. A group session was held to educate providers on harm reduction practices in opioid use and to introduce the harm reduction handout as well as

instructions on how to access the handout on the EMR system. Following the group session, a post-intervention survey was given to providers that attended the group meeting. Results: Prior to the group session, our pre-intervention survey indicated that only 28.6% of providers believe that they have sufficient resources to educate patients on harm reduction practices in opioid use. With insufficient resources, providers may not possess the necessary tools to properly educate their patients and will have to refer their patients to outside resources. Following the group session and the introduction of the new handout in the EMR system, the post-intervention survey indicated that 70% of providers believe they now have sufficient resources to educate patients on harm reduction. Conclusion: The results demonstrated that utilizing resources on harm reduction in opioid use from the EMR system is an effective strategy to educate patients with Opioid Use Disorder. Additionally, increasing provider knowledge about harm reduction improves comfort levels when educating patients on safe practices in opioid use. Finally, the results indicate that with adequate resources, harm reduction in primary care setting is an effective approach to resolve the opioid crisis.

No. 48

Initiation of Buprenorphine in Medically Hospitalized Patients With Opiate Use Disorder and the Impact on Discharging Against Medical Advice

Poster Presenter: Sree Latha Jadapalle, M.D.
Co-Authors: Victoria J. Teague, D.O., Joe Shortall

SUMMARY:

Abstract Background: Individuals with opiate use disorder (OUD) are more likely to leave the hospital against medical advice (AMA), even in the face of life-threatening conditions (Southern et al, 2012; Ti and Ti, 2015). The primary motivator for this behavior is to escape the symptoms of opiate withdrawal while compelled into abstinence during their admission (Ti and Milloy, 2015). Initiation of buprenorphine in these patients would eliminate the need to fully withdraw from opiates while hospitalized, and provide long-term treatment for OUD. The project aims to improve patient and organizational well-being by decreasing the rate of AMA discharges in individuals with OUD by initiating buprenorphine in hospitalized patients. Methods: Patients with OUD who are admitted medically at a tertiary care center (Cape Fear Valley Hospital, Fayetteville, NC) are evaluated for appropriateness for medication-assisted treatment (MAT) with buprenorphine. Patient data, including demographics, previous use of MAT, and previous AMA discharges are recorded. Patients are referred to an associated outpatient clinic for follow-up, and attendance to follow-up appointment is recorded. Results: Eleven patients have been screened and initiated on buprenorphine for OUD. Six out of 11 patients had previously left AMA, the other 5 had not. During the admission where buprenorphine was initiated, 3 of the 11 patients left AMA. Two of the 11 patients successfully transitioned to the outpatient clinic, 1 remains in long-term acute care, and the remaining patients were lost to follow-up. Conclusion: Preliminary evidence suggests that initiation of MAT during hospitalization will decrease the likelihood of discharging AMA. Efforts to increase both access to MAT and awareness within the hospital staff regarding the benefits of MAT are ongoing. As the sample size grows, it is anticipated that utilizing MAT for OUD will decrease morbidity and mortality associated with OUD in this community (Thomas et al, 2014).

No. 49

Late-Onset Bipolar Disorder Linked to Kratom Use: A Case Report

Poster Presenter: Kanika Ravi Ramchandani, M.D.
Co-Authors: Leanne Ottoni, M.D., Michele Pato, M.D.

SUMMARY:

Kratom (Mitragyna speciosa korth), formally regionally confined herbal psychoactive substance is native to Southeast Asia, where it was used as a mild stimulant, to prevent opiate withdrawal and for recreational purposes. The main active alkaloid substances, mitragynine and 7-hydroxymitragynine, present with CNS stimulant and depressant effects mediated primarily through monoaminergic and opioid receptors. Here we discuss effects of the drug leading manic episodes with psychotic features in a high functioning man. Mr. S., a 39-year-old, single,

employed, domiciled male with a recent psychiatric hospitalization for bipolar disorder and history of Kratom use in 2018, presents to the ER due to bizarre behavior: constant cleaning, trouble sleeping. Per sister, pt.'s behavior started changing in February 2020 before the pandemic was declared, whereby he was hoarding N95 masks, wore a hazmat suit, goggles and mask in his apartment, and taped his windows and doors shut. Consequently, in February he was hospitalized for a week. Per family, there was no previous psychiatric hx or admissions. He was diagnosed with Bipolar disorder and d/c on Lithium 300mg BID and Risperdal 1mg BID with follow up. In July, he was readmitted, after breaking off his relationship and found standing naked outside of his apartment. He was subsequently discharged. Despite his compliance with medication as confirmed my mother, his admission to CPEP occurred less than a week after. EMS was activated by his family due to reports the patient was throwing his electronics away (phone, remotes), stating that his ex-girlfriend (who was also diagnosed with bipolar disorder around the same time) was trying to hack his wifi. He rearranged the furniture in his apartment, took everything off the walls and placed something in the microwave that caught fire. Sister confirmed he was increasingly irritable, would not make eye contact and curse his family members. On presentation, he was oddly related, not able to give logical answers and expressing he was in "a ball of confusion". He exhibited odd behaviors: closing his eyes for 45-60 secs as if meditating and then opening them to reintroduce himself, as if meeting for the first time. Patient also insisted the day was "Tuesday" on both Wednesday and Thursday despite multiple attempts explaining the correct day, using a calendar as proof. He denied auditory, visual hallucinations, suicidal, homicidal ideation but had evident disorganization of thought process. He confirmed current marijuana use (thrice a week) but denied current Kratom use. Patient was reluctant to take his medications but eventually did. His Li level was 0.58, the rest of his labs were WNL. Considering the patient presented with psychiatric symptoms in February, a sound hypothesis is that his episodes are not linked to the pandemic. Patient's manic symptoms included a lack of sleep, flight of ideas and increase in goal directed activity most likely due to his past Kratom use.

No. 50

Methamphetamine Use in Patients With Food Addiction

Poster Presenter: Robert Rymowicz, D.O.
Co-Author: John Tsuang

SUMMARY:

Abstract: Food Addiction typically presents as a loss of control with regards to the ability to control the consumption of hyperpalatable foods, and often leads to preoccupation, feelings of embarrassment and distress, and increased adiposity. Although methamphetamine is FDA approved for the treatment of exogenous obesity, it is rarely prescribed today. Illicit methamphetamine is widely available in certain parts of the United States, and is noted for its ability to promote weight loss through improved task salience, reduced appetite, and increased psychomotor activity. We present our experience with patients with Food Addiction in treatment for Methamphetamine Use Disorder, who complain of a relapse of Food Addiction behavior and a distressing increase in adiposity following cessation of methamphetamine use. This retrospective case series includes 9 patients with Methamphetamine Use Disorder in Los Angeles County, who identified Food Addiction as their primary motivation for the initiation of methamphetamine use, and the resumption of preoccupation with food and increased adiposity as their primary concerns following successful methamphetamine cessation. These patients were seen and evaluated by the author, and additional data was retrieved from the patients' electronic medical records. Clients were diagnosed with Methamphetamine Use Disorder in accordance with DSM-5 critiera, and with Food Addiction using the Yale Food Addiction Scale 2.0. An extensive review of the literature was conducted over PubMed, with no similar publications noted. Results: This poster will present the concerns reported by patients, their preferred treatments, and the outcomes of their treatment for both Methamphetamine Use Disorder and Food Addiction.

No. 51
N-Methyl-D-Aspartate Receptor Antagonists and the Treatment of Opioid Use Disorder
Poster Presenter: Dimy Fluyau, M.D.
Co-Author: Neelambika Sharanabasa Revadigar, M.D.

SUMMARY:
Effective treatment for opioid dependence is increasing worldwide. Current pharmacotherapy focuses on opioid and adrenergic receptors. The N-methyl-D-aspartate receptor (NMDAR) is among other receptors that can also be targeted to treat opioid use disorder beyond methadone or buprenorphine. Four NMDAR antagonists: ketamine, memantine, amantadine, and dextromethorphan (DM)) have the potentiality to manage opioid withdrawal symptoms and reduce opioid maintenance dose in participants on methadone or buprenorphine/naltrexone (SMD 0.5425,95 CI 0.0272-1.0578). Memantine''s capability at attenuating craving for opioids is comparable with buprenorphine (SMD 0.5168,95 CI 0.0024-1.031). Pancreatitis, intense anxiety, depersonalization, auditory, and visual hallucination raise concerns for safety. There is insufficient evidence to recommend NMDAR antagonists for the treatment of opioid use disorder over methadone. However, memantine appears to as efficacious as buprenorphine. More studies on memantine are warranted.

No. 52
WITHDRAWN

No. 53
New Frontiers: The Application of Technology in Smoking Cessation Strategies
Poster Presenter: Brian P. Blum, D.O.
Co-Authors: Sara Khan, Shivani Kaushal, Clara Alvarez Villalba

SUMMARY:
Background Despite steadily decreasing rates of tobacco use in the US, cigarette smoking continues to impose significant burdens on the health of millions of Americans. While pharmacotherapy and behavioral counseling, have proven to be the most effective interventions established thus far, recent research has been assessing the value of technology-based strategies for smoking cessation. Such interventions may include websites, computer programs, mobile phone texts, smartphone applications, and other electronic aids 1. In this review, we will discuss the emergent addition of technology in smoking cessation and compare technological interventions to more traditional strategies. Reviewing such interventions side-by-side could clarify optimal methods to help individuals quit smoking, further decreasing the rate of smoking and its detrimental health outcomes. Methods A focused literature search was carried out using PubMed. Beginning with a MeSH search of the term "smoking cessation", results were filtered for high-quality reviews, meta-analyses, and randomized control trials. After a comparison of various interventions and their efficacies, another MeSH search of “smoking cessation” was carried out, with the qualifiers of “telemedicine” and “technology”, to further characterize and evaluate promising emerging smoking cessation treatment tools. Results The most effective currently-utilized methods to treat tobacco dependence include behavioral group counseling 2, brief clinician counseling 3, and use of medications such as varenicline 4. Multiple studies indicate that patients receiving technology-based interventions have comparable abstinence rates to patients participating in face-to-face clinical visit programs 5,6,7,8. Additionally, several randomized control trials and meta-analyses on programs utilizing WhatsApp and Short Message Service (SMS) suggest that messaging-based interventions produce higher abstinence rates compared to controls such as generic self-help material 9,10,11,12,13. Furthermore, use of technology-based interventions in conjunction with conventional smoking cessation treatment appears to increase abstinence rates 9,14. The low cost and accessibility of technology-based interventions make them a particularly promising solution for socioeconomically disadvantaged and rural patients 1,7,15,16. Conclusions Technology-based interventions are a cost-effective and scalable adjuvant solution to the pervasive problem of nicotine addiction. While the existing literature suggests that technology-based interventions are successful in promoting abstinence and can be used effectively in combination with conventional smoking cessation treatment, there is a scarcity of

randomized controlled trials evaluating the efficacy of technology-based treatment tools and more investigation is required.

No. 54

Pharmacotherapy for Management of "Kratom Use Disorder": A Systematic Literature Review With Survey of Experts

Poster Presenter: Saeed Ahmed, M.D.
Lead Author: Corneliu N. Stanciu, M.D.

SUMMARY:

Objectives: An increasing number of Americans are turning to Kratom for self-management of various pain, anxiety and mood states; and as an opioid substitute. Addiction to this unique botanical develops and carries a high relapse risk and to date there are no guidelines on how to maintain long-term abstinence. The aim of this article is to compile all available information on management of Kratom addiction from the literature with evidence from the clinical practice of expert addictionologists in an attempt to develop a standard of care consensus. Methods: A systematic literature search was conducted to capture all relevant cases pertaining to maintenance treatment for kratom addiction. Results were supplemented with case reports and scientific posters gleaned from reliable online sources and conference proceedings. Additionally, a survey of members of the American Society of Addiction Medicine (ASAM) was administered to assess the practice patterns of experts who treat patients with kratom addiction in isolation of a comorbid opioid use disorder. Results: Based on a literature review, 14 reports exist of long-term management of kratom addiction, half of which do not involve a co-morbid Opioid Use Disorder (OUD). Pharmacological modalities utilized include mostly Buprenorphine but also a few cases of Naltrexone and Methadone, all with favorable outcomes. This is supported by the results of the expert survey that demonstrated that those who have managed kratom addiction in isolation of a comorbid OUD reported having utilized Buprenorphine (89.5%) as well as the other Medications for Opioid Use Disorder (MOUD). Conclusions: This is the first comprehensive review to examine the existing literature referring to management of kratom addiction in combination with a survey of current expert's clinical consensus regarding management of Kratom Addiction. Based on this information, it seems reasonable that the indication for MOUD should be extended to cases of moderate-severe kratom addiction. Limitations: The evidence summarized here is the most comprehensive collection of data on management of an emerging public health problem – kratom addiction. The cases resulting from the literature search, and included here, have a significant amount of heterogeneity in the descriptions, information provided (ie kratom dose, route, etc), toxicology screens used for abstinence monitoring, reporting of maintenance follow-up duration, etc. Nonetheless, they all used buprenorphine, or naltrexone, for management of long-term abstinence as a general consensus.

No. 55

Predictors and Outcomes of Invasive Mechanical Ventilation in Opioid Overdose Hospitalization in the United States

Poster Presenter: Eduardo Espiridion, M.D.
Co-Author: Adeolu Oladunjoye

SUMMARY:

Introduction Opioid overdose is increasingly becoming common and so is the need for invasive mechanical ventilation (IMV) for opioid overdose admissions in hospitalized patients. Respiratory failure requiring invasive mechanical ventilation is the most common reason for the admission of opioid-associated overdose patients. The aim of our study was to assess the demographic and clinical characteristics associated with the increased need for IMV in hospitalized opioid overdose patients. Methods We analyzed all adult admissions (18 years and above) using the National Inpatient Sample (NIS) database for five years from January 1, 2010 to December 31, 2014 to identify opioid overdose patients requiring invasive mechanical ventilation. We compared the demographic and clinical characteristics of opioid overdose patients requiring and not requiring mechanical ventilator support and performed univariate and multivariate analyses to determine the odds ratio (OR) of association Results A total of 2,528,751 opioid overdose patients were identified among which 6.4% required IMV during

hospitalization. The prevalence of opioid overdose and the need for IMV increased 31% and 38%, respectively, over the study period. Multivariate logistic regression (OR(95% CI),p0.001) determined the following to be associated with increased odds of mechanical ventilator use: (OR 1.12 (1.06-1.19) among patients aged 25-39 years vs (1.36(1.28-1.44)) for the age group 40-64 years when compared to 18-24 years; hospital locations in the southUS region (OR 14.30) (13.63-15.0)), rhabdomyolysis (3.22(3.04-3.42)), septic shock (9.15(8.41-9.97)), and anoxic brain injury (15.5(13.70-17.50)). Other factors associated with the decreased odds of IMV include hepatitis C virus infection (OR 0.75 (0.72-0.79)) and black race (OR0.68 (0.63-0.74)] Opioid overdose patients requiring IMV had a higher length of stay by 8.9 days, higher hospitalization cost by US$ 28,117.81 and higher in-hospital mortality rate (13.4% vs 0.3%). Conclusion The prevalence of opioid overdose and the need for IMV increased over the five-year study period, reflecting an increase in the relatively high in-hospital mortality of opioid overdose patients on IMV. Patient''s age, geographic location, race, and several comorbidities affect the need for invasive mechanical ventilation in hospitalized opioid overdose patients. These findings emphasize the need for a better understanding of these risk factors in creating a strategic approach for hospital care of opioid overdose patients.

No. 56

Predictors of Smartphone Addiction Severity Among College Students in India

Poster Presenter: Karan V. Mehta
Co-Authors: Neeraj Mahajan, Dishant Upadhyay, Taxashil Jadeja, Rajkumar Sevak

SUMMARY:

Background: College students in India extensively use smartphones; however, little is known about the variables that affect the severity of their smartphone addiction. The aim of the current study was to evaluate whether chronotype, social jetlag and sleep duration affect the severity of smartphone addiction in college students in India. **Methods**: A total of 1175 students from medicine, dental, engineering, paramedical and other colleges in Gujarat, India, completed a web-based survey. The survey included demographic questions and questions from the Smartphone Addiction Scale - Short Version (SAS-SV), reduced Horne and Ostberg Morningness and Eveningness Questionnaire (rMEQ), and Munich Chronotype Questionnaire (MCTQ). A multiple linear regression analysis evaluated the effects of rMEQ categories (e.g., morning-type, evening-type), social jetlag (using MCTQ questionnaire), sleep length, smartphone usage time, and gender on the severity of smartphone addiction in college students. **Results**: The outcomes from the multiple linear regression analysis indicated that the model was a significant predictor of SAS-SV score ($F_{7,1174} = 9.51$, p . The social jetlag scores (B=-0.41), sleep length on non-work days (B=0.44), an rMEQ category (B= -1.95), maximum smartphone usage time (B=10.17), and gender (B=1.13) significantly predicted SAS-SV scores ($p<0.034$). The smartphone addiction severity was 1.95 units greater in individuals with evening-type compared to neutral-type rMEQ category; in 1.12 units greater in men compared to women; and 10.16 units greater in in individuals whose smartphone usage was maximum right after waking up compared to those whose usage was maximum during other times of the day. Every unit increase in sleep length on non-workdays increased SAS-SV scores by 0.44 units. Every unit increase in social jetlag score decreased SAS-SV scores by 0.41 units. There was no significant difference in smartphone addiction severity between individuals with morning-type compared to neutral-type rMEQ category (B=0.26, p=0.68); and between individuals with morning-type compared to evening-type rMEQ category (B=-1.69, p=0.08). The sleep length on workdays did not significantly affect smartphone addiction severity (B=-0.13, p=0.43). **Conclusion**: These results indicate that smartphone addiction severity is affected by a number of factors, which can be targeted for developing interventions for reducing smartphone addiction among college students in India.

No. 57

Recovery Support Services and Patient Navigation for Opioid Overdose Emergency Department Patients

Poster Presenter: Elliott J. Liebling, M.P.H.

Co-Authors: Gabriel Kaplan, M.D., Alan L. Gordon, M.D., Jessica Joyce S. Perez, M.P.H., Michael M. Litterer

SUMMARY:
Background: Drug overdose deaths (DOD) sharply increased in the US, reaching 67,367 in 2018. NJ was one of five states where the age-adjusted DOD rate was higher in 2018 than in 2017. Non-traditional recovery support services have been developed to address this public health emergency of devastating proportion. Among these are Peer Recovery Services (PRS) and Patient Navigator Services (PNS). Evidence suggests that these improve patient outcomes (1,2). This IRB-approved retrospective chart study outlines factors found to correlate with acceptance of these novel recovery support services among NJ emergency department (ED) patients who received naloxone (NAL) following an opioid overdose (OOD). Methods: A group of 2,399 NAL-reversed ED patients treated between April 2019 and December 2020 were offered PRS and PNS (which is contingent on acceptance of PRS first). We compared three distinct groups of patients: those who refused PRS, those who accepted PRS only, and those who accepted PNS after PRS. For the analysis, acceptance of PNS was considered a more successful outcome than acceptance of PRS only; acceptance of either was considered more successful than refusal of services. Since opioid use disorder is a chronic condition, patients may visit the ED multiple times for recurrence of use; in cases where a patient was offered PRS and PNS multiple times during the study period, data from the most successful outcome were used. We conducted Pearson's chi-squared tests for categorical variables and ANOVA for continuous variables to assess differences for each variable across the subgroups. We then used multinomial logistic regression to determine the independent correlates for each group. Results: Mean population age was 41.8 and 70.3% were male. Regarding recovery support services, 18.9% refused PRS, over half (56.1%) accepted PRS, and one-quarter (25.0%) accepted PNS. In the multivariable model, non-Hispanic white patients were more likely to accept PRS. In addition, patients who had been previously offered PRS during at least one prior visit were more likely than new patients to accept PNS. Conclusion: This study examined a population at high mortality risk since recent non-fatal overdose is associated with DOD with a dose-response effect (3). Continuity of treatment and support is essential to increase survival. Understanding which factors correlate with an improved likelihood of accepting PRS and PNS can help programs tailor engagement tactics and improve treatment retention. The study findings suggest that additional approaches are necessary to better connect with patients of all racial and ethnic backgrounds and patients who previously refused services. It is especially important to educate patients with stable housing—which may imply a less acute need for support—that in the absence of treatment, there is a potential for rapid deterioration and risk for repeated OOD.

No. 58
Self-Harming Behaviors in Gambling Disorder
Poster Presenter: Eve K. Chesivoir, B.A.
Co-Authors: Stephanie Valle, Jon Grant, M.D.

SUMMARY:
Background: In recent years, both Gambling Disorder (GD) and non-suicidal self-injury have been brought into the spotlight as key disorders in a controversial, new diagnostic category of "behavioral addictions." Previous research has explored suicidality in GD, as well as the prevalence of self-harming behaviors in other impulsive disorders. However, little is known of the relationship between self-injury and GD. This study aims to uncover the relationship between self-harm and GD symptom severity, and explore at the role that depression may play in this relationship. **Methods**: 330 non-treatment-seeking young adults who have gambled at least 5 times in the past year completed the Self-Harm Inventory (SHI), the Hamilton Depression Inventory (HAM-D), and clinical measures related to GD symptom severity (SCI-PG, CAGI). Participants ranged from meeting none to meeting full criteria for GD. Correlation coefficients were calculated with SHI, HAM-D, SCI-PG, and CAGI scores, and a two-way analysis of variance was conducted to examine the effects of self-harming behavior and depression levels on gambling symptom severity. **Results**: Of the 330 gamblers, 156 did not self-harm, 136 engaged in 1-5 self-harming behaviors, and 36 engaged in 5 or more self-harming

behaviors (mean SHI score=1.70, SD=2.52). SHI scores showed a weak, yet significant, correlation with SCI-PG and CAGI scores (r=0.17, p<0.01; r=0.174, p<0.01). There was a statistically significant interaction between the effects of self-harming behaviors and depression on GD severity (p<0.01). Simple main effect analysis showed that gamblers who self-harmed had significantly higher CAGI scores than gamblers who did not self-harm (p<0.01). **Discussion**: The data suggest that GD severity differs significantly in gamblers who self-harm compared to those who do not, and depression symptoms likely play a role in this relationship. Future research should continue to uncover the relationships among different addictive disorders, as well as their connections to mood disorders, as this may increase our understanding of addictive behavior.

No. 59

Should We Be Screening for Mood and Anxiety Symptoms in Nicotine Users?

Poster Presenter: Ahmad Hameed, M.D.

SUMMARY:

Background: Nicotine use and dependence are major public health concerns. The direct and indirect cost of nicotine use to the society in United States is more than $300 billion per year. It is also responsible for more than 480,000 deaths per year. Quitting smoking is very difficult and complex. Data suggests that smokers who have psychiatric syndromes consume more cigarettes than general population. In our cohort, we had asked adult individuals who were smoking cigarettes to contact us either by phone or online to assess their basic eligibility for participation in several concurrent clinical trials. Method: We had inquired adults (age 18+) cigarette smokers to see if they were interested in participating in research studies. They were invited to complete a survey to assess basic eligibility criteria for consideration to participate in clinical trials. We received a total of 4688 inquiries. 3826 individuals consented to participate in our trials. Smokers who consented, were asked additional questions which included their date of birth, gender, ability to understand English, educational level and the number of cigarettes they smoked daily. They were also asked if they ever had depression or anxiety. Statistical analysis to see the prevalence of depression and anxiety in our cohort of smokers. Results: Participants (n=3826) had a mean age of 41.1 (SD: 12.6), 59.6% were female, and 50.5% reported having at least some college education. They smoked an average of 18.3 (SD: 9.0) cigarettes per day. Nearly two-thirds (64.2%, n=2458) of the participants reported having suffered from problems with or being treated for depression or anxiety, a significantly greater proportion than those (35.8%, n=1368) who reported never having depression or anxiety (p < 0.0001). Discussion: Smoking and nicotine use is a major public health concern. More than 480,000 individuals die yearly secondary to smoking related illness. Due to the dependence potential of nicotine, it is difficult to stop smoking/using nicotine. Individuals who suffer from mental health disorders have a higher rate of smoking and nicotine use compared to the general population making quitting smoking or nicotine especially difficult. We wanted to see the prevalence of depression and anxiety in our cohort of smokers/ nicotine users. In our cohort a significantly large percentage (64.2%, n= 2458) versus (35.8%, n=1368), acknowledged as having either suffered from or being treated for depression and anxiety. Our data suggest that we should be screening for depression and anxiety as there is a strong correlation between nicotine use, mental health syndromes and quit rates. We also suggest that smokers with depression and anxiety symptoms should be treated aggressively for their psychiatric syndromes so that decreasing and quitting smoking/nicotine becomes less stressful. We further suggest that additional studies are needed to assess the relationship of other psychiatric syndromes and nicotine use.

No. 60

Skin in the Game: Association Between Loot Box Purchases and Problematic Gambling

Poster Presenter: Dylan Tan
Co-Authors: Robert Howard Dicker, M.D., Frozan Walyzada, Bora Colak

SUMMARY:

Background: The cost of playing a video game traditionally comes from either purchasing access to

an online or hard copy of a game or paying for limited-time access to a game (e.g. arcade machine, online subscription). However, modern games are shifting towards a business model of incentivizing players to purchase in-game items with real-world money, often dubbed “microtransactions”. These microtransactions can either be purely cosmetic without impact on gameplay (e.g. giving characters new outfits) or confer an in-game advantage (“pay to win”)1. A popular method for selling microtransactions are through loot boxes (sometimes called “gatcha”), a digital container with a randomized chance of rewarding players with various in-game items2. As of 2018, loot boxes have grown into a $30 billion industry. Why is this concerning? The randomness of loot boxes is psychological similar to gambling games3,4. This similarity might lead to increased risk for problematic gambling, excessive gambling that interferes with an individual’s personal, familial, or professional life4. Given the nascency of internet gaming disorder, psychiatrists would benefit from learning more about loot box purchasing and its association with gambling. Method: Literature search was performed on Pubmed using keywords “(loot box) OR (loot boxes)” between 1/1/2015 - 10/26/2020. A total of 29 articles were found. 2 entries were found off topic and subsequently removed. Another 2 entries were author corrections and were removed. The final list included 25 articles related to loot boxes. Results: A total of 25 articles on loot boxes were reviewed. There were 3 articles published in 2018, 9 articles in 2019, and 13 in 2020 to date. No articles were published before 2018. A majority of studies were surveys (n=14) or policy implications of loot boxes (n=5). Surveys were conducted on both adults (n=11) and adolescents 18-years-old or younger (n=3) and problematic gambling was assessed with either the Problem Gambling Severity Index (PGSI), Canadian Adolescent Gambling Inventory (CAGI), or the South Oaks Gambling Screen – Revised for Adolescents (SOGS-RA). A positive correlation between loot box purchasing and problematic gambling behavior was detected in 2/3 surveys on adolescents and 8/11 surveys on adults. Other articles included descriptive papers (n=4) on the phenomena of loot boxes, one psychology experiment on loot boxes, one analysis of loot box prevalence, and one protocol for a planned systematic review. Conclusion: Research into the effects of loot boxes is a rapidly growing field. Multiple surveys have shown a positive correlation between loot box purchase and problematic gambling, though the nature of these studies do not explain causality between the two variables. More studies are needed to determine if loot box purchase is associated with other mood or psychiatric disorders.

No. 61

Sustaining Positive Effects of Mentorship for Addictions Problems (MAP) on Substance Use: The Importance of Social Connection Amidst Turbulent Times

Poster Presenter: Kathlene Tracy, Ph.D.
Co-Author: Leah Wachtel, M.A.

SUMMARY:

Background: Substance use disorders (SUD) and their consequences present a significant public health burden in the US, with only 12.9% of the 14.2 million adults with an alcohol or drug use disorder receiving treatment and additional disproportionate negative impacts on disparate vulnerable populations. The COVID-19 pandemic compounds these challenges as it poses the need for social distancing/self-quarantining at times of heightened concern which require patients to re-build social networks as restrictions are dropped. Social support is known to be beneficial for individuals with SUD, and subsequently social isolation is a risk factor for relapse/increases in use. Although there are several empirically based SUD treatments, adoption by providers and adherence/attrition by patients have been significant barriers. Mentorship for Addiction Problems (MAP) is a new behavioral intervention that formalizes client-to-client mentorship relationships as an adjunct to standard outpatient medication assisted/behavioral treatment, comprised of selection, training, and supervision procedures enabling successful recovering patients to mentor those early in recovery. We tested the preliminary efficacy of MAP in reducing substance use and whether treatment effects during the active intervention previously documented were sustained in follow-up. **Methods**: 65 participants (17 Later Recovery Participants LRP and 48 Early Recovery

Participants ERP) with SUD were randomized to MAP+TAU or TAU. Within each MAP cohort, 4-5 mentors engaged in mentoring activities for 24 weeks until 12-13 mentees participated in MAP for 12 weeks. LRP met lifetime diagnosis for a SUD with 6 months abstinent from drugs/alcohol. ERP met current diagnosis for a SUD with active substance use. Behavioral/biological measures were conducted at baseline, weekly, monthly, and termination for all participants and the 12 week follow-up for ERP. **Results**: Agreement between objective Urine Toxicology and Substance Use Report (SUR) was above 90%. As a result, SUR data was utilized for a more comprehensive assessment of use. On average, ERP in MAP (n=24) used substances (heroin, cocaine, or alcohol) significantly fewer days than controls (n=24) during follow-up weeks 13-24, 1.9[SD=4.8] days versus 5.6[SD=7.4] days, p=0.043. In addition, both the ASI alcohol use and drug use composite scores had different rates of change between conditions during follow-up weeks 13-24 (for interaction term between treatment condition and time; alcohol: b=-0.08, SE=0.03, t(47)=-2.97, p=0.005; drug use: b=-0.02, SE=0.01, t(47)=-2.36, p=0.023), with alcohol/drug use scores increasing in TAU and decreasing in MAP for ERP. Supporting data will also be presented. **Conclusion**: MAP shows promise in sustaining the positive effects of reduced substance use during follow-up, which is critical early in treatment when vulnerability and risk for relapse is high. This work was supported by NIDA (R34DA034898)/NIAAA (R01AA016160).

No. 62

The Addictions Neuroclinical Assessment: Analysis of the Negative Emotionality and Executive Function Domains in Patients With Alcohol Use Disorder

Poster Presenter: Brandon Manor
Co-Authors: Nancy Diazgranados, M.D., David Goldman, Emily Vogt, Vijay Ramchandani

SUMMARY:

Introduction: The Addictions Neuroclinical Assessment (ANA) is a tripartite clinical framework of measures that evaluates neurofunctional domains relevant to addiction: Incentive Salience (IS), Negative Emotionality (NE), and Executive Function (EF). It aims to personalize addiction medicine by connecting the neurobiology of alcohol use disorder (AUD) with clinical assessments that could aid with diagnosis and targeting treatments. Here we present how the NE and EF domain assessments performed when analyzed according to diagnosis and self-report scales of stress, impaired control and impulsivity. Methods: Patients with AUD and non-AUD controls enrolled in the NIAAA natural history protocol completed the ANA battery that includes measures of: affect (Positive and Negative Affect Scale), alexithymia (Toronto Alexithymia Scale-20, TAS), resilience (Connor-Davidson Resilience Scale, CDRS), working memory (Backwards Digit Span Task), spatial reasoning (Manikin Test), reward-based decision-making (Effort Expenditure for Reward Task, EEfRT), and visual attention (Trail Making Task, TMT). Participants also completed self-report scales assessing stress (Perceived Stress Scale, PSS), impulsivity (Barrett's Impulsivity Scale, BIS-11; UPPS Impulsive Behavior Scale, UPPS-P). and impaired control (Impaired Control Scale, ICS). Results: This analysis was conducted in the sample that completed the ANA study prior to April 2020 (n=247) and included 173 patients with a SCID-5 diagnosis of AUD and 74 controls. We examined NE and EF measures of the ANA battery for relationships with AUD diagnosis as well as how these measures were linked to self-reported stress levels, impaired control and impulsivity. All measures of the NE domain except positive affect were significantly different between individuals with AUD and controls. Initial matrix correlational analysis revealed that the measures of NE were all highly correlated with PSS scores as well. In the EF domain, all evaluated measures showed significant differences between the AUD group and controls. Correlational analysis revealed that only the EEfRT measures were associated with the BIS-11 and UPPS-P; other task measures correlated only with ICS subscale scores. Linear regression analysis showed that the ICS perceived control score (ICS-PC) was a consistent significant predictor across task measures. Moreover, lower ICS-PC predicted a lower proportion of correct responses on the Manikin task (p=0.029). Discussion: The ANA battery measures in the NE and EF domains significantly differed between AUD and control groups. Associations with self-report measures of stress and

impulsivity/impaired control suggest validity of the ANA measures in assessing the NE and EF domains respectively. Application of the ANA to characterize individual differences in risk factors can provide deeper insights into potential targets and mechanisms for treatment and ultimately better outcomes for AUD.

No. 63

The Multiple Applications of Naltrexone in Medical and Psychiatric Disorders

Poster Presenter: Siana L. Ziemba, D.O.
Co-Authors: Suneeta Kumari, M.D., Saba Afzal, M.D.

SUMMARY:

Naltrexone is known to treat various addictive behaviors, such as alcoholism, opiate, narcotic and tobacco addiction. With respect to the treatment of alcohol addiction, several studies have shown the effectiveness of naltrexone because it eliminates the neural positive reinforcement experienced from alcohol. As a result of the lack of positive reinforcement, there is no internal incentive to drink alcohol. In addition to naltrexone use in various addictions, literature review also indicates that Naltrexone can be used in multiple clinical/ psychiatric disorders. However, Naltrexone utility in clinical settings is variable—some frequently used approaches have less scientifically robust evidence but are nevertheless considered crucial, including its use in various dermatological disorders, chronic diseases, and cancers. In this review, the authors aim to discuss the concept of using naltrexone for multiple medical and psychiatric conditions. We will also discuss role of low-dose naltrexone (LDN) as a novel anti-inflammatory treatment for chronic pain conditions such as fibromyalgia, crohn's disease, multiple sclerosis, and complex regional pain syndrome, that are associated with inflammatory processes. This review is intended for clinicians who are seeking additional information about the background, theory, mechanism of action, and research on naltrexone. METHODS: This systematic review purposes to analyze the available literature, compiling the studies that were conducted on multiple uses of Naltrexone. The databases used consisted of PubMed, Google Scholar, and Cochrane Library. We performed searches with terms "Naltrexone", "Low dose Naltrexone", "Multiple application of Naltrexone". We identified various studies that addressed the diverse applications of Naltrexone administration in various medical and psychiatric disorders. CONCLUSION: Overall, findings from previous research reveal that Naltrexone has proven to be a promising and successful treatment, covering conditions ranging from a plethora of addictions, dermatologic disorders, autoimmune diseases, and obesity to improving overall quality of life. Naltrexone has comprehensive potential in medicinal therapy; it has a variety of therapeutic effects which have yet to be explored. The authors concluded that extensive long-term studies/ clinical trials are needed to better understand the role of naltrexone in terms of its proper dosage and guidelines of its usage in various medical and psychiatric conditions.

No. 64

The Social Distant Road to Recovery: Qualitative Study Examining the Effect of Covid-19 on Patients With Opioid Use Disorder

Poster Presenter: Cristina Montalvo, M.D.
Co-Authors: Emma Fitzelle-Jones, B.A., Jawad M. Husain, M.D., Devin Cromartie, M.D., M.P.H., Rohit Abraham, M.D., M.P.H.

SUMMARY:

Background: Since the beginning of the COVID-19 pandemic, traditional routes of care of psychiatric care have been affected with patients with substance use disorder having increased challenges in accessing care in addition to increased isolation due to limited peer support groups in the wake of social distancing. Current numbers suggest increasing trends of up to 32% for nonprescribed fentanyl from mid-March through May with increases in mental health related disorders including anxiety and depression. **Methods**: Through the Boston University Psychiatry Evaluation of Minority Addiction Treatment (BUPE-MAT) study, we purposively sampled adult patients (n=40) with OUD from the emergency department of an urban safety-net hospital and individuals with opioid use disorder in the Boston Area. One-on-one semi-structured telephone interviews were conducted. Thematic analysis and grounded theory were utilized to

explore relationships between COVID-19, racial/ethnic identities, and effects on engagement in treatment and recovery. **Results**: Break down of demographics of the participants (n=40) included 27 (68%) Female; 25 (62.5%) Black/African American; 7 (22%) currently using opioids at time of interview with 53.78 years being the average age at interview. Identified themes focused on challenges accessing online treatment and support, increased anxiety, and increased isolation. Online treatment and support found that zoom was not always a suitable and accessible mode of "Telerecovery" with a lack of feeling engaged and supported particularly with online AA/NA groups. In addition, the worry of contracting COVID-19 led to increased anxiety as well as guilt with many feeling concerned for those in early recovery and acknowledging lack of recovery community available. Finally, many participants reflected on death of loved ones with a decrease in support networks. **Conclusion**: Addressing challenges to access and quality of online treatment and support, increased anxiety and isolation during COVID-19 may help mitigate the observed increase in opioid overdoses.

No. 65
WITHDRAWN

No. 66
Treatment Options and Shared Decision-Making in the Treatment of Opioid Use Disorder: A Scoping Review
Poster Presenter: Tyler Marshall, M.P.H.

SUMMARY:
Background: Shared decision making (SDM) is an approach to clinical decision-making inclusive of patients' values and preferences during health-related decisions. Previous research suggests SDM may be beneficial in the treatment of substance use disorders; however, the impact of SDM in the treatment of opioid use disorder (OUD) remains unclear. **Objectives**: To identify relevant peer-reviewed literature related to SDM in adults (≥18 years) with OUD, and to summarize the findings according to relevant patient health and treatment-related outcomes. **Methods**: A scoping review was conducted. Five electronic health databases were searched from database inception until September 2019. Only peer-reviewed studies where adults with OUD were provided a choice and/or allowed input into their treatment plan were included. Two independent reviewers screened, extracted, and assessed the quality of included studies. **Results**: Fourteen studies (n=1,748 participants), including seven randomized controlled trials, three non-randomized controlled trials, two observational studies, and one qualitative study met inclusion criteria. Two studies showed a decrease in illicit drug use. One study showed improvements in treatment retention, satisfaction with care, quality of life, perceived dose adequacy and risk of arrest. One qualitative study suggested that inclusion of patients in treatment decisions may improve patient satisfaction, while excluding patients may encourage discontinuation of treatment. **Conclusions**: The available evidence suggests that when clinicians provide treatment options and/or include patients with OUD in treatment-related decisions, outcomes may improve. However, more research is warranted to determine the impact of SDM in the treatment of OUD as few studies measured, or evaluated SDM explicitly.

No. 67
WITHDRAWN

No. 68
Anxiety and Depression Exacerbation Due to Carcinoid Syndrome
Poster Presenter: Utsmai Mary Menezes, M.D.
Co-Authors: Ethan Chambers, Akash Vadalia, Madhu Rajanna, Nicole Smith

SUMMARY:
Carcinoid syndrome is a paraneoplastic disease consisting of symptoms including episodes of: secretory diarrhea, skin flushing, abdominal pain, malnutrition, dehydration, weakness, wheezing, bronchospasm, rapid changes in blood pressure and heart palpitations. Supportive laboratory results may reveal elevated urinary 5-hydroxyindoleacetic acid (5-HIAA). Etiology is unclear however, it is related to increased production of humoral factors including serotonin, histamine, bradykinin and prostaglandins. Recent research reveals patients with carcinoid

tumors have increased rates of anxiety and depression. Patients have reportedly greater anhedonia, increased psychomotor retardation, and increased feelings of hopelessness. Carcinoid syndrome equally affects males and females with a national prevalence of 18.8%. The majority of these neuroendocrine tumors arise in the gastrointestinal tract, while others arise in the respiratory tract, with frequent disseminated liver metastases. Current literature is lacking data related to carcinoid syndrome and anxiety management. We present a case of an elderly caucasian female who presented to the emergency department with a longstanding history of secretory, non-bloody diarrhea, COPD, depression, anxiety and profound 60lbs weight loss in the past year. During the hospital course, our patient had multiple episodes of diarrhea (up to 10 times a day); frequent episodes of wheezing with low oxygen saturation (SaO_2 78-85%); heightened anxiety accompanied by palpitations, sweating and hypervigilance. Abdominal imaging revealed a coarse nodule in the liver consistent with carcinoid syndrome. Urine 5-HIAA levels were ordered after other organic causes of malabsorption and diarrhea were ruled out. Testing for c-difficile, ova/parasites, celiac sprue, crohn's, ulcerative colitis, VIPoma; endomysial IgA, anti-gliadin IgA, and gliadin IgA were all negative. Differential diagnosis of pheochromocytoma, zollinger ellison syndrome and hyperthyroidism were also ruled out. Esophagogastroduodenoscopy and videofluoroscopy were inconclusive for disease.Our patient demonstrated increased depression and anxiety symptoms requiring frequent psychiatric consults, despite ongoing treatment with dual benzodiazepines, antidepressants and anxiolytics. In addition to presenting this case our poster will also discuss applicable features of anxiety management and include a literature review explaining the evaluation, diagnosis and treatment of patients with carcinoid syndrome and generalized anxiety disorder and depression.

No. 69

Anxiety, Depression and Stress During the COVID-19 Pandemic: Results From a Cross-Sectional Survey

Poster Presenter: Michael Van Ameringen, M.D.
Co-Authors: Jasmine Zhang, Nina Lamberti, Beth Patterson, Carolina Goldman Bergmann

SUMMARY:

Purpose: Multiple survey studies have demonstrated a mental health burden of COVID-19 globally. Reports from all over the world reported increases in stress, anxiety and depression as well as general decline in mental health during the first wave of the pandemic. However, few studies have investigated specific factors underlying risks for poor mental health during COVID-19. The current study therefore aims to understand the predictors of significant MH problems (depression, anxiety and stress) in a sample of North Americans. **Methods**: A link to an online survey was posted from April 8th - June 11th, 2020 which included questions regarding COVID-19 experience, perceived impact of the pandemic on life domains (e.g., social communication, finances), utilized coping strategies (e.g., online activities, substance use), and MH treatment history. Current psychiatric symptom severity and impairment were evaluated using the Generalized Anxiety Disorder-7, Patient Health Questionnaire-9, and the Perceived Stress Scale. Respondents were asked to complete the survey at three time points over a span of 8 weeks. **Results**: Overall, 632 individuals (82% female, mean age:42.04+16.56) in Canada and the United States completed the initial survey. While few reported contracting COVID-19 (0.5%), the impact of the pandemic was evident, with a vast majority reporting anxiety around COVID-19 infecting loved ones (88%). Almost half (43%) reported previous MH treatment and 31% met criteria for GAD, 29% for MDD and 63% reported significantly high levels of stress. Female sex, younger age and past MH treatment emerged as significant predictors of these issues($p<.01$). Age-related differences in the impact of COVID-19 on life domains, substance use, and online activity were also noted. The long-term results are currently being examined and will also be presented in this poster. **Conclusions**: The findings from the current sample add to the growing literature suggesting negative effects of COVID-19 on MH, while highlighting specific risk factors. Age may be an important factor in predicting MH during this pandemic.

No. 70

Anxiety, Depression and Stress in Brazil During the COVID-19 Pandemic: Results From a Cross-Sectional Survey

Poster Presenter: Michael Van Ameringen, M.D.
Co-Authors: Carolina Goldman Bergmann, Maryam Rahat, Heather Dwyer, Nina Lamberti

SUMMARY:

Background: Recent literature has provided evidence that supports the extensive effects of the COVID-19 pandemic on various aspects of life, which could have mental health (MH) implications. However, few studies have examined various risk factors for pandemic-related MH issues and their relationship with coping behaviors used during this pandemic. **Methods**: A link to a questionnaire battery was posted from April to June, 2020 across various websites and social media platforms. The questionnaires were focused on the COVID-19 experience, the impact of the pandemic on various life domains (e.g., social communication, finances), coping strategies (e.g., digital and online activities, substance use), as well as MH treatment history. Additionally, mental health symptoms and quality of life were evaluated using the Generalized Anxiety Disorder-7, Patient Health Questionnaire-9, the Perceived Stress Scale, Obsessive Compulsive Inventory – Revised, PTSD Checklist DSM 5 and Quality of Life Enjoyment and Satisfaction Questionnaire. **Results**: Overall, 517 individuals (68.9% female, age:45.22+0.71) in Brazil completed the online survey. A small number reported contracting COVID-19 (1.4%), however, the impact of the pandemic was broad and evident, with a vast majority reporting anxiety about COVID-19 infecting them (84.1%) or their loved ones (83%). Regarding clinically significant symptom severity, 22.6% met criteria for GAD, 18.4% for MDD, 13.9% met criteria for OCD, 18.2% met criteria for PTSD and 62.5% reported clinically significant high levels of stress. Results of a forward Stepwise Regression Analysis identified sex, younger age, past MH treatment frontline worker status and living conditions as significant predictors of these disorders ($p<.01$). Being under the age of 35 was a significant risk factor and living with family or a partner was a protective factor across majority of the categories of interest. **Conclusion**: The findings from the current sample adds further evidence and detail to the growing body of literature on the pandemic related risk factors of mental health distress in Brazil, which correspond to international literature.

No. 71

Associations Between Fear of COVID-19, Affective Symptoms and Risk Perception Among Community-Dwelling Older Adults During a Covid-19 Lockdown

Poster Presenter: Madeline Han
Co-Authors: Rathi Mahendran, Yu Junhong

SUMMARY:

Background: Fear is a common psychological response to the current COVID-19 pandemic. When excessive levels of fear are present, it can lead to significant levels of psychological distress and encourage irrational behaviors, such as exacerbation of pre-existing mental health conditions and suicidal behavior. Factors associated with such fear remains relatively unstudied among older adults. Our study aimed to investigate if fear of COVID-19 could be associated with a combination of psychological factors such as anxiety and depressive symptoms, and risk perception of COVID-19, and demographic factors in a community sample of older adults. **Methods**: A cross-sectional study design was adopted. The sample consisted of 413 older adults (Mage = 69.09 years, SD = 5.45), recruited from an existing cohort study which profiled community-dwelling older adults in Singapore. Older adults completed measures of fear of COVID-19, anxiety and depressive symptoms, and risk perception of COVID-19, during a COVID-19 lockdown. These variables, together with demographics (age, gender, and years of education), were fitted to a structural equation model. Anxiety and depression symptoms were highly correlated with each other and were combined into the higher order latent variable of affective symptoms for analyses. All statistical analyses were performed in R 4.0.0. **Results**: The final model revealed that fear of COVID-19 was positively associated with psychological factors of affective symptoms and risk perception. Older age was associated with greater fear of COVID-19. No significant associations were found between fear of COVID-19 and gender, or years of education. **Conclusion**: Our findings showed that fear of COVID-

19 can be a projection of pre-existing affective symptoms and inflated risk perceptions. These findings also highlighted the need to address the incorrect risk perceptions of COVID-19 and socio-affective issues among older adults in the community. This work was supported by Research Donations from Kwan Im Thong Hood Cho Temple, Lee Kim Tah Holdings Pte Ltd and the Hongkong and Shanghai Banking Corporation, under the Mind Science Centre, Department of Psychological Medicine, National University of Singapore.

No. 72

Emotion Regulation Mediates the Relationship Between Therapeutic Alliance and Improved Anxiety in Adults Receiving Inpatient Psychiatric Treatment

Poster Presenter: Christopher Shepard
Co-Authors: Katrina Rufino, Ph.D., Patricia Daza, Ph.D., Michelle Patriquin, Ph.D.

SUMMARY:

Anxiety disorders are the most prevalent psychiatric disorders throughout the lifespan (Essau, Lewinsohn, Lim, Ho, & Rohde, 2017). A common characteristic of people with anxiety disorders is problems with regulating emotions (Cisler, Olatunji, Feldner, & Forsyth, 2010). Previous research has found strong evidence for a predictive relationship between the therapeutic alliance and psychotherapy outcomes (Flückiger, Del Re, Wampold, Horvath, 2018); however, further exploration on what factors contribute to this relationship is needed. The current study examined emotion regulation (ER) and the mediating role it has between therapeutic alliance and anxiety symptom change across intermediate length of stay inpatient psychiatric treatment. Participants were 2,262 inpatients between the ages of 18 and 89 (M = 35.2, 48.1% female; average length of stay = 42.2 days, SD = 20.9). Therapeutic alliance was assessed with the Working Alliance Inventory-Short (WAI-S) 2 weeks after admission. ER problems were assessed 4 weeks after admission using the Difficulties in Emotion Regulation Scale (DERS). The DERS total score and the 6 DERS subscales were used. The Generalized Disorder-7 (GAD-7) scale was administered at admission and discharge to assess change in anxiety symptoms. Mediation analyses were conducted using the PROCESS macro (Hayes, 2017). Mediation analyses indicated that therapeutic alliance predicted the total ER score and all ER subscales ($p < .001$), and therapeutic alliance was significantly associated with anxiety change ($p < .001$). The DERS and five of the six subscales were associated with anxiety change ($p < .05$). Mediation of the total DERS score (95% CI: .004, .017), nonacceptance of emotional responses (95% CI: .001, .009), lack of impulse control (95% CI: .000, .011), lack of emotional regulation strategies (95% CI; .001, -.018), and lack of emotional clarity (95% CI: .001, .01) was found: better ER mediated the relationship between greater therapeutic alliance and improved anxiety at discharge. Overall, this study identified ER strategies as one important factor contributing to the relationship between better therapeutic alliance and improved anxiety outcomes. Future research should extend our findings and examine the mediating role of ER between therapeutic alliance and other relevant clinical outcomes (e.g., depression, suicide ideation).

No. 73

Intolerance of Uncertainty in Attention-Deficit/Hyperactivity Disorder and Comorbid Anxiety Disorders

Poster Presenter: Geneva Mason
Co-Authors: Sachin Lokuge, Tia Sternat, Martin A. Katzman, M.D., Kathryn Fotinos

SUMMARY:

Background: A high degree of co-occurrence exists between Attention-Deficit/Hyperactivity Disorder (ADHD) and internalizing disorders. The identification of common factors underlying disorders comorbid with ADHD thus constitute an important driver of dimensional approaches to classification and treatment1. One construct that has been implicated in both ADHD and internalizing disorders is intolerance of uncertainty (IU), or the inability to tolerate uncertain or negative events2,3. However, no studies to date have examined IU in an adult ADHD population. The present study investigates IU in adults with ADHD and its relation to comorbid anxiety disorders. Methods: The analysis included 704 adult outpatients (381 females, mean age = 36.17) referred to a tertiary

psychiatric clinic in Toronto, Canada. Subjects were assessed using the MINI 6.0.0 and MINI Plus ADHD module 5.0.0 and completed the self-administered Intolerance of Uncertainty Scale (IUS), which evaluates inhibitory IU (impaired functioning in response to uncertainty) and prospective IU (desire for predictability). Adult patients with ADHD (N = 217) were compared to those without ADHD (N = 487) on total, prospective, and inhibitory IUS score. Results: ADHD diagnosis significantly predicted IUS score (regression, p = .004). IUS score was also predicted by sex (p = .001), the presence of social anxiety disorder (SAD, p < .001), obsessive-compulsive disorder OCD, p = .004), generalized anxiety disorder (GAD, p < .001), and post-traumatic stress disorder (PTSD, p = .021). Patients with ADHD had higher total, inhibitory and prospective IU relative to patients without ADHD (one-way MANOVA, p < .02). Total IUS score was higher in ADHD patients with a comorbid anxiety disorder compared to patients with ADHD only, an anxiety disorder only, or neither disorder (one-way ANOVA, p <.001). Regression analyses indicated that GAD (p = .001) and PTSD (p = .008) predicted increased IU in ADHD patients, while GAD (p = .002), OCD (p = .004), and SAD (p = .004) predicted increased IU in patients without ADHD. A hierarchical stepwise regression identified comorbid GAD, PTSD, and SAD as significant predictors of increased IU in patients with comorbid ADHD and collectively accounted for 18.9% of the variance in total IU (p < .001). Conclusion: Adult outpatients presenting with ADHD have higher levels of IU than those without ADHD. This finding is exacerbated by common comorbid anxiety disorders such as GAD, PTSD, and SAD. While GAD predicted increased IU regardless of ADHD diagnosis, PTSD predicted increased IU specifically in ADHD patients. Our results support the value of IU as a transdiagnostic construct for understanding the co-occurrence of ADHD and internalizing disorders4. Implications for outpatient assessment and practice will be discussed.

No. 74
WITHDRAWN

No. 75
Prevalence and Correlates of Police Contact Anxiety Among Black Emerging Adults

Poster Presenter: Robert Motley Jr., Ph.D., M.S.W.
Co-Authors: Yasir Masood, M.D., Sean Joe, Ph.D., L.M.S.W., Alyssa Finner, M.S.W., Yu-Chih Chen, Ph.D.

SUMMARY:

Background: Anxiety disorders are among the most prevalent disorders for Black emerging adults 18 to 29 years of age in America. The prevalence of police violence exposure among Black emerging adults puts this population at risk for increased rates of anxiety disorders. However, empirical research investigating police induced anxiety among Black emerging adults is scant. To fill this void in research, the current study assessed the prevalence and correlates of police contact anxiety for a sample of Black emerging adults. **Methods:** Computer assisted surveys were utilized to collect data from 300 Black emerging adult students (age 18-29) enrolled at a community college (n = 285) and university (n = 15) located in St. Louis, Missouri. Univariate, bivariate, and ordinary least square regression analyses was done to estimate prevalence rates and correlates of police contact anxiety for the study sample. **Results:** Police contact anxiety as a result of being a victim (Mean = 13.68, SD = 4.94), witnessing (Mean = 13.35, SD = 5.10), and seeing a video (Mean = 13.01, SD = 4.41) of police use of force was moderately high. Bivariate analysis revealed that being male, young, unemployed, and witnessing community violence was significantly associated with police contact anxiety. Results from ordinary least square regression showed that, controlling for other variables, participants who worked full-time were less likely to have higher police contact anxiety as a result of seeing a video of police use of force than those who were unemployed (b = −2.82, SE = 1.24). In addition, participants who reported higher rates of witnessing community violence were more likely to have higher police contact anxiety as a result of being a victim of police use of force (b = 0.11, SE = 0.05). **Conclusion:** To our knowledge, this is the first study to quantify police contact anxiety. Black emerging adults in the current study had moderately high rates of police contact anxiety and those who self-reported being unemployed or having a history of witnessing community violence was more likely to

experience police contact anxiety. These results may inform clinical practice with ethnic minorities experiencing various social anxieties as well as future research on the prevalence and severity of police contact anxiety for emerging adults in the United States. This study was funded by the National Institute on Minority Health and Health Disparities (F31MD013386).

No. 76

Prevalence of Tobacco and Alcohol Use Problems Among Individuals With Panic Disorder: Differences by Sex

Poster Presenter: Michael Chung, M.D., M.H.S.
Co-Author: Michele Pato, M.D.

SUMMARY:

Higher rates of alcohol and tobacco use problems have been observed among individuals with anxiety disorders such as panic disorder (PD). Despite prior research indicating important sex and race differences in substance use problems and panic disorder independently, no previous study has examined the associations of these commonly occurring problems by sex and race. This study examines reported rates of alcohol and tobacco use problems and their association with presumed panic disorder in 10,953 individuals drawn from the Genomic Psychiatric Cohort (GPC), comprising 56% of women and 44% of men, and 55% of individuals of European-Caucasian Ancestry (EA) and 45% of African Ancestry (AA). Due to the large sample size of AA individuals, our study is novel in that the EA:AA ratio is nearly 1:1. Using alcohol and tobacco use disorder screening items and panic disorder screening items, we examined the main effects of panic disorder on alcohol and tobacco use problems and the moderating infl uence of sex and race. Our findings demonstrate that individuals who endorsed PD screening items (n=342) are at increased risk for alcohol and tobacco use problems. Female gender was associated with a decreased risk for alcohol and tobacco use problems as compared to males and screening positive for PTSD was associated with increased risk for alcohol and tobacco use problems. Associations between PD with alcohol and tobacco use problem scores remained significant after adjustment for age, sex, race and PTSD. The influence of PD on alcohol use problems is greater among males as compared with females. There was no difference in alcohol use problems in relation to race.

No. 77

The Impact of Covid-Related Stressful Life Events on Anxiety

Poster Presenter: Anokhi Bafna
Co-Authors: Gabriella Epshteyn, Jenelle Richards, M.A., Lisa J. Cohen, Ph.D.

SUMMARY:

Background: The recent COVID-19 pandemic may have dramatically affected the mental health of Americans over the last few months. At present, there are over 6 million confirmed cases, over 180,000 related deaths (CDC, 2020, Sept. 2) and countrywide stay-at-home orders. These events have introduced an unprecedented degree of uncertainty, stress, and grief in American lives, with regard to physical health, individual freedom, employment, and death of loved ones (Jean-Baptiste et al., 2020). Increases in such stressors may have an adverse impact on individuals' mental health (Pfefferbaum et al., 2020), including increased symptoms of distress and anxiety (Twenge et al., 2020). The present study aims to examine the impact of COVID-related SLEs in the last three months on individuals' anxiety. Methods: An online questionnaire was used to collect information on recent SLEs and levels of anxiety experienced during the pandemic from a community sample of adults (N = 543) across the country. Validated items assessing the presence of anxiety were selected from the SNI (Cohen et al., 2018) and SCI-2 (Galynker et al., 2017) scales, then summed to produce a single outcome measure of total anxiety. Bivariate Mann-Whitney U Tests examined associations between each COVID-related stressor and total anxiety. Multiple linear regression analysis was then performed to assess the unique impact of each significant SLE on total anxiety scores. Results: The SLEs endorsed by over 10% of the sample included: serious illness or injury to close friend/relative (30.0%), serious problem with close friend/neighbor/relative (23.4%), academic failure or severe academic stressor (18.0%), major financial crisis (17.7%), death of close

friend/relative (17.3%), romantic rejection (16.6%), and fired/laid-off (16.6%). The SLEs that significantly correlated with total anxiety in bivariate analyses were academic failure/stressor, major financial crisis, serious problem with close friend/neighbor/relative, broke off steady relationship, public shaming, sexual molestation/assault by close person, and romantic rejection. The SLEs that remained significant in the linear multiple regression analyses after controlling for inter-correlations were academic failure/stressor, major financial crisis, public shaming, serious problem with close friend/neighbor/relative, and broke off steady relationship. Conclusion: Findings indicate that SLEs during the COVID-pandemic are prevalent and have a significant impact on the anxiety level of individuals in the community. Our findings suggest that financial, academic, interpersonal, and possibly social media shaming stressors have been the most anxiety-producing, at least within this sample. Aside from the explicit economic and health repercussions inflicted, the present findings provide support for the claim that the stressors experienced during this pandemic have significant mental health effects, specifically on anxiety levels.

No. 78
WITHDRAWN

No. 79
30 Day Readmission Rate for Oral Aripiprazole Versus Oral Risperidone in Patients With Autism Spectrum Disorder and Irritability
Poster Presenter: Shivani Kaushal
Co-Authors: Sindhura Kompella, M.D., Samuel Neuhut, M.D., Sara Khan

SUMMARY:
Risperidone and aripiprazole have been established as standard pharmacological treatments for irritability and associated aggressive behaviors in individuals with Autism Spectrum Disorder (ASD), and are the only drugs approved by the FDA for those purposes per literature review. In studies that compare risperidone and aripiprazole head-to-head, the drugs appear to have similar effects in assessments of symptom reduction using behavioral checklists and psychiatric scales. However, rates of readmission in children treated with oral risperidone or oral aripiprazole have not yet been studied, demonstrating significant absence of information that should be considered in the adverse effect profiles of these drugs. We conducted a Retrospective analysis using HCA Corporate Databank for 30, 60 and 90 day readmission rate for patients who were on oral risperidone vs oral aripiprazole with *DSM-5* diagnosis of Autism disorder. Variables such as age, gender, ethnicity, *DSM-5* Diagnosis: Autism Spectrum disorder and oral risperidone vs. aripiprazole were studied in the population. Readmission encounters due to other illnesses were excluded from the study. Age between 6-18 years is studied. Chi square analysis was conducted to analyze trends of readmission rate within 30, 60 and 90 days. Logistic regression was then used to assess correlation between oral antipsychotics (risperidone vs. aripiprazole) and readmission rates within 30, 60 and 90 days. After applying the exclusion criteria, n= 2,226 and the association with 30, 60, 90 day readmission at a 95% confidence level (a=.05) was found to be significant for Caucasian ethnicity (P-value=0.0316), age (P-value=0.0393) and antipsychotic vs no antipsychotic use (P value=0.041). Although antipsychotic use reduced readmission rate within 30 days in patients with irritability and ASD, oral aripiprazole and oral risperidone were equally effective in reducing 30 day readmission rate and neither is superior in comparison to the other in 30, 60, 90 day readmission rates. Importantly, use of antipsychotic reduced 30 day readmission rates in comparison to no medication use. Therefore, our study shows the importance for use of antipsychotics for individuals who are refractory to first- and second-line therapies such as behavioral interventions, or for those who present with persistent and serious risk of harm to themselves or others. Additionally, use of antipsychotic in this scenario may reduce hospitalizations within 30 days of discharge, mortality and morbidity.

No. 80
A Systematic Review on the Impact of the COVID-19 Pandemic on the Autism Spectrum Disorders Population and Guidelines for Providing Support
Poster Presenter: Usman Ghumman, M.D., M.P.H.

Co-Authors: Lynn Vu, Marrium Ghumman, Carla Alvarado

SUMMARY:
Coronavirus disease 2019 (COVID-19), an infectious disease caused by severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2), has been recognized as a global pandemic with the latest data reporting at least 17 million cases worldwide. These staggering numbers have not only had a huge impact on the U.S.'s healthcare system and economy but have also affected the population's general mental health and national education. To promote social distancing, many schools in the U.S. abruptly closed in March and transitioned from an in-person classroom to a home-based distance-learning model. This disruption has been difficult, especially for children and adolescents with autism spectrum disorder (ASD). ASD is found in 1 in 59 children in the U.S and can present with functional routines and meaningful rituals, and disruptions in these organized daily activities can result in the manifestation of challenging behaviors such as tantrums, aggression, and self-injury. Supportive therapy such as applied behavioral therapy (ABA), occupational therapy, and speech therapy has been shown to improve these challenging behaviors. However, the COVID-19 pandemic has been a huge disruption in the everyday routine lives of children with ASD and made supportive therapies difficult to access. In this review article, we looked at all the studies done since the onset of the COVID-19 pandemic on COVID-19, its relationship to ASD, and guidelines for parents and providers of children with ASD. In conclusion, it is widely acknowledged that the COVID-19 pandemic and its changes have had a negative impact, especially on individuals with ASD and their families. This is due to the abrupt disruption in daily routine leading to an increase in challenging behaviors as well as a decrease in the availability of professional services. Therefore, it is important that this population receives guidance and support. Common guidance includes following an alternative routine, taking care of the caregiver's well-being, and utilizing online resources and telehealth for support. Professionals should also be aware of the difficulties facing this population and work as a multidisciplinary team to provide care during these unprecedented times.

No. 81

Autism Spectrum Disorder Population During the COVID-19 Pandemic: Data From Special Education Teachers in El Paso School Districts

Poster Presenter: Usman Ghumman, M.D., M.P.H.
Co-Authors: Lynn Vu, Sumbul Siddiqui, Bharathi Gadad

SUMMARY:
Objective: In order to promote social distancing during the COVID-19 Pandemic many schools in the U.S. abruptly closed in March and transitioned from an in-person classroom to a home-based distance-learning model. This disruption has been difficult, especially for children and adolescents with autism spectrum disorder (ASD). In this study, we surveyed the special education staff of four school districts in the El Paso area, assessing the extent of the negative impact of COVID-19 on important areas of student wellbeing such as social communication skills, repetitive behavior, general medical health, academic performance, and aggressive behavior and aspects of online teaching for the ASD population. **Method**: A survey was conducted using google forms which were sent to the educators working with children with ASD in public schools within the El Paso area (El Paso Independent School District, Ysleta Independent School District, Socorro Independent School District, and Canutillo Independent School District). The survey was available online from 12 October to 29 October 2020. **Results**: We found that in students with ASD who switched to online instruction, the social communication skills were the most severely impacted, followed by a decrease in school performance, increase in repetitive behavior, and increased aggressive behavior. Among the 104 responders, 70.6% found moderate to severe difficulty in planning and execution of lesson plans, and 62.5% also reported moderate to severe difficulty in engagement with students. Furthermore, the majority of the educators believed that the provision of services (speech therapy, occupational therapy, and feeding services) to this population was not adequate, and would not recommend online instruction for the ASD population in the future. **Conclusion**: The ASD population, already

being a vulnerable group, have been severely impacted by the change to online instruction in public schools due to the COVID-19. Further studies need to be done to assess the long-term consequences of these changes, and additional support may be required by these students in order to succeed once schools resume regular classes.

No. 82

Transcranial Direct Current Magnetic Therapy for Management of Autism Spectrum Disorder in Children and Adolescents: A Systematic Review

Poster Presenter: Uzma Beg, M.B.B.S.
Co-Authors: Mustafa Qureshi, M.D., Kanwarjeet Singh Brar, M.D., Muhammad Khalid Zafar, M.D., Hiren Patel, M.D.

SUMMARY:
Introduction: According to CDC''s (ADDM) Autism and Developmental Disabilities Monitoring Network, 1 in 54 children is diagnosed with Autism spectrum disorder [1]. This systematic review provides an overview of available studies that test transcranial direct current stimulation (tDCS) to decrease symptoms severity in children with autism spectrum disorder (ASD). Method: A systematic literature search was conducted using ("Autism" OR "Autism spectrum disorder" AND "transcranial direct current stimulation" OR "tDCS") AND (("children" OR "adolescents" OR "teenagers" OR "pediatric population")) in PubMed, Embase, and PsycINFO. We searched for randomized controlled trials (RCTs), open-label studies (OLS), and experimental studies. Further relevant review articles and meta-analysis were searched for more inclusion. Our literature search resulted in 238 hits. After the title, abstract, and full article review, we qualified Six studies. Results: We found six studies (three small randomized controlled studies, one experimental study, one quasi-experimental study, and a pilot RCT) describing the positive effects of tDCS in ASD symptom reduction. The study design varied considerably, and the sample size ranged from 1 to 50 patients. The results indicated a statistically significant increase in Autism Treatment Evaluation Checklist ATEC Scores, vocabulary scores, Children''s Global Assessment Scale scores, and, Health and Behavioral Problem scores (ranging from 14 -26% improvement) [2]. One recent study in 2020 also revealed significant symptom reduction as improvement in mean values of the total ATEC scores, sociability domain sub-scores, as well as health, physical, and behavior domain sub-scores [3]. Conclusion: The data encourages the potential usefulness of tDCS for the management of ASD in children and adolescent population. It provides enough evidence to support symptom severity reductions and suggests improvement in language and clinical outcomes. However, the quality and generalizability of the evidence needs further scrutiny, and more randomized controlled trials are required to establish clinical efficacy of tDCS for ASD in children and adolescents.

No. 83

A Computational Model of the Role Hippocampal Neuron Presynaptic Endocannabinoid Cb1 Receptors in Memory and Retrieval With Implications

Poster Presenter: Ayodeji Jolayemi, M.D.

SUMMARY:
The underlying neurobiology of memory formation remains a subject of great interest with multiple molecular mechanisms being reported to correlate with memory formation. The endocannabinoid system is one such molecular mechanism that may correlate with memory formation, especially from studies of presynaptic cannabinoid receptors CB1 in the hippocampus. However, the role of endocannabinoid receptors in a theory of memory formation continues to remain a subject of enquiry. We approached this problem using a computational brain modeling system. The computational modeling system is based on an abstract automata system, with the flexibility of modeling different aspects of the neural system. In using this system to model a possible mechanism of memory, the computational model independently predicted a system of memory formation that correlates with a theory in which the CB1 receptors and long term potentiation play a role in memory formation. The significance of our finding for a potential theory of the role of CB1 receptors in memory formation, based on a prediction using a computational brain modeling system. The

implications of the finding on therapeutic approach to Alzheimer's Dementia and other Major Neurocognitive Disorders is discussed.

No. 84

A Systematic Literature Review of the Association Between Somatic Symptom Disorder and Antisocial Personality Disorder

Poster Presenter: Eduardo Espiridion, M.D.
Co-Author: Stacie Kerbel

SUMMARY:
Somatic symptom disorder (SSD) and antisocial personality disorder (APSD) are found at higher rates within families compared to the general population. Both disorders are characterized by low serotonin levels, which may be attributed to polymorphisms in the dopa decarboxylase (DDC) gene. The polymorphism rs11575542 of the gene leads to decreasing the efficiency of aromatic l-amino decarboxylase (AADC) and serotonin levels in a person. The polymorphism is also associated with the development of somatic symptoms and sensation-seeking behavior, a trait underlying APSD. Hence, the role of this polymorphism as an underlying feature that may predispose a person to develop APSD or SSD should be explored further in future studies.

No. 85

Cyclosporine Attenuates Stress-Induced Neuroinflammation

Poster Presenter: Patrick J. Ronan
Co-Author: Thomas P. Beresford

SUMMARY:
We have shown that calcineurin (CLN)-meditated immunosuppressants act in brain to reduce alcohol intake in mice but the proximal pathways mediating this effect remain unclear (1-3). The phosphatase calcineurin inhibits peripheral immune activation through the inhibition of the transcription factor NFAT in T cells which leads to decrease expression of a host of inflammatory cytokines and inflammatory molecules. Calcineurin also acts in brain, where it is abundant in both neurons and glia. It plays key roles in reward, stress, and neuroinflammatory signaling (3). Converging lines of evidence have implicated neuroinflammation in the etiology of alcohol abuse (3, 4). Ethanol use leads to enhanced neuroinflammation and neuroinflammation alone causes enhanced ethanol use. Similarly, stress induces neuroinflammatory responses (3). Here we sought to determine the effects of calcineurin-mediated immunosuppressant, cyclosporine A (CsA), on stress-induced neuroinflammatory markers in brain. Rats (n=8) were given either CsA (30 mg/kg, I.P.) or vehicle, exposed to 30 minutes of restraint stress and returned to their home cage for 90 minutes. Brains were rapidly dissected and frozen in isopentane on dry ice. The CeA and PVN were microdissected from 300 um frozen sections and qRT-PCR was performed. Overall, Cyclosporine inhibited the expression of a wide range of neuroinflammatory markers in these regions including cytokines such as IL-2, IL-1b, IL-6, TNFa; markers of glial activation: CD45 and Iba-1; chemokine and chemoattractant molecules such as CCR2 and CCL2; as well as other inflammatory signaling molecules such as COX-2. Some of the largest effects were seen on IL-1 b and IL-6 expression in both CeA and PVN. While CsA inhibited the expression of CD45 and iba1 in the CeA, in the PVN these effects were striking. This suggests that stress rapidly induces glial activation in these regions which is inhibited by CsA. Together these data suggest that rapid, stress-induced neuroinflammatory signaling is attenuated by inhibition of CLN activity. This has implications for the treatment of multiple disorders in which stress is an etiological or maintenance factor such as PTSD and AUD.

No. 86

Insulin Resistance, Body Mass Index, and Physical Activity in Individuals With Depressive Symptoms

Poster Presenter: Stacie Laurie Ong, B.A.
Co-Authors: Fahim Abbasi, M.D., Kathleen Watson, Ph.D., Alison Myoraku, M.S., Natalia Rasgon, M.D., Ph.D.

SUMMARY:
Background: Numerous studies have shown that depression is associated with elevated insulin resistance (IR). IR is a modifiable metabolic state, and evidence suggests that treating IR with

pharmacological or behavioral therapies may be beneficial in patients with depression. However, the mechanisms that underlie the relationship between IR and depression are not well understood, and only a few studies have used direct, rather than surrogate, measures of IR. Here, we examine the association between depression symptoms and a direct measurement of IR, and if this association is independent of body mass index (BMI) and physical activity. Methods: Cross-sectional data were gathered from 97 primarily overweight/obese adults ages 23 to 61 without type 2 diabetes. For each participant, BMI and metabolic data were collected. IR was assessed directly by measuring steady-state plasma glucose (SSPG) concentration during the insulin suppression test. Depression symptoms were assessed with the Hamilton Depression Rating Scale 17-Item (HDRS-17). Physical activity status (inactive versus active) was assessed by the International Physical Activity Questionnaire. Results: Individuals with HDRS-17 scores ≥8 had significantly higher SSPG concentration compared to individuals with HDRS-17 scores <8 (mean ± SD; 184 ± 79 versus 132 ± 63 mg/dL, p=0.02). This association persisted after adjustment for age and sex (adjusted mean difference=56 mg/dL, 95% CI=19-92) by ANCOVA. Upon further adjustment for BMI and physical activity status, the difference in SSPG estimates between the HDRS-17 ≥8 and HDRS-17 <8 groups was reduced, but the association remained significant (adjusted mean difference=35 mg/dL, 95% CI=4-67). In a multiple linear regression model (F(5,91)=10.79, p<0.001, R2=0.34), age, BMI, inactivity, and HDRS-17 ≥8 were all positively associated with higher SSPG concentration. Conclusion: These findings suggest that elevated depression symptoms are positively associated with IR measured directly by SSPG, independent of BMI, inactivity, age, and sex. This is broadly consistent with our previous findings that indirect measures of IR are positively associated with depression severity among individuals with current major depressive disorder. Longitudinal studies are needed to identify if BMI and inactivity are contributing factors to the higher IR seen in individuals with elevated depression symptoms, and future studies may explore mediators of the relationship between IR and depression symptoms.

No. 87

Link Between Frailty, Depression and Cognitive Impairment With Toxoplasma Gondii IgG Serointensity and Seropositivity

Poster Presenter: Hira Mohyuddin
Co-Authors: Niel T. Constantine, Ph.D., Blanca Laffon, Ph.D., Aline Dagdag, Teodor T. Postolache, M.D.

SUMMARY:

Introduction Immunosenescence involving both increased inflammation and tissue damage, contributes to "frailty," a condition involving decreased physiological adaptive reserves and, consequently, an increased risk of morbidity, mortality and functional decline (1). Causes of frailty are poorly understood. Immune dysregulation, including a chronic immune activation as well as deficits in defense against pathogens, have been described with aging, and considered potential causal contributors to frailty (2). Chronic infection with T. gondii has been previously linked with cognitive impairment (3), depression (4, 5), and inflammation. We thus hypothesized positive associations between frailty, cognitive deficits, and depression with T. gondii IgG seropositivity. **Methods** A cross-sectional study was conducted in Spanish participants ≥65 y.o. [N=350, age(SD)= 78.5(8.5) with 67% women] classified according to frailty status by Fried's phenotype criteria (6). Cognitive status was estimated with the Mini-Mental State Exam (cutpoint for positive <25) (7) and depression with the Geriatric Depression Scale (cutpoint for depressed >4) (8, 9). T. gondii IgG antibodies in plasma were measured with ELISA methods (cutpoint for positivity was an Antibody Index >1.0). We performed a) two-ways ANCOVAs [with IgG titers as dependent variable, frailty status (non-frail or prefrail further called "non-frail" vs. "frail), cognitive impairment and depression status as primary independent variables, with adjustment for gender and age, with Tukey post-hoc testing)], and b) three logistic regressions with frailty status, cognitive impairment and depression as binary dependent variables, T. gondii seropositivity status, gender and age as independent variables. **Results** T. gondii antibody titers were significantly higher in frail vs. non-frail individuals (p<0.01 in T. gondii positives, and p<0.05 in the entire sample), in cognitively impaired vs. nonimpaired (p<0.005 in T.

gondii positives and p<0.001 in the entire sample) and in depressed vs. nondepressed individuals (p<0.005 in T. gondii positives, but NS in the entire sample). T. gondii seropositivity was significantly associated with cognitive impairment (OR=2.36 95% CI 1.17; 4.75), resisting adjustment for depression (OR=2.47 95% CI 1.21; 5.05), but was not significantly associated with either frailty or depression. **Conclusion** Although limited by its cross-sectional design, the study replicates previous associations between T. gondii seropositivity and cognitive status, and serointensity with depression, and for the first time, to our knowledge, relates T. gondii IgG titers to frailty. Potential contributors to these associations may be the virulence, extent, and recency of infection and its reactivation, and induction of persistent low grade immune activation "inflammaging" (10). Further research of T. gondii infection in aging may lead to the potential discovery of novel therapeutic targets to promote healthy aging.

No. 88

The Efficacy of MDMA (3,4-methylenedioxymethamphetamine) In Psychiatric Disorders: A Systematic Review and Meta-Analysis

Poster Presenter: Sarah Tedesco
Co-Authors: Ganeya Gajaram, Layth Lewis, Deepa Krishnan

SUMMARY:

Background: 3,4-methylenedioxymethamphetamine (MDMA), MDMA, known recreationally as "Molly" or "Ecstasy", is a triple monoamine reuptake inhibitor. MDMA specifically acts as a weak 5-HT1 and 5-HT2 receptor agonist, targeting 5-HT2A, 5-HT2B, and 5-HT2C receptors. Its potential use for therapeutic purposes with these pharmacological profiles remains a controversial subject. Some studies have shown the potential benefits in clinical trials for the treatment of disorders such as resistant PTSD and social anxiety in autistic adults and there is a need to further explore the scope of its impact on psychiatric disorders. Objective: The aim of this article is to present a systematic review and meta-analysis of the effects of MDMA on various psychiatric disorders in humans, using selected measures relative to meeting psychiatric illness criteria to analyze a change from baseline to endpoint and discussing the potential benefits and adverse events relative to dosing and symptomatology. Methods: Articles were collected and analyzed for systematic review: 21 articles were included in the systematic review that met the criteria for the use of MDMA in the treatment of psychiatric disorders as well as assessing safety and efficacy of the drug in human participants. A meta-analysis was used to evaluate the significance of the findings on dosing and efficacy of MDMA in human participants with psychiatric illness. Articles were analyzed based off of populations who presented with symptomatic psychiatric illness providing data from scales that had baseline and endpoint values. Medical, psychiatric, social, and demographic variables were also taken into account. Primary diagnosis of patients included in the studies showed 13 articles with PTSD, and 3 with anxiety. Of the 21 studies analyzed, there was overlap in secondary comorbid psychiatric illness of Depression (7 total studies) and Anxiety (4 total). Results: The disorders for which MDMA demonstrated a net positive or negative effect on symptoms are presented separately. Symptomatology appeared to be in positive associations with higher doses and controlled with therapeutic advancements when psychotherapy was included with MDMA. Therapy alone proved that patients with mental illness couldn't achieve higher treatment responses compared to MDMA-assisted psychotherapy. Adverse events in patients across all disease classes are presented as minimal. Therapeutic index for patients who demonstrated some benefit is also presented. A risk ratio for beneficial and adverse events is used to determine patients who are treatment resistant. Discussion: The potential therapeutic use of MDMA for various psychiatric disorders needs more exploration specifically for patients with depression, anxiety, mood disorders, personality disorders, and eating disorders. More studies are needed to expand on the above stated psychiatric illnesses to treat patients with treatment resistant psychiatric disorders.

No. 89

No Significant Association Between Sleep Problems and Porphyromonas Gingivalis IgG K Serotypes: A Study in the Old Order Amish

Poster Presenter: Iqra Mohyuddin
Lead Author: Teodor T. Postolache, M.D.
Co-Authors: Aline Dagdag, Mark Reynolds, D.D.S., Ph.D., M.A., Anna Spector, M.D., M.P.H.

SUMMARY:

Background: Sleep problems and periodontal disease are thought to have a bidirectional relationship, and have been linked with depression, dementia, and metabolic illness (Bunjo et al., 2020; Lo Martire et al., 2019; Makkar et al., 2018; Nakada et al., 2015; Orchard et al., 2020; Wheaton et al., 2012). Inadequate sleep can worsen inflammation, a hallmark of periodontal disease, and the activation of the immune system can alter sleep/wake cycles (Gee et al., 2019). A keystone pathogen of periodontal disease is the gram-negative bacteria, Porphyromonas gingivalis, (Spector et al., 2020; Hajishengallis & Lamont, 2014) which is implicated in Alzheimer's disease (Dominy et al., 2019) presumably through translocation to the brain (Wadhawan, 2020). The bacteria is able to turn the inflammation switch on and off via increasing and decreasing certain pro and anti-inflammatory mRNA's (Du et al., 2016). Its virulence is related to several factors including to its K1-7 capsular antigens (Laine & Van Winkelhoff, 1998; Sims et al., 2001). This study was conducted to explore cross-sectionally associations between seropositivity K serotypes of P. gingivalis and measures of self-reported impairment in sleep. If identified, these links would provide a rationale to initiate causality and mediation studies. We hypothesized that sleep impairment and daytime sleepiness will be positively associated and sleep duration negatively associated with P. gingivalis K-serotype IgG titers and positivity. Methods: Our participants were 880 Old Order Amish (OOA) aged 44.8 years-old (SD: 17.2 years); 360 men (40.91%) and 520 women (59.09%). They responded to a questionnaire adapted from the Pittsburgh-Sleep-Quality-Index (Buysse et al., 1989). IgG titers to 7 K-capsular serotypes of P. gingivalis were measured with ELISAs. We tested for the association of serotype-IgG log titers and positivity (top- 5% and top 25% for each serotype) with sleep parameters (as binary and continuous variables) using linear and logistic regressions, adjusting for age and sex. Results: None of our primary hypotheses were confirmed. Exploratory analysis returned a negative association of log-transformed serotype K3 IgG with daytime sleepiness (p=0.01); contrary to the direction of our hypothesis. Conclusions: The strength of the study includes a higher life-style homogeneity and reduced smoking prevalence in the Amish, thus reduced confounding. The negative results of this study imply P. gingivalis K serotype titers are not associated with sleep disturbance. Limitations include cross-sectional design and relying on self-reports, and limited generalizability. In sum, our results reduce the likelihood that sleep impairment mediates previously reported associations between P. gingivalis and neuropsychiatric and metabolic illnesses.

No. 90

Platelet and White Blood-Cell-Based Ratios: Differential Inflammatory Markers of Severe Mental Disorders?

Poster Presenter: Gonzalo Paniagua
Lead Author: Pilar A. Sáiz
Co-Authors: Leticia Gonzalez-Blanco, Maria Garcia-Portilla, Julio Bobes

SUMMARY:

Introduction Neutrophil to lymphocyte (NLR), monocyte to lymphocyte (MLR), and platelet to lymphocyte (PLR) ratios represent peripheral markers of inflammation and have been associated with different mental disorders as Mayor Depressive Disorder (MDD), Bipolar Disorder (BD) and Schizophrenia (SCH) (1-3). However, it is not known whether there are differences in these ratios between the three disorders. The aim of the study is to analyze differences in these ratios in patients with MDD, BD and SCH versus healthy controls (HC) and identify potential differences in these markers among the three groups of patients. Methods Sample: 622 participants were analyzed, divided into 4 groups (DSM-5 criteria): 197 MDD [female: 59.4%, mean age: 53.25 (SD=10.96)]; 154 BD [female: 63%, mean age: 49.14 (SD=13.19)]; 176 SCH [female: 36.9%, mean age: 39.9 (SD=13.39)]; 95 HC female:

46.1%, mean age: 38.29 (SD=11.49)] Assessment: Sociodemographic and clinical data, Hamilton Rating Scale for Depression (HRSD), Young Mania Rating Scale (YMRS), Positive and Negative Syndrome Scale (PANSS), Calgary Depression Scale for Schizophrenia (CDSS), fasting counting blood cell were performed. Statistics: Chi2 test, ANOVA, and non-parametric ANCOVA (Quade´s test) for adjusting for covariates (age), with Scheffe post hoc test. Based on previous data (1) stratified analyses by sex were performed. The level of statistical significance was set at a= 0.05 (two-sided). Results: Differences in age (F=43.864; Chi2=31.339, p=0.001. After stratifiying by sex NLR, MLR and PLR ratios were compared using the Quade´s test using age as covariate. In males, no differences were found between MDD, BD, SCH patients and the control group. However, statistically significant differences were observed in MLR in the subgroup of females [MDD: 0.23 (SD=0.09); BD: 0.23 (SD=0.11); SCH: 0.24 (SD=0.11); HC: 0.29 (SD=0.13); F=5.733, p=0.001]. Post hoc test showed that there are MLR differences between HC versus MDD and between HC versus BD, with higher values in HC versus the other two groups. On the other hand, both in males and females, no differences were found in any of the studied ratios, among the 3 diagnostic groups. Conclusions The MLR is reduced in MDD and BD patients compared to healthy controls, but exclusively in the group of women. The reduced peripheral MRL detected in MDD and BD patient could be related to the recruitment of activated monocytes to the central nervous system, becoming active players in the described neuro-inflammation of these disorders. However, the analyzed ratios do not allow to differenciate between the three diagnostic groups of patients.

No. 91

Polydipsia in Chronic Psychiatric Patients: Medical and Psychological Characteristics

Poster Presenter: Ijeoma Jennifer Hassan, M.D.
Co-Authors: Evaristo O. Akerele, M.D., Harlan Mellk, M.D., Leena Rajagopal, M.D.

SUMMARY:

Introduction: Polydipsia, with its risk for potentially life-threatening hyponatremia, is commonly reported in chronic psychiatric patients, with a reported prevalence as high as 20%. Polydipsia may be associated with psychological and medical factors. In a clinical investigation, we sought to determine the extent to which polydipsic behavior in long term patients hospitalized at a 500-bed state psychiatric hospital could be attributed to other medical disorders and whether polydipsic patients with no evidence of medical disease (“psychogenic”) differed from those with SIADH or other medical disorders. Methods: Hospital databases were reviewed and interviews were conducted with clinical treatment teams to identify all patients with a likely history of polydipsia. Based on chart review, polydipsia history patients were assigned to 3 groups: those diagnosed with SIADH, those with other medical disorders commonly associated with polydipsia (OM), and those with no evident medical history relevant to polydipsia (NM). OM diagnoses included, among others, diabetes insipidus, diabetes mellitus, CKD, and HTN with diuretic use. Group comparisons utilized SPSS (v. 25). Results: 29 patients (5.2% of population) were identified as having current or past polydipsia (mean age 56.2±10.8; 72% males) in 2016. 10 were NM, 8 SIADH, and 11 OM. All had diagnoses of schizophrenia or schizoaffective disorders and were receiving antipsychotic medication.The mean age for each group was: NM 56.0±10.3, SIADH 63.3±8.3, OM 51.3±10.6. Age differences among the groups were significant (ANOVA: F 3.36, df 2, p<0.05); post-hoc tests found that SIADH were older than OM patients (p<0.05) with no differences between the NM and other groups. NM patients were 70% male, SIADH 63%, OM 82%, with no significant group differences ($\chi2$= 0.91, p > 0.05). The current most recent serum Na+for each group was: NM 133.4±8.1, SIADH 128.8±5.5, OM 135.1±5.9. There were no significant group differences in serum sodium (ANOVA F 2.26, df 2, p>0.1). There was a suggestion of group differences in the proportion of patients with a history of developmental disorder (DD): NM 30%, SIADH 0%, OM 9%. While there was no significant overall difference in DD (χ23.7, p >0.1), a possible difference between NM and SIADH was suggested (p < 0.1). Discussion: Polydipsia history patients whose disorder appears primarily psychogenic (NM), about a third of our cohort, did not differ on a number of clinical and demographic features from patients with identifiable medical factors associated with

polydipsia. Possibly increased DD in psychogenic polydipsia, however, requires investigation with larger samples. Absent clearly distinguishing clinical features for psychogenic polydipsia, it appears important to assess all patients with such behaviors for contributory medical factors. Clinical features of psychiatric patients with polydipsia, including clinical course, will be considered in the context of the observations.

No. 92

Potential Implications of Cannabis Abuse on Antipsychotic Efficacy Via P-Glycoprotein: A Case Report

Poster Presenter: Jing Yi Wang, M.D.
Lead Author: Hunter Hinman, M.D.
Co-Authors: Teresa Pigott, M.D., Tyler Kimm, M.D.

SUMMARY:
Cannabis use is more common among patients with psychiatric disorders, and patients with psychosis and concomitant cannabis use are more likely to be hospitalized and have worse treatment outcomes than those without cannabis use. We present a case of a 20-year-old patient with schizophrenia and cannabis use disorder who was admitted for psychosis with catatonic features. He was initially treated with risperidone and then subsequently with haloperidol. The purpose of this case report is to examine the interaction between chronic cannabis use and permeability glycoprotein, and how this affects the efficacy of various antipsychotic medications. Mr. B is a 20-year-old male with a past psychiatric history of schizophrenia, and social history of cannabis and synthetic marijuana abuse, who presented to an acute psychiatric unit as a walk in for psychosis with catatonic features. Upon presentation, he exhibited profound staring, mutism, and immobility. When asked about precipitating events, he responded that he was addicted to marijuana. He was previously admitted twice to this inpatient psychiatric unit for disorganized behavior and audiovisual hallucinations. This admission, he was initially given 2 mg intramuscular lorazepam for catatonia, which improved ambulation. He continued to have latency, poverty of speech, thought blocking, internal preoccupation, and hyper-religious delusions. He was started on 2mg oral lorazepam for catatonic features and 2 mg oral risperidone for psychosis. His response to risperidone was minimal, requiring increased doses up to 3 mg twice daily without improvement. On day 7, the risperidone was switched to oral Haldol, which was titrated up to 5 mg in the morning and 10 mg at night. After being switched to Haldol, the patient showed improvement of psychomotor symptoms, hallucinations, and delusions. Intramuscular Haldol Decanoate 100 mg was given on day 12, and the patient was transferred to a transitional care unit where he continued to improve. We believe the patient's improved response to haloperidol, as compared to risperidone, may have been due to the interaction between those medications, cannabis and P-gp. Permeability Glycoprotein (P-gp) is an efflux transporter on the endothelial cells of the blood brain barrier. It is involved in the transportation of antipsychotic metabolites out of the central nervous system. Recent research in animal models has shown increased expression of P-gp following THC doses. In the last twenty years, multiple studies have shown different ranges in P-gp affinity among antipsychotics, from high affinity (risperidone and quetiapine) to low (haloperidol and clozapine). As such, a patient with psychosis and chronic cannabis use may be more likely to respond favorably to an antipsychotic with low P-gp affinity. Knowledge of P-gp affinity may aid practitioners in making therapeutic decisions for psychotic patients with cannabis abuse.

No. 93
WITHDRAWN

No. 94
WITHDRAWN

No. 95

A Novel Rapidly Effective Treatment of Agitation for Bipolar Disorders With the Oral Dissolving Film BXCL501

Poster Presenter: Sheldon H. Preskorn, M.D.
Co-Authors: Scott L. Zeller, M.D., Leslie L. Citrome, M.D., M.P.H., Joseph Goldberg, M.D., Robert Risinger

SUMMARY:
Background: Acute agitation occurs frequently in patients with bipolar mania,1 requiring management in anemergency department setting or inpatient hospital unit.2 Treatment includes injectable antipsychotics or benzodiazepines.3 BXCL501 is an oral dissolving film for sublingual or buccal use of dexmedetomidine, a highly selective alpha-2a receptor agonist. SERENITY II evaluated the efficacy, safety, and tolerability of BXCL501 for treating acute agitation in patients with bipolar disorder. **Methods**: This was a Phase 3, randomized, placebo-controlled study of BXCL501. Adults aged 18-75 years with a diagnosis of bipolar I or II disorder were eligible if they had a total score of >14 on the 5 items of the PANSS-Excitatory Component (PEC) scale at screening and baseline, with a score ^{3}4 on at least 1 of the 5 PEC items. Patients were randomized 1:1:1 to a single dose of BXCL501 120 mg, BXCL501 180 mg or placebo. The primary endpoint was mean change from baseline in the PEC total score at 2 hours. Secondary endpoints were the earliest time of an effect on agitation on the PEC scale, PEC response (>40% reduction from baseline), and mean change from baseline to 2 hours on the Clinical Global Impression-Improvement Scale (CGI-I) and the Agitation and Calmness Evaluation Scale (ACES). **Results**: Of 380 patients randomized, 362 (95.3%) completed the study. Median age was 48 years, 55% were female, mean PEC total score was 18, and patients were comparable across groups. At 2 hours, the mean change from baseline for the PEC total score was -4.9, -9.0, and -10.4 for placebo, BXCL501 120 mg, and BXCL501 180 mg, respectively (LSM difference: -4.1 and -5.4 vs. placebo, p<0.0001). At 2 hours, PEC response rates were 92.1%, 78.6%, and 48.4% with BXCL501 180 µg and 120 µg and placebo (p<0.0001 vs. placebo). At 2 hours, significant improvement in the CGI-I was observed in the 120 µg and 180 µg groups vs. placebo (LSM difference: -0.9 and -1.3, respectively, p<0.0001). At 2 hours, significant improvement in the ACES score was observed with BXCL501 120 µg and 180 µg vs. placebo (LSM difference: 1.8 and 2.4, respectively, p<0.0001). Significant (p<0.01) improvement with BXCL501 vs. placebo was observed as early as 20 and 30 minutes for the PEC and CGI-I, respectively. Adverse events (AE) occurred in 34.9%, 35.7%, and 17.5% with BXCL501 120, 180, and placebo. All AEs were mild or moderate most commonly somnolence, dizziness, dry mouth, hypotension, orthostatic hypotension, and hypoaesthesia. No drug-related severe or serious AEs occurred. **Conclusion**: BXCL501 demonstrated rapid, robust and clinically meaningful efficacy in the vast majority of bipolar I & II patients for >2 hours, and represents a novel, versatile, non-invasive and well tolerated treatment of agitation with potentially better patient outcomes. Funded by BioXcel Therapeutics.

No. 96
Bipolar Predominant Polarity and Borderline Personality Disorder Traits: A Cross-Sectional Study
Poster Presenter: Nicole M. Bucaro, M.D.
Co-Authors: Melissa Allen, D.O., Marsal Sanches, M.D., Ph.D.

SUMMARY:
Introduction: The concept of predominant polarity proposes that some patients with bipolar disorder (BD) tend to experience a higher rate of certain types of mood episodes over the course of their illnesses. According to this approach, BD patients can be characterized into different subtypes (depressive versus manic predominant polarity), with specific diagnostic and therapeutic implications. However, little is known about the relationship between predominant polarity and personality traits, specifically, borderline personality traits. **Methods**: Sixty-eight inpatients who met DSM-IV criteria for BD (59 BD-I, 4 BD-II, and 5 BD NOS) completed the Borderline Personality Questionnaires (BPQ), an instrument largely utilized for the quantification of borderline personality traits. Predominant polarity was defined by a proportion equal or higher than 2:1 lifetime depressive vs. manic/hypomanic episodes. Among the bipolar patients, 40 (12 males, 28 females, age= 35.53 + 10.78 years) were classified as meeting criteria for manic predominant polarity, while 28 (14 males and 14 females, age= 31.36 + 9.70 years) were classified as suffering from depressive predominant polarity. The BPQ was completed by the patients at the time of discharge and its scores among patients in both groups were compared. The statistical analysis was performed using the Student's "t" test. **Results**: There were statistically significant differences between patients

with depressive predominant polarity and manic predominant polarity with respect to the BPQ total scores (t = -2.47, d.f. = 66, p = 0.016). Patients with predominant depressive polarity had significantly higher BPQ total scores compared to those with predominant manic polarity (depression = 37.79 + 21.94, mania = 25.80 + 18.00). **Conclusion**: Although preliminary, our results suggest that bipolar patients with predominant depressive polarity display higher rates of borderline personality traits. These findings point to a possible impact of personality traits on the clinical presentation of BD in terms of predominant polarity.

No. 97

Combination Therapy Using Two Long Acting Injectable Antipsychotics as Maintenance Treatment for Treatment-Resistant Bipolar Disorder: A Case Report

Poster Presenter: Alvaro Jorge Gonzalez Alfonzo, M.D.
Co-Author: Pik-Sai Yung, M.D.

SUMMARY:

Bipolar disorder (BD) is a severe, chronic, and disabling condition requiring the treatment of acute episodes and the prevention of recurrence using mood stabilizers and second-generation antipsychotics (SGA) typically administered as oral formulations. However, for patients having difficulty adhering to oral maintenance treatments, SGAs in long-acting injectable (LAI) formulations are recommended. There is evidence that the combination of two different LAIs may be beneficial in treating patients with schizophrenia who have failed to respond adequately to LAI monotherapy. Our case report describes the successful prevention of major mood episodes for 12 months combining aripiprazole lauroxil and haloperidol decanoate in a 39-year-old Hispanic male with BD. This patient had a history of multiple inpatient admission for mania due to oral medication non-adherence in the community and previously demonstrated inadequate responses to several LAI monotherapies' maintenance trials. Both LAI were chosen based on tolerability and response to oral formulations in the inpatient setting. No adverse reactions were observed, including treatment-emergent extrapyramidal symptoms and tardive dyskinesia. ??To our knowledge, the combination of two different LAIs for the maintenance treatment of BD has only been recently reported. It may be indicated to prevent mood episodes in nonadherent patients who have shown an inadequate response to LAI monotherapy.

No. 98

Distinct Effects of Antidepressants in Treatment-Resistant Unipolar and Bipolar Depressions in Association With Mood Stabilizers and Antipsychotics

Poster Presenter: Christophe Moderie, M.D., M.Sc.
Co-Authors: Nicolas A. Nunez, M.D., Gabriella Gobbi, M.D., Ph.D., Stefano Comai, Ph.D.

SUMMARY:

Background: Antidepressant (AD) use in treatment-resistant bipolar depression (TRD-BD) is common but controversial 1. This practice is fostered by the hypothesized continuum between treatment-resistant unipolar depression (TRD-UP) and TRD-BD 2. Head-to-head comparisons of response to AD between TRD-UP and TRD-BD could challenge both the assumed continuum and the belief that AD are useful in TRD-BD 3. This study aims to evaluate the combination of AD and mood stabilizer (MS) and/or antipsychotics (AP) in TRD-UP vs. TRD-BD in a natural setting. Secondary objectives included 1) comparing the clinical trajectory of TRD-BD treated with or without AD and 2) testing for a differential response to AD in TRD-BD subtypes. **Methods**: Charts of 206 patients (76 TRD-UP, 70 TRD-BD type 1, 53 TRD-BD type 2) were reviewed. TRD-UP and TRD-BD were treated with AD and/or AP and/or MS. Clinical outcome was determined by comparing changes of the Hamilton Depression Rating Scale (HAMD) scores at the beginning (T0) and after three months of unchanged treatment (T3). Changes in HAMD scores were analysed using repeated measures ANOVA with diagnosis/treatment as between-subject factor and time as a within-subject factor followed by Tukey post-hoc analyses. To compare TRD-UP and TRD-BD treated with specific combinations of AD with AP and/or MS, delta scores were computed and compared using independent samples t-tests. **Results**: HAMD scores in TRD-UP patients were

higher than in TRD-BD treated with AD (F1,139= 34.54, p< 0.001), but TRD-UP patients nonetheless had a greater improvement from T0 to T3 (F1,139= 8.88, p= 0.003). AD+AP generated greater reductions in HAMD in TRD-UP vs. TRD-BD (t=2.48, p=0.02). There were trends for a greater improvement in TRD-UP compared to TRD-BD for the treatment with AD+MS (t=1.81, p=0.07) and AD+AP+MS (t=1.9 , p=0.055). The addition of AD compared to treatment with solely AP and/or MS failed to modify the clinical trajectory in TRD-BD (F1,122= 0.67, p= 0.41), with no further benefits within BD subtypes (F3,122= 1.68, p= 0.17). **Conclusions**: The combination AD+AP/MS generates a greater clinical response in TRD-UP than in TRD-BD supporting the existence of a distinct neurobiological profile in TRD-UP vs. TRD-BD. Our results also point out the absence of clinical benefit to add AD in TRD-BD. This research was supported by the RQSHA (Réseau québécois sur le suicide, les troubles de l'humeur et les troubles associés)

No. 99

Effects of Childhood and Adult Trauma on Affective Lability in Patients With Bipolar Disorder

Poster Presenter: Amir Garakani, M.D.
Co-Authors: Frank Buono, Joseph Goldberg, M.D., Kaitlyn Larkin

SUMMARY:

Background: Growing attention has focused on the phenomenology of affective instability or emotional lability in adults with bipolar disorder, but its underlying determinants remain elusive. There is limited research on the impact of trauma on bipolar disorder. We examined the impact of childhood versus adult trauma as clinical antecedents and relative contributors to adult affective lability in a group of patients at an inpatient psychiatric facility with bipolar and unipolar mood disorders. Method: We cross-sectionally evaluated 46 patients with DSM-IV-TR bipolar disorder and 63 other patients with mood disorders for affective lability and histories of adult and childhood trauma using standardized scales. Bipolar disorder was screened using a modified Mood Disorders Questionnaire. Also used were the Affective Lability Scale, Childhood Trauma Questionnaire and the PTSDChecklist- Civilian. Regression models were developed to parse the relative contribution of childhood versus adult traumatic experiences to affective lability while controlling for potential clinical covariates. Results: Adult trauma was strongly associated with total as well as subcomponent domains of affective lability among bipolar patients while controlling for both age at onset and childhood trauma histories. Childhood sexual or physical abuse was not significantly associated with overall affective lability ratings, although modest significant associations were observed between emotional abuse or neglect with the depressive subcomponent of affective lability as well as emotional neglect with the affective lability anxiety subcomponent. We found no evidence for an additive model of childhood plus adult trauma in predicting adult affective lability as compared with the presence of adult trauma alone. Conclusion: Contrary to expectations, adult but not childhood trauma was significantly associated with affective lability among patients with bipolar disorder. These preliminary findings suggest that recency of traumatic experiences may play a more proximal role than early developmental adverse experiences in influencing emotional instability in adult patients with bipolar disorder.

No. 100

Efficacy of Cariprazine in Patients With Bipolar Depression and Higher or Lower Levels of Baseline Anxiety: A Pooled Post Hoc Analysis

Poster Presenter: Rakesh Jain
Co-Authors: Andrew J. Cutler, M.D., Lakshmi Yatham, Roger McIntyre, M.D., Mehul Patel

SUMMARY:

Background: Anxiety symptoms/anxiety disorders are common in patients with bipolar I disorder and they can have negative impact on clinical outcomes. Cariprazine is a dopamine D3-preferring D3/D2 and serotonin 5-HT1A receptor partial agonist and 5-HT2B antagonist approved to treat adults with bipolar I disorder (manic, mixed, depressive episodes) and schizophrenia. The efficacy of cariprazine in patients with bipolar I depression was demonstrated in 3 randomized, double-blind (DB), placebo (PBO)-controlled, phase 2/3 studies (NCT02670538, NCT02670551, NCT01396447). Post

hoc analyses evaluated the effects of cariprazine on symptoms of depression and anxiety in patients with bipolar depression and higher or lower levels of baseline anxiety. Methods: Patients were randomized to PBO, 1.5 mg/d, or 3 mg/d for 6 weeks of DB treatment. Data from 2 studies that included the Hamilton Anxiety Rating Scale (HAMA) were divided into higher (HAMA total score ≥18) and lower (HAMA total score <18) baseline anxiety subsets to assess mean change from baseline to week 6 in Montgomery-Åsberg Depression Rating Scale (MADRS) and HAMA total scores, and HAMA Somatic and Psychic Anxiety subscales scores. In a supportive analysis, data from all 3 studies were used to evaluate change from baseline on the Hamilton Depression Rating Scale (HAMD) Anxiety/Somatization subscale in higher (subscale score ≥7) and lower anxiety subsets (subscale score <7). All analyses used mixed-effects model for repeated measures; P values were not corrected for multiple comparisons. Results: In 2-study analyses, there were 529 patients in the higher anxiety subset and 423 patients in the lower anxiety subset. For MADRS total score change, the least squares mean difference (LSMD) versus PBO was statistically significant for cariprazine 1.5 mg (-2.4; P=.0200) in the higher anxiety subset, and for cariprazine 1.5 mg (-2.2; P=.0457) and 3 mg (-4.4; P<.0001) in the lower anxiety subset. The LSMD versus PBO in HAMA total score change was also statistically significant for cariprazine 1.5 mg in the higher anxiety subset (-1.9; P=.0105) and for cariprazine 3 mg in the lower anxiety subset (-1.3; P=.0441). For HAMA subscale change, the LSMD was statistically significant for cariprazine 1.5 mg versus PBO on the Somatic (-0.7; P=.0454) and Psychic (-1.2; P=.0127) Anxiety subscales in the higher anxiety subset; no significant differences were noted in the lower anxiety subset. In the 3-study analysis, LSMDs versus PBO on the HAMD Anxiety/Somatization subscale were statistically significant for cariprazine 1.5 mg (-0.8; P=.0004) and 3 mg (-0.6; P=.0120) in the higher anxiety subset, but not in the lower anxiety subset. Conclusions: In this pooled post hoc analysis, treatment with cariprazine 1.5 mg/d was associated with significantly greater improvement than placebo in depressive and anxiety symptoms in patients with bipolar depression and higher levels of baseline anxiety. Funded by: AbbVie, Inc.

No. 101

Efficacy of Cariprazine on Functioning in Patients With Bipolar Depression: Post Hoc Analysis of a Randomized, Placebo-Controlled Trial

Poster Presenter: Mauricio Tohen, M.D., D.P.H., M.B.A.
Co-Authors: Mehul Patel, Eduard Vieta, M.D., Ph.D., Jessica Whelan, Joseph R. Calabrese, M.D.

SUMMARY:

Introduction: Bipolar I disorder is a chronic, recurrent disorder associated with reduced quality of life and functional disability including family, social, and occupational functioning. Cariprazine is a dopamine D3-preferring D3/D2 and serotonin 5-HT1A receptor partial agonist approved for the treatment of adults with manic, mixed, or depressive episodes associated with bipolar I disorder and schizophrenia. The efficacy of cariprazine in patients with bipolar I depression was demonstrated in 3 pivotal phase II/III randomized, double-blind, placebo-controlled clinical trials; its effect on functioning has not yet been reported. This post hoc analysis of data from a pivotal study (NCT01396447) evaluated the effects of cariprazine on function in patients with bipolar I depression using the Functional Assessment Short Test (FAST) scale. Methods: Patients were randomized to placebo or cariprazine 0.75 mg/d, 1.5 mg/d, or 3 mg/d for 8 weeks of double-blind treatment; the 0.75 mg/d dose is outside the recommended dose range and was not included in this analysis. The FAST was administered at baseline and week 8. Mean changes from baseline to week 8 in FAST total and FAST subscale scores were analyzed in the intent-to-treat (ITT) population using an ANCOVA model with last observation carried forward imputation. Results: A total of 388 patients (placebo=129; cariprazine: 1.5 mg/d=134, 3.0 mg/d=125) were included in the ITT population. The least squares mean difference (LSMD) versus placebo for change from baseline in FAST total score was statically significant for cariprazine 1.5 mg/d (1.5 mg=-5.3 [PP=.0575]). On FAST subscales, the LSMD versus placebo was statistically significant in favor of cariprazine 1.5 mg/d, but not 3 mg/d, for Autonomy (1.5 mg=-0.8 [PP=.1420]), Occupational Functioning (1.5 mg=-1.2

[P 3 mg=-0.6 [P=.1930]), Cognitive Functioning (1.5 mg=-1.2 [PP=.2513]), and Leisure Time (1.5 mg=-0.5 [PP=.4607]); the LSMD for Interpersonal Relationships was significant for both doses (1.5 mg=-1.4 [PPP=.0637]; 3 mg=-0.3 [P=.0962]). Conclusion: In patients with bipolar I depression, the difference in FAST total score change was statistically significant in favor of cariprazine 1.5 mg/d versus placebo, suggesting improved functioning for cariprazine-treated patients after 8 weeks of treatment. Cariprazine treatment also demonstrated efficacy versus placebo in improving functioning across multiple FAST domains, with the largest treatment effects observed on the Autonomy, Occupational Functioning, Cognitive Functioning, Leisure Time, and Interpersonal Relationships subscales. These results suggest that cariprazine may be effective at improving functioning in patients with bipolar depression. Supported by AbbVie.

No. 102

Lurasidone in the Treatment of Comorbid Anxiety Symptoms in Bipolar Depression

Poster Presenter: Joseph Goldberg, M.D.
Co-Authors: Cynthia Siu, Ph.D., Michael Tocco, Ph.D., Andrei A. Pikalov, M.D., Ph.D.

SUMMARY:

Background Anxiety and subsyndromal manic symptoms often occur during episodes of depression. The objective of this post-hoc analysis was to investigate the relationships between symptoms of anxiety and depression, and their implications for treatment response to lurasidone in patients with bipolar depression presenting with comorbid anxiety and subsyndromal manic symptoms. Methods This post-hoc analysis included pooled data from two placebo-controlled studies on lurasidone as monotherapy (20-60 mg/d and 80-120 mg/d) and as adjunctive therapy (20 to 120 mg/day flexibly dosed) with lithium or valproate in patients with bipolar depression. Psychic anxiety symptom component was assessed by a sum of HAM-A items 1-6 and item 14 for mental agitation and psychological distress. Somatic anxiety symptom component was assessed by a sum of HAM-A item 7-13 for physical complaints related to anxiety. Results Anxious symptoms were highly prevalent in patients with bipolar depression at study baseline, with 100% had at least one psychic anxiety symptoms, 443 (91.1%) had at least one somatic anxiety symptom. The proportion of patients with any degree of sleep disturbance symptoms as measured by the individual items assessing sleep was 94.9% on the MADRS, 95.1% on the HAM-A, and 76.3% on the YMRS. Lurasidone was associated with a significant change in psychic anxiety component score from baseline to week 6 as monotherapy (LS mean change -4.58, p<0.001 for 20-60 mg/d; LS mean change -4.40, P<0.01 for 80-120 mg/d; vs. -2.87 for placebo) and as adjunctive therapy with lithium/valproate (LS mean change -5.72 vs. -4.42 for lithium/valproate plus placebo, P<0.01). Lurasidone was also associated with a significant change in somatic anxiety component score from baseline to week 6 as monotherapy for the low dose arm (mean change -1.89, P=0.09 for 20-60 mg/d; mean change -1.70, P=NS for 80-120 mg/d; vs. mean change -1.40 for placebo) and as adjunctive therapy with lithium/valproate (LS mean change -2.30 vs. -1.58 for lithium/valproate plus placebo, P<0.01). The presence of "decreased need for sleep" symptom (YMRS item 4) at baseline significantly moderated the effect of lurasidone monotherapy 20-60 mg/d (vs. placebo) treatment, leading to significantly greater lurasidone effect size for improvement in HAM-A total score (Cohenís d=0.55, P<0.001), somatic anxiety component score (d=0.35, P=0.008), and psychic anxiety component score (d=0.58, P<0.001) in the presence (vs. absence) of sleep disturbance symptoms. Anxiety symptom remission (HAMA <= 18) mediated functional remission (all SDS domains <= 3) with lurasidone (vs. placebo) treatment (P<0.05). Conclusion In adults with bipolar depression, results from this post-hoc analysis suggest that lurasidone was efficacious in treating psychic and somatic anxiety. Co-occurring sleep disturbance symptoms moderated the effect of lurasidone on anxiety. Remission of anxiety symptoms was also associated with functional recovery.

No. 103

Managing Bipolar Depression—Effect of CME Learning: Assessing the Impact of Virtual Medical Education

Poster Presenter: Amanda Glazar
Co-Authors: Cecilia Peterson, Antony Loebel, Michael Lemon, Prakash S. Masand, M.D.

SUMMARY:

Introduction Bipolar patients spend two-thirds of their symptomatic lives in the depressed phase of the illness. Bipolar depression (BPD) patients typically need more than one drug to maintain euthymia and the practice of adding an atypical antipsychotic to a regimen is still the trend. However, many approved therapies are associated with poor response rates, a high incidence of adverse effects, and very heterogeneous responses to the use of antidepressant monotherapy. Several agents target the manic and mixed episodes of the disorder, but the evidence base for the treatment of depressive episodes is more limited, particularly long-term. Quetiapine, cariprazine, olanzapine-fluoxetine combination, lurasidone, and cariprazine are the only four FDA-approved drugs for the acute treatment of BPD. A virtual broadcast was developed to assess the ability of continuing medical education (CME) to improve awareness of the recognition and treatment of BPD among psychiatrists. **Methods** The virtual broadcast (May 23, 2020) consisted of a two-hour, live-streamed discussion between two expert faculty. Impact of the educational activity was assessed by comparing learners' responses to four identical questions presented before and directly after activity participation. A follow-up survey was sent to all participants six-weeks post-activity to measure performance in practice changes. A chi-square test was used to identify significant differences between pre- and post-assessment responses. Cohen's d was used to calculate the effect size of the virtual broadcast. **Results** Activity participation resulted in a noticeable educational effect among learners (n=929; d=2.17, P<.001). The following areas showed significant (P <0.05) pre- vs post-educational improvements: recognition of approved therapies for pediatric BPD, identification of risk factors for antidepressant induced activation , identification of BPD patients who are possible candidates for antidepressant therapy and recognition of medications with negative studies in BPD. Additionally, 59% (n=32) of learners reported a change in practice performance as a result of the education received, including developing treatment plans based on assessment of patients with BPD and utilization of evidence-based treatment options for patients. **Conclusions** The results indicated that a CME-certified two-hour virtual broadcast was effective at improving knowledge among learners with regard to the recognition and treatment of BPD. This knowledge also resulted in positive changes in practice performance post-activity. Future medical education efforts should continue to address best practices in the diagnosis, treatment and management of patients with BPD, as there remains a need for improving outcomes in this patient population.

No. 104

Phenotype Characteristics Associated With Different Cognitive Trajectories in Bipolar Disorder at 3-Year Follow-Up

Poster Presenter: Mercedes Valtueña García
Co-Authors: Clara Martínez-Cao, Ainoa García Fernández, Pilar A. Sáiz, Maria Garcia-Portilla

SUMMARY:

Introduction Bipolar disorder (BD) is a chronic disease characterized by mood swings (depressive, manic and mixed episodes) that alternate with periods of euthymia, cognitive dysfunction and functional impairment1,2. With evolution, some patients show a deterioration in cognitive performance while others improve or remain stable3. There are few studies identifying the variables that predict the evolution of cognitive performance over time. Objective To identify the baseline clinical, somatic and psychosocial functioning variables that allow to predict the evolution of cognitive performance in a sample of patients with bipolar disorder at three years of follow-up. Method Secondary analysis of a prospective multicenter 3-year follow-up study. Sample: 129 patients with BD. Inclusion criteria: BD outpatients, age ≥ 18 years. Assessments: sociodemographic and clinical questionnaire, HDRS, YMRS, Screen for Cognitive Impairment in Psychiatry (SCIP), and Functioning Assessment Short Test

(FAST). Anthropometric and vital signs were recorded as well as lab results. The sample was divided into 3 groups according to the evolution of cognitive Performance at 3 years: Worsened Cognitive Performance (WCP) (n = 62), Stability of Cognitive Performance (SCP) (n = 33) and Improved Cognitive Performance (ICP) (n = 31). Results The baseline cognitive performance score was [WCP= 1.76 (1.47); SCP= 2.88 (1.65); ICP= 3.42 (1.15)] and at three years was [WCP= 3.52 (1.36); SCP= 2.88 (1.65); ICP= 1.77 (1.02)]. According to the evolution of cognitive performance at three years, the WCP group had an early-onset of bipolar disorder [Mean age (SD)] [WCP= 24.97 (8.12); SCP= 29.12 (9.94); ICP= 30 (8.59)] and a greater length of illness. Neither HDRS nor YMRS were significantly associated with the type of cognitive trajectory. Regarding somatic variables, patients with WCP had higher BMI [Mean (SD)] [WCP= 30.20 (6.26); SCP= 28.59 (4.11); ICP= 26.20 (4.76), p =0.007] and higher CRP levels [WCP= 2.32 (4.88); SCP= 0.63 (0.66), p= 0.028] compared to patients with SCP. On the other hand, statistically significant differences were found among the three groups in the FAST total score [WCP= 27.82 (16.67); SCP= 32.6 (17.65); ICP= 18.33 (13.09)]. Specifically, the WCP group presented greater impairment in cognitive (6.39 vs 4.42, p= 0.007) and economic areas [1.61 (1.98); 0.58 (1.03), p= 0.025] compared to the group with ICP. Furthermore, the patients with SCP presented greater difficulty in the occupational functioning [10.87 (5.54); 6 (4.64), p= 0.002] compared to the ICP individuals. Conclusions The phenotype characteristics of the worsening cognitive trajectory were early onset and longer length of illness, obesity, elevated biomarkers of inflammation and impairment in psychosocial functioning. Our data support specific therapeutic interventions addressing the modifiable phenotype characteristics in order to ameliorate cognitive performance.

No. 105

Quantifying Illness Trajectories in Bipolar Disorder and Schizophrenia Through the Rochester Epidemiology Project (REP)

Poster Presenter: Manuel Gardea, M.D.
Co-Authors: Javier Ortiz Orendain, M.D., John Michael Bostwick, M.D., Alastair John Stewart McKean, M.D., Mark Andrew Frye, M.D.

SUMMARY:
Background: Evidence suggests that many patients with bipolar disorder (BD) and schizophrenia (SCZ) experience a diagnostic confirmation delay as early symptoms are often unrecognized or are non-specific. The controversy is ascertaining whether BD and SCZ prodromes [i.e. early sign(s) or symptom(s) indicative of disease onset preceding more diagnostically specific signs and symptoms] exist, and if so, delineating time-frame from prodrome to diagnosis. The concept of prodrome is highly variable but, in cohorts who progress to meet diagnostic criteria for BD or SCZ, it can clarify the trajectory of illness and future potential targets for early interventions. Methods: We aim to review and analyze patient demographics and longitudinal patterns of symptom endorsement, healthcare utilization, and psychiatric diagnoses of people in Olmsted County who are diagnosed with BD or SCZ. We will review the medical records of subjects from the REP, a comprehensive medical records linkage system that indexes medical records, medications, procedures, and other health-related information of persons seeking medical care in Olmsted County, Minnesota. Results: The conceptualization of domains identified in the qualitative data through thematic analysis resulted in the following categories: demographics, perinatal data associated with BD and SCZ, previous psychiatric diagnoses, family history, identified risk factors and history of social and functional decline. We included the characteristics of diagnostic entities of clinical high risk for psychosis and cyclothymia, which evidence suggest may be diathesis for SCZ and BD, respectively. We hypothesize that patients with BD with history of psychotic mania and patients with SCZ will have similar illness trajectory as quantified by symptoms of general anxiety, phobia, insomnia, depression, and psychosis, but will have significantly different illness trajectory as quantified by the presence of cyclothymia (BD not SCZ), time from first symptoms to incident case (BDI/BDII vs SCZ), patterns of drug and alcohol use, and psychotropic drug use. An exploratory hypothesis will investigate the illness trajectories identified and its association with known genetic and viral disease risk factors already identified in the Mayo Clinic Bipolar Disorder Biobank. Conclusion: It may prove to be

advantageous to conceptualize the childhood and adolescent clinical phenotypes and other psychosocial factors in individuals who later develop BD or SCZ as clinical risk states rather than early prodromes. Our study intends to highlight the importance of a developmental approach that can contribute to differentiate if early specific and non-specific psychopathology are associated with subsequent BD or SCZ and that would allow earlier diagnosis and treatment and move towards a modern translational epidemiology model.

No. 106

The Safety and Tolerability of Lumateperone 42mg for the Treatment of Bipolar Depression: A Pooled Analysis of 2 Randomized Placebo-Controlled Trials

Poster Presenter: Susan Lynn McElroy, M.D.
Co-Authors: Suresh Durgam, Susan Kozauer, M.D., Richard Chen, Lakshmi Yatham

SUMMARY:

Background: Approved treatments for bipolar depression are limited and associated with a spectrum of undesirable side effects. Lumateperone (LUMA), a mechanistically novel antipsychotic that simultaneously modulates serotonin, dopamine, and glutamate neurotransmission, is FDA-approved for the treatment of schizophrenia and is being investigated in bipolar depression. LUMA 42-mg monotherapy was evaluated in 2 randomized, double-blind, placebo (PBO)-controlled studies (Study 401 [NCT02600494]; Study 404 [NCT03249376]) in patients with a major depressive episode (MDE) associated with bipolar I or bipolar II disorder. A pooled analysis of these studies assessed the safety and tolerability profile of LUMA 42 mg in the treatment of bipolar depression. Methods: Safety data were pooled from 2 studies that recruited patients aged 18–75 years with a clinical diagnosis of bipolar I or II disorder who were experiencing a MDE and had a Montgomery-åsberg Depression Rating Scale (MADRS) Total score ≥20 and a Clinical Global Impression Scale-Bipolar Version-Severity (CGI-BP-S) score ≥4. Patients in these studies were randomized to LUMA or PBO and treated for 6 weeks. Safety assessments included adverse events (AEs), laboratory parameters, and vital signs. Additional assessments included changes on extrapyramidal symptom (EPS) scales (Barnes Akathisia Rating Scale [BARS], Abnormal Involuntary Movement Scale [AIMS), and Simpson-Angus Scale (SAS)). Results: The safety population comprised 746 patients (LUMA, 372; PBO, 374). Treatment-emergent AEs (TEAEs) occurred in 56.2% of LUMA and 47.3% of PBO patients. The only TEAEs that occurred in ≥5% of LUMA patients were headache (LUMA, 14.2%; PBO, 7.8%) and somnolence (LUMA, 13.2%; PBO, 3.2%). Rates of discontinuation due to AEs were 7.0% and 2.1% for LUMA and PBO, respectively. Rates of treatment-emergent events of mania/hypomania were low (LUMA, 1.6%; PBO, 1.3%). Mean change in weight was low and similar between groups (LUMA, +0.06 kg; PBO, +0.19 kg); incidence of potentially significant weight gain (≥7% increase) was low (LUMA, 0%; PBO, 1.4%). Changes in metabolic parameters were low and similar between groups: total cholesterol [mg/dL] (LUMA, −0.6; PBO, −1.1); LDL cholesterol [mg/dL] (LUMA, −0.7; PBO, −0.6). LUMA was not associated with changes in prolactin [μg/L] (LUMA, −0.17; PBO, +1.06). LUMA was associated with minimal EPS risks as assessed by both TEAEs and mean change in EPS scales: BARS (LUMA, −0.1; PBO, −0.1); AIMS (LUMA, +0.0; PBO, +0.0); SAS (LUMA, +0.0; PBO, +0.0). Conclusion: In this pooled analysis of 2 randomized, PBO-controlled trials in patients with a MDE associated with bipolar I or bipolar II disorder, LUMA 42 mg showed good tolerability with minimal impact on metabolic parameters, prolactin, and EPS. These results suggest that LUMA may provide benefits over currently available treatments for bipolar depression.

No. 107

Variant of Takotsubo Cardiomyopathy in a Patient With Acute Mania

Poster Presenter: Elaine Meyers, M.D.
Co-Authors: Kathleen A. Crapanzano, M.D., Eva Marina Mathews, M.D., M.P.H.

SUMMARY:

Ms. R., a 67-year-old Caucasian female with a past psychiatric history of depression, presented to the psychiatric consult service with recent episode of transient global amnesia, chest pain, and flight of ideas. The patient was noted to have elevated

cardiac enzymes. Cardiology determined the elevated cardiac enzymes were not due to acute coronary syndrome. However, a cardiac perfusion scan demonstrated subtle anterior wall motion abnormalities consistent with stress-induced cardiomyopathy, a variant of Takotsubo cardiomyopathy. On interview, the patient appeared acutely manic evidenced by distractibility, flight of ideas, increased psychomotor agitation, talkativeness (pressured speech), and lability. She had also intermittently expressed suicidal thoughts and homicidal ideation toward her son. Her presumptive diagnosis was bipolar disorder, current episode manic and she admitted to the inpatient psychiatric facility after medical clearance. It was determined that the causal factor for her stress-induced cardiomyopathy was emotional stress secondary to acute mania. Cardiology recommended caution with psychiatric medications that could predispose this patient to arrhythmias. Although acute emotional stress has been associated with cardiomyopathy, we can only find reference to two previous reported cases of mania being associated with the development of Takotsubo1. This case reinforces the importance of a thorough evaluation of patients with mania or other serious psychiatric illness to screen for medical illness, including this sort of atypical presentation. This poster will review the common psychiatric presentations that are associated with Takotsubo as well as clinical issues to be aware of when treating a psychiatric condition in the context of this cardiomyopathy.

No. 108

Altered Hedonic Perception and Cortical Response to Food in Patients With Chronic Pain

Poster Presenter: Yezhe Lin, M.D.
Lead Author: Paul Geha, M.D.
Co-Authors: Ivan DeAraujo, Ph.D., Dana Small, Ph.D.

SUMMARY:

Background: Pain and obesity are two highly prevalent and interrelated conditions that constitute a huge burden on affected individuals and society. Despite the link between pain and obesity, little is known about the neurobiological mechanisms underlying this association. It is, for example, still unclear what brain circuitry is involved in such altered perception of food in pain patients. In this work, we aim to determine the hedonic perception and brain response to highly palatable fat-rich food in patients during the acute and chronic phases of pain. Methods: We applied a combined cross-sectional and longitudinal design. We recruited 45 chronic lower back pain (CLBP) patients (age 33.93 ± 1.76, 37.8% male), 51 subacute back pain (SBP) patients (age 31.20 ± 1.65, 60.8% male) and 36 healthy controls (HC) (age 31.31 ± 1.97, 55.6% male) at baseline and followed the SBP and HC up in one year. All our subjects went through psychometric measurements on depression and anxiety by the Beck Depression Inventory (BDI) and Beck Anxiety Inventory (BAI). The liking of fat-rich food was also measured and correlated with Calories consumed by our subjects. Brain response to a highly caloric drink was measured in SBP patients at baseline and one-year follow-up. Results: We found disrupted associations between the liking of fat-rich food and consumed calories in CLBP and SBP patients. Such association was preserved in HC at baseline and follow-up. fMRI results showed lower responses to a highly caloric drink in CLBP patients compared to HC within the right dorsolateral prefrontal cortex (RDLPFC) and right parietal cortex; SBPp patients at follow-up showed a consistent decreased response to a highly caloric drink in the RDLPFC when their pain became chronic. The response in RDLPFC did not differ between SBP and HC or among SBPp, SBP patients who recovered later (SBPr), and HC at baseline. Conclusion: Back pain patients exhibit disrupted hedonic satiety signals, and decreased brain response to highly caloric foods in the RDLPFC, an area involved in top-down cognitive control. The development of CLBP precedes the disruption in hedonic signals and brain response to food. These results improve our understanding of the overlapping mechanism of pain and obesity and may lead to potential behavioral and brain biomarkers for future therapeutic methods.

Monday, May 03, 2021

Poster Session 9

No. 1

The Utilitarian Concept of Mind and Mental Health

Poster Presenter: Sankalp Jain, M.B.B.S.

Co-Author: Thirunavukarasu Manickam, M.D.

SUMMARY:
Psychiatry unlike other branches of medicine is the most unique branch in a way that it deals with human behavior and disorder of mind. But since time immemorial mind has been a topic of ardent debate about its origin, location and objective definition. Earlier it was philosophers who took the charge and tried to define mind, but in defining so, the element of immortality and its cosmic correlates would creep in. And the matter of mind would become more of a spiritual definition. We here do not attempt to deny the existing concepts of mind, but rather introduce a new concept of mind which would only include the core ideas in the field, essential for formulating a working definition that psychiatrist deals in day to day life. A simple, working concept to medical students, psychiatry residents, nurses, paramedics, psychiatrists, students and professionals of all allied clinical disciplines, to enable them to understand mental illness and mental health in a uniform and consistent way so that they can navigate the health system better and provide more comprehensive care for those seeking psychiatric help. This would enable all mental health professionals to speak the same language, without room for personal bias or interpretation. This would enable no room for personal bias and interpretation and benefit common public to understand the implications of mental health and illness without confusion. Which would avoid unnecessary misconceptions and miscommunication and reduce the stigma attached to mental illness. The utilitarian concept considers mind as a functional system of the body which had mood, thought and intellect as organs of this system working in unison, it shouldn't be misunderstood to be the same as the popular philosophical concept of the mind, called "functionalism." Defining mental health is another challenge. Any disorder or disturbance of mind is under the rubric of mental illness which perpetuate stigma. We try to divide the spectrum of mental health into four quarters. Mentally healthy, not healthy, unhealthy and ill. Based on two dimensions, one being the impact on self and other being the impact on others. Awareness of one's own self ,ability to relate well with others and one's own actions are useful to self, or at least not detrimental to one's own self and others are the three arms of mental health which is applicable only in the assessment of individual people at clinical setting.

No. 2

Diurnal Heart Rate Variability as a Physiological Index of Mood and Emotion Regulation in Major Depression and Borderline Personality Disorder

Poster Presenter: Agustina E. Wainsztein, M.D.

SUMMARY:
BACKGROUND: Heart rate variability (HRV), a measure of autonomic nervous system activity, has been studied in a number of psychiatric disorders during the resting state but evidence on its circadian patterns in Major Depressive Disorder (MDD) and Borderline Personality Disorder (BPD) is scarce. We sought to identify and differentiate HRV circadian patterns in MDD, BPD and healthy controls (HC) while exploring potential physiological mechanisms associated with mood and emotion dysregulation. METHODS: 24-hour electrocardiographic recordings were obtained from fifty subjects (16 HC, 18 BPD, 16 MDD). HRV was calculated during sleep and wake periods. Associations with mood and affect measures, and with cognitive emotion regulation strategies and self-reported difficulties in emotion regulation (DERS) were examined. Participant's resilience traits were explored in relation to mood and emotion regulation variables. RESULTS: Lower diurnal measures of HRV (i.e, RMSSD and HF) were observed in MDD subjects compared to HCs. Decreased HF was observed during wake vs. sleep in MDD patients. HAM-D and negative affect scores negatively correlated with HRV in MDD and BPD respectively. MDD and BPD exhibited a positive relationship between the implementation of emotion regulation strategies and HRV compared to HC. CONCLUSION: HRV alterations characterized by low diurnal cardiac parasympathetic control constitute a potential trait biomarker of major depression and psychiatric vulnerability to depressive episodes in BPD. HRV anomalies in MDD may persist during clinical remission. Diurnal HRV may represent a psychophysiological index of mood and emotion regulation.

No. 3

Identification of Predictive Factors for Retention in Treatment (With Synchronous-Sequential Model) of Patients With Mood and Schizoaffective Disorder

Poster Presenter: Aristotele Hadjichristos, M.D.
Co-Authors: Federica Agovino, M.D., Diletta Tomaselli, M.D., Ilario Mammone, M.D., Marta Giacomini

SUMMARY:

Background: One of current problems in psychiatry concerns the "retention in treatment" of patients with severe psychiatric disorders and substances abuse. Often the clinicians underestimate various psychopathological traits. Identifying these with psychometric methods could increase the quality of the treatment.The basis of our techinque is the "Synchronous –Sequential Model". It allows to integrate diagnosis and treatments with the psychiatric clinic and psychoterapy. Psycodiagnostics evaluation during the first assessment phase is a central key element to formulate the right diagnosis, to determine the severity of the psychopathological disorders and to reduce drop outs.The present study aims to differentiate and to compare psychopathological symptoms found in patients (in "Real World") at the time of their afference to our Center for Integrated Psychiatry and Psychology Center "C.I.Psi Clodio" in Rome-Italy. Methods: Using MMPI-2 we collected a sample of 70 distinct patients (according to DSM-5 criteria) with bipolar disorder diagnosis with (n.15) and without substance abuse (n.15), schizoaffective disorder with (n.10) and without substance abuse (n.10) and unipolar disorder without abuse of substances (n.20). Subsequently, we ran the correlation between the scores of the different clinical scales of MMPI-2, obtained by the three target groups. Results:The results showed that there was a difference between the scores of some clinical scales for bipolar, unipolar and schizoaffective patients, with or without comorbidity for substance abuse. In patients with unipolar, bipolar and schizoaffective disorders, without concomitant substance abuse, were significant the scales Depression (D) and Hysteria (Hy); in patients with bipolar and schizoaffective disordes, with concomitant substance abuse were significant the clinical scales Psychopathic Deviate (PD) and Schizophrenia(Sc). The differences between scales reflect the presence of mayor depressive mood and somatization symptoms (physical symptoms) in patients without substance abuse and extreme cases of maladjustment, impulsivity and formal thought disorders in patients with substance abuse, across the diagnosis. Conclusion: According to the Synchronous-Sequential Model, the present study shows is fundamental to better investigate symptomatology and patient's perception of the disorder in order to delineate all the psychopatological charactheristics. The goal is to propose an Integrated-Therapy to improve the efficacy of treatments and avoid drop outs. The results obtained, even if of a small initial sample (still in progress evaluation of the total sample n=600), confirm the clinical evaluations: patients require a consultation reporting as most disturbing different symptoms depending on the presence or absence of substance abuse. This will be discussed in the poster.

No. 4
WITHDRAWN

No. 5

New Findings in Synchronous-Sequential Model. Neurobiological and Neuropsychological Aspects Adjuvanting the Outcome in Resistant Bipolar Disorder

Poster Presenter: Alessia Lo Grande
Lead Author: Aristotele Hadjichristos, M.D.
Co-Authors: Ilaria Bandini, Michele Sante Fonti, M.D.

SUMMARY:

Patients with bipolar disorder (BPD) may exhibit slow and continuous cognitive impairment similar to the model of Kraepelinian Dementia Praecox, with different intensities and times. It's well known that the functions and mood are biologically integrated. We propose the present clinical case as an example of application of our integrated diagnosis and treatment model (Synchronous –Sequential Model). The aims of our treatment model was to achieve mood stability and good expression of personality with a reduction of cognitive drift. Ms. C.C., a 53-year-old italian female, presents to the psychiatric consult for a psychotic bipolar disorder accompanied by an evident cognitive and emotional deterioration already present at the assessment. The psychiatric

and psychological history shows a fragmentary condition of treatement (from 1994) without the adherence to national (Italian) and international guidelines for BPD. C.C. performs a psychiatric, psychodiagnostic (MMPI 2) and neuropsychological assessment (MMSE, Visual Search, Test for prose memory, Clock Test, Rey-Osterrieth Complex Figure, Drawing Copy, Neuropsychological Interview). Subsequently the patient has been submitted to neuroimaging exams (RM with functional tests and tractography with contemporary PET). The results of the neuro-psychodiagnostic assesment combined with the neuroimaging technique have shown not only the presence of a serious form of psychotic DB Type I, but the understanding of serious alterations behavioral both on a neurobiological and psychological basis. The application of the Synchronous –Sequential Model provides: psychopharmacological treatment, neuro-rehabilitative treatment, sections of psychoeducation and after the clinical and functional cognitive improvement structured sessions of CBT. In conclusion, the hypothesis is that the non-recognition of the presence of a cognitive damage secondary to the mood disorder, and the non-treatment of the same, is prejudicial to the completion of an integrated treatment path, and therefore to the achievement of psycho-physical balance in the living environment. The treatment described above should facilitate compliance with psychopharmacological and psychotherapeutic therapies and therefore the achievement of the goal. The results achieved in about 6 months of therapy will be discussed in the poster.

No. 6
WITHDRAWN

No. 7
Association of Cyberbullying and Suicidality: A Meta-Analysis of Cross-Sectional Studies
Poster Presenter: Jayasudha Gude, M.B.B.S.
Co-Authors: Srinagesh Mannekote Thippaiah, M.D., Rashmi Subhedar, M.D., Jatminderpal Bhela, M.D., Zeba I. Murtaza, M.D.

SUMMARY:
Background: During the COVID-19 pandemic, there is increased usage of smart phones and social media, not only for personal use but also for educational purposes. Such increased spending of time on the digital platforms makes adolescents more vulnerable for cyberbullying. Cyberbullying is associated with significant negative mental and psychosocial consequences among young people. In 2019, at least 36% of young children and teenagers between the ages of 11-18 had experienced cyberbullying in the United States. We speculate that the emotional stress in adolescents during COVID-19 pandemic can increase the susceptibility to cyberbullying which can increase the rates of suicidal ideation (SI), self-harm (SH) and suicidal attempts (SA). The objective of this meta-analysis is to estimate the overall prevalence of cyberbullying and to assess association between cyberbullying and suicidal ideations/self-harm/suicide attempts. **Methods**: We conducted systematic search using PubMed and Scopus databases using search words cyberbullying, suicidal attempt and self-harm from their inception to till date. Our search algorithm identified 433 articles, we reviewed 64 eligible articles of which 16 studies met the inclusion criteria. Two of the authors assess the full text version of the 16 articles which were deemed appropriate to the current analysis. The inclusion criteria were adolescents between the ages of 11-18 and have experienced cyberbullying. The primary outcome measure was the prevalence of suicidal ideation, self-harm, suicide attempts among adolescents who were cyberbullied compared to the general population. Data was extracted following MOOSE guidelines and data analyzed using Review Manager 5.4. The statistical parameters; odds ratio, 95% CI, p-value and standard error were obtained to compare data, and forest plots were created using random-effects models. The p-value < 0.05 was considered statistically significant, heterogeneity (I2) set at>75% was considered significant. **Results**: Out of 16 studies, 96183 adolescents were included in the analysis and the overall prevalence of cyberbullying was found to be 8.89%. Among the cyberbullied group the odds ratio, 95% CI and p value was 12.30 [6.57-23.03], ($P < 0.00001$), for adolescents who had suicidal ideation. Three studies reported self-harming behaviors among cyberbullied adolescents and their OR, 95% CI and p value was

(35.08 [18.54-66.38] (P < 0.00001). Seven out of 16 studies provided data for suicidal attempts among cyberbullied victims and the OR, 95% CI and P value was 7.84 [3.31-18.53] (P < 0.00001). Heterogeneity was found to be 91% for the SI group and 83% for the SA groups which was a major limitation of this study. **Conclusion**: The results of our current meta-analysis shows higher risk of suicidal ideations, self-harming behaviors and suicidal attempts among cyberbullied adolescents. Enhanced vigilance is required during unprecedented times of crisis to prevent adverse effects of cyberbullying.

No. 8
WITHDRAWN

No. 9
WITHDRAWN

No. 10
Knowledge and Attitude Towards Child Rights Among School Teachers in Selected Schools of Lalitpur District
Poster Presenter: Atit Tiwari
Co-Author: Aakriti Pandey

SUMMARY:
Child rights are based on what a child needs to survive, grow, participate and meet their potential. It applies to every children regardless of ethnicity, gender and religion for their proper mental, emotional and social growth and development. But today, child right violation continues to be one of the global issue. These children lacking the fair equity of opportunities and rights in their early life has both, miserable childhood and a shattered future. They are likely to have low self esteem and confidence, anxiety, depression, substance addiction and different other psychiatric problems as they grow through their adulthood. It is thus important for the care givers, parents and teachers to have comprehensive understanding on the child rights. It is also found that children expect their teacher to provide them with information on child rights.1 A study in Dharan shows only 53.2% of the government school teachers had adequate knowledge on child rights while 87.3%had positive attitude towards child rights2. In a study in India, 84% of the teachers had average knowledge on child rights and all the teachers had favorable attitude on child rights3. We attempted to assess the knowledge and attitude towards child rights among teachers in 4 government schools in Lalitpur district, Nepal. The descriptive cross sectional study was carried. Sample size was ninety three (93). Non probability purposive sampling technique was used. Self developed structured questionnaire was used to assess the knowledge and self administered structured Likert scale was used to assess the attitude towards child right. The study revealed that majority of teachers were female of 40-50 years of age. Similarly, majority had Master's degree with less than 10 years of experience. Study shows that 31.2% of the respondents had adequate, 44.1% had moderate and 24.7% had inadequate level of knowledge on child rights, such as survival rights, protection rights, development rights and participation rights of the children. 95% of the respondents had positive attitude towards child right. Ninety two percent of the respondents believed that girl child are more prone to physical, sexual and emotional abuse from her own relatives in the society . Ninety percent of the respondents were aware of the national hotline number for child abuse . There was no any significant association between teachers' knowledge and attitude on child rights with their socio-demographic variables. A positive significant correlation was found between knowledge and attitude of teachers' on child rights. Based on our research, a national level program is recommended for teachers for creating comprehensive awareness on child rights such that each of the children get equal opportunity for their overall physical, mental, emotional and social well being.

No. 11
Prevalence of ADHD Among Adolescents With Type 1 Diabetes Mellitus: Meta-Analysis of Observational Studies
Poster Presenter: Jatminderpal Bhela, M.D.
Co-Authors: Mihir Amin, M.D., Rashmi Subhedar, M.D., Jayasudha Gude, M.B.B.S., Batool Sheikh

SUMMARY:

Background: Prevalence of type 1 diabetes mellitus (T1DM) and attention deficit hyperactivity disorder (ADHD) in adolescents has been increasing remarkably every year and the impact of T1DM on ADHD prevalence has been rarely explored. **Aims/Objective**: The aim of this study was to evaluate the prevalence of ADHD in adolescents with T1DM. **Methods**: Advanced literature search on PubMed was carried out following MOOSE guidelines to identify the observational studies conducted on comparing the prevalence of ADHD in adolescents with or without T1DM using MeSH-terms x OR y from December 1, 2019, to April 30, 2020. Seven studies were identified out of 2,300 search results with the consensus of 3 reviewers. Out of seven, five studies reported positive outcomes and two reported no association between ADHD and T1DM. Five studies were selected for data analysis as the other two studies, despite having positive outcomes, did not report data on controls or odds ratio of those studies. For the final five studies, comprehensive meta-analysis software with mixed effects random models was used to analyze pooled OR and 95%CI and created forest plot. **Results**: Out of five studies with data on the prevalence of ADHD in T1DM, three studies had details on positive outcomes. T1DM. Pooled prevalence of ADHD was higher amongst adolescents with T1DM [1.85% vs 1.33%; 95%CI; p<0.001; 386/20,900 vs 31,732/2,384,121 adolescents; Heterogeneity (I2): <0.0001] In compare to non-T1DM, T1DM patients' ADHD had higher odds [aOR:1.62; 95%CI:1.45-1.79; p<0.00001; I2:0.000; p=0.42]. **Conclusion**: Close attention, proper management and treatment is required for adolescents with Type 1 Diabetes Mellitus in order to reduce the higher prevalence of ADHD in this age group. Even though Type 1 Diabetes Mellitus and ADHD are one of the most commonly diagnosed medical conditions in adolescents, the association between Type 1 Diabetes Mellitus between ADHD has rarely been studied and needs to be investigated further.

No. 12

Psychiatric Morbidity Among the Patient of First Ever Ischaemic Stroke

Poster Presenter: Muhammad Sayed Inam, M.B.B.S., M.Phil.

SUMMARY:

Introduction: Stroke is the most common cause of mortality world wide and a serious cause of disability in the community. Stroke affects not only physical but also emotional, psychological, cognitive, and social aspects of patients. Some of the neuro psychiatric disorders associated with stroke include Post Stroke Depression (PSD), Bipolar Mood Disorder, General Anxiety Disorder, Psychotic disorder, pathological affect and catastrophic reaction. **Aims and Objectives**: To evaluate psychiatric morbidity among the patients of first ever ischemic stroke. **Materials and Methods**: This cross sectional comparative study was carried out in the Department of Psychiatry, Sylhet MAG Osmani Medical College Hospital, Sylhet during the period from 1st July 2013 to 30th June 2014. Sixty six ischaemic stroke patients of first attack between 2 weeks to 2 years of stroke, aged above 18 years irrespective of sex and 66 accompanying healthy person of the patients and other patients without any kind of stroke matching age and sex fulfilling inclusion and exclusion criteria were taken in Group-A and Group-B respectively. Exclusion criteria were patients with transient ischaemic attack, haemorrhagic stroke, previous stroke, head injury, known psychiatric disorder, serious cognitive impairment and other chronic diseases that may cause psychiatric morbidity. Diagnosis of ischaemic stroke was made in these patients by the consultant neurologists reviewing the history, clinical examination and accompanying investigations reports specially CT scan of brain. Psychiatric assessment was done using General Health Questionnaire (GHQ12) as screening tool. All GHQ12 positive cases were evaluated using mental state examination and recorded in a MSE sheet. Diagnosis of psychiatric disorders of all respondents was confirmed by psychiatrist according to DSM-5 criteria. **Results**: The patients with ischaemic stroke and control subjects were similar in age [57.6 (SD ± 5.5) years vs 57.1 (SD ± 4.5) years; p>0.130] and sex [48(72.7%) male and 18 (27.3%) female vs 45 (68.2%) male and 21 (31.8%) female; p=0.567]. Co-morbid psychiatric disorder was found in 23 (34.8%) patients of Ischaemic Stroke and 9 (13.6%) control subjects. Conclusion Co-morbid psychiatric disorders are quite common among patients with First Ever

Ischaemic Stroke in the form of Major Depressive Disorder and Generalized Anxiety Disorder.

No. 13
Understanding perceptions to improve an intervention for Justice-involved African-American and Latinx young men
Poster Presenter: Ikenna Achebe, M.D.

SUMMARY:
African American/Black and Latinx adolescents and young adults continue to bear the heaviest burden of HIV/AIDS within their age demographic and further elucidate the considerable health disparity that warrants our continued attention (CDC, 2018). This study is one of the few to examine the knowledge, attitudes and behaviors related to HIV testing among a sample of African American and Latinx Justice-involved young adults (JIYA), ages 18-24, a highly vulnerable but often overlooked group. Over three-quarters reported sexual risk behavior in the past 12 months, almost all had received an HIV test at some point in their lives, but barriers to consistent testing were revealed. This study found that concerns about medical privacy possibly shaped by potential stigma related to a positive status or concern related to parental/familial reactions to their sexual behavior may prevent HIV testing among JIYA. Thus, a tailored intervention program to decrease sexual risk and increase HIV testing that focuses on decreasing institutional mistrust may be an effective strategy to improve attitudes around testing. JIYA narratives demonstrated diverse attitudes and behaviors to risk and testing. They also demonstrated a disconnect between their risk behavior and perceived HIV risk with minimal knowledge of PreP. This disconnect between perceived and actual risk, possibly driven by HIV-related stigma, shaped their use of HIV testing. These disjunctures and divergent behaviors/beliefs, strongly point to the justice system, particularly alternative sentence programs that serve young adults, as important points of intervention. Staff interviews largely echoed youth findings and described system-level barriers to delivering HIV testing services. As an alternative to in-house HIV-services, the regular partnerships with local testing vans, testing agencies, etc. as described by staff here may provide a sufficient answer to the youth's needs. Both staff and youth here noted positive relationships with HIV testing partners and personnel and staff reported that these on-site free partnerships made referrals easier.

No. 14
Effectiveness and Cost-Effectiveness of Acute Psychiatric Treatment at Home Compared to Inpatient Treatment: A Prospective Longitudinal Study
Poster Presenter: Karel Joachim Frasch, M.D.

SUMMARY:
Background: Evidence on the efficacy of home treatment (HT) results mainly from international controlled randomized long-term studies and suggests at least equal, in some areas better, treatment outcomes compared to inpatient psychiatric hospital treatment (e.g., reduction of symptom severity, burden on relatives and treatment satisfaction). For the German health care system only few corresponding studies are available, especially with regard to consideration of more than one treatment period. Method: Prospective controlled observational study with 3 survey points over a period of 12 months (at the beginning of treatment, 6 and 12 months later) using a matched-pair design. 2 patients from the control group (CG) with comparable clinical (ICD-10 diagnosis, number of inpatient admissions) and socio-demographic characteristics (gender, age, employment status) are selected from patients who meet criteria for HT for each included HT patient. Primary outcome criterion is the severity of clinical and psychosocial impairment (HoNOS-D). Secondary outcome criteria are empowerment (EPAS), treatment satisfaction (ZUF-8), subjective quality of life (WHOQoL-bref), quality-adjusted life years (EuroQol), resource consumption (CSSRI), safety (HoNOS-D and documentation in patient records) and burden on relatives (IEQ). Statistical analysis is performed with mixed-effects measurement models, selection bias is controlled by adjustment with propensity scores and cost-effectiveness is estimated using net benefit regression models. Results: So far, the HT group includes n=20 patients (80.0% female) and the CG includes n=22 patients (60.9% female). The

participants of the HT-group were on average aged m=49.2 years (sd=15.4), the participants of the CG were on average m=48.6 years (sd=14.0) old. With regard to the employment status at the first measurement point, 11 HT patients (CG: 11) were employed, 2 patients (CG: 4) were retired, 1 patient (CG: 2) was unemployed/seeking employment or incapacitated, 4 patients (CG: 2) worked as housewife/househusband and 1 patient (CG: 2) was in vocational training/studies. At the first time of measurement, 7 HT patients (CG: 9) had an F2 main diagnosis, 9 patients (CG: 13) from the chapter F3, 3 patients (CG: 0) from chapter F4 and 1 patient (CG: 1) from F6. At the first measurement point, the HT patients have been undergoing inpatient psychiatric treatment on average for 2.4 times (sd=2.4) and the CG patients 3.7 times (sd=3.7). In the poster, the results regarding the primary and secondary outcome parameters at the first and second point of measurement (mean values and standard deviations) will be presented and discussed. Behavior endangering themselves or others was not present in either group. Conclusion: In our study, HT proved to be a feasible and safe alternative to traditional psychiatric inpatient treatment. Due to the too small sample size at the present time no hypothesis-checking analyses can be accomplished.

No. 15

Limiting Factors and Barriers for Using Long-Acting Injectable Antipsychotic Medications in Psychiatric Care

Poster Presenter: Kaushal Shah, M.D., M.P.H.
Co-Authors: Clayton Morris, M.D., Hema Mekala, M.D.

SUMMARY:

Background: Antipsychotic medication use is vital in managing and stabilizing patients with mental illness [1]. Recent evidence supports use of long-acting injectable antipsychotics (LAIAs) in preventing the relapse of schizophrenia and bipolar disorders [1]. According to the National Institute of Mental Health (NIMH), the prevalence of schizophrenia ranges from 0.33% to 0.75% worldwide and 0.25% to 0.64% in the United States [2]. Bipolar disorder is estimated to be prevalent in 2.9% and 4.4% of the US adolescents and adults, respectively [3]. Poor adherence to treatment was identified as a main cause of relapse in these psychiatric disorders, leading to higher re-hospitalizations [4]. Our aim is to identify factors contributing to the relapse amongst schizophrenia or bipolar patients on the LAIA medications. Methods: We searched the National Library of Medicine (NLM) and accessed the Medline, PubMed, and PubMed Central databases from January 1, 2003, to July 31, 2020. The Medical Subject Headings (MeSH) used were ''Schizophrenia,'' ''Bipolar Disorder,'' ''Psychotic Disorders,'' ''Antipsychotic Agents'' in the context of keywords ''Long-acting injectable'' and ''Barriers.'' All articles yielded through this search were reviewed to address the objective of this research. Results: The use of LAIAs has shown to be effective in the maintenance treatment of schizophrenia and bipolar disorder, but despite this evidence, both patients and physicians have shown some levels of reluctance to utilize these methods, especially in the early phases of the illness [4]. Studies have shown that physician-centric, patient-centric, and administrative barriers play a significant role in the use of LAIAs. Factors that influenced the physician''s decision in LAIA use were their inadequate expertise to manage patients, lack of knowledge and awareness, and poor attitudes and beliefs towards LAIAs [4]. The patient-centric factors include their inaccurate perception, inadequate knowledge, fear, preference of oral medication to injectable, cost, convenience, and stigma towards LAIAs [5-9]. Administrative issues of insufficient staffing and insurance policies have also influenced the decision to use LAIAs [7-9]. Conclusion: Since the LAIAs have shown favorable outcomes in recent studies to prevent relapse of their primary psychiatric conditions, it is crucial to identify and address the factors limiting its use. Appropriate policies, prescribing guidelines, provider''s training, developing good patient-doctor treatment relationships, and creating public health awareness could help overcome these barriers of LAIAs use and improve mental health outcomes.

No. 16

Mental Health Impact During Phases 2 and 3 of the Pandemic in Mexico

Poster Presenter: Marlon Edu Saavedra Delgado
Lead Author: Bernardo Ng, M.D.

Co-Authors: Ana Villaseñor Todd, Sandra Patricia Caicedo Agudelo

SUMMARY:
Disasters of the magnitude of the COVID-19 pandemic, invariably impact the mental health and psychological wellbeing of the population in every country affected. Studies in countries such as China and Spain, report and impact of 7 to 39% of the population, with symptoms of anxiety, depression, or even PTSD. In Mexico, the Ministry of Health announced five phases for this pandemic, 1. Imported cases; 2. Community Spread; 3. Rapid Spread; 4. Second wave; and 5. End of the Pandemic. The Research Division of the Mexican Psychiatric Association (APM), launched a survey through its social media outlets, during phases 2 and 3. It included sociodemographic data, quarantine status and the Goldberg anxiety and depression scale. There were 138 participants in phase 2 (72.4% women and 27.6% men), with 80% at an educational level of an associate's degree or higher. Over half of the respondents were either employed or self-employed. Forty percent were single, and 45% married/common law. The vast majority were in quarantine (98%), either strict or very strict. Only 2% either had COVID or had been in close contact with someone who did, 6% knew of someone who had it and the rest (92%) had not been in contact with it at all. In this phase 84.8% endorsed anxiety symptoms; and 76.8% depressive symptoms, which were more common in those that had a couple and had no children (p=0.02). Education, employment, and confinement status, and exposure to COVID, did not show an association with either type of symptoms. Phase 3, had 366 participants, with 75.4% women and 24.6% men; 86% had an associate's degree or higher, 75.8% were employed, 51.4% were married/common law, 36.6% were single, and 9% were divorced/widow or separated. The great majority were in quarantine (95%). Only 8.2% either had COVID or had been in close contact with someone who did, 19.2% knew of someone who had it and the rest (72.6%) had not been in contact with it at all. In phase 3, 88.9% endorsed anxiety symptoms, and 86.7% depressive symptoms. Possible determinants of such results, including the debate over the management of the disaster by government and health officials, will be discussed.

No. 17

Transition From Children's to Adult's Health Care Services in the U.K.: Experiences of Young Adults With ADHD, ASD and/or Learning Disability

Poster Presenter: Paul Shanahan
Co-Authors: Rupal Ekeberg, Lucie Ollis, Kate Balla, Karen Long

SUMMARY:
Background: Previous research has highlighted a lack of continuity of care when young adults with a neurodevelopmental condition transition from children's to adult's health care services. Young adults with neurodevelopmental conditions are particularly susceptible to poor health and well-being in the transition to adulthood. A lack of planning, consistency, availability of adult's services and information about transition can lead to increased anxiety, confusion, reduced support and in some cases, not receiving care from adult's services all together. The majority of research conducted in this area has primarily focused on what health professionals think is important in the transition process, rather than focusing on the experiences of the young people who will or have experienced transition. Aim: Our aim is to add to the existing literature focusing on transition and address the identified gap by including evidence from young adults with a neurodevelopmental condition (and their families) who have experienced transition from children's to adult's services. Method: We recruited young people between the ages of 18 and 25yrs with Attention Deficit Hyperactivity Disorder, Autism Spectrum Disorder and/or a Learning Disability from two London boroughs (England, U.K). In total, six young people took part in semi-structured interviews with support from a family member. A further five parents/family members were interviewed on behalf of the young person if they were unable to communicate with the researchers. In total, we transcribed ten interviews verbatim and analysed the transcripts using Interpretative Phenomenological Analysis (IPA). Results: The analysis resulted in four overall themes: Parents as advocates, availability of adult's specialist health and social care services, lack of information sharing and, transition as a binary, abrupt change.

Conclusions/recommendations: Although young people with neurodevelopmental conditions are officially an "adult" when they turn 18yrs old, they may not feel or act as an adult. They often still need the support of parents and family members when making decisions about their health care. We suggest statutory services should be taking on this coordination role to ensure young people are receiving appropriate information about resources and services available to them. In addition, we suggest young people should have the ability to access either children's or adult health care services between the ages of 16 and 20yrs and that this should be reflected in service contracts. Future research is needed to evaluate the costs and benefits of changes to contract specifications to decipher whether this crossover period is feasible. In addition, we suggest a central place is needed for young people and their family members to access information about transition and the availability of health and social care services - perhaps through an online information sharing tool. This research was funded by Health Education England.

No. 18

Understanding the Impact of E-Cigarettes on the Sleep Quality

Poster Presenter: Kaushal Shah, M.D., M.P.H.
Co-Authors: Hema Mekala, M.D., Sukhmeet Bedi, M.D., Mohammed Akbar, M.D., Sushma Srinivas, M.D.

SUMMARY:

Background: In 2019, the Substance Abuse and Mental Health Services Administration (SAMHSA) identified using e-cigarettes as an emerging issue in the United States (U.S.). Since 2011, we have observed a constant rise in e-cigarette use which was initially used to consume nicotine and other substances that contains harmful chemicals. E-cigarettes were the most common methods to use nicotine products amongst the U.S. middle school and high school students, consisting of 0.39 million and 1.73 million, respectively.1,2 Using e-cigarettes, have been linked to lower sleep continuity and decreased sleep.3,4 As e-cigarette has become a public health issue, it is imperative for us to evaluate the association between the e-cigarettes use and its impact on sleep. Methods: This study conducted a retrospective cross-sectional analysis of the National Health and Nutrition Examination Survey (NHANES) of 2015 to 2018 data. We utilized the Statistical Analysis System (SAS) software 9.4 version to conduct analysis. The sleep quality was assessed in e-cigarette users through daytime sleep duration, weekly snoring frequency, snorting, gasping or stop breathing frequency, and age appropriate recommended sleep duration. A quantitative bivariate analysis and logistic regression was performed to the association of e-cigarette and sleep. Results: The study consists of 7337 sample populations aged 18 to 65, with almost equal numbers of male (49.93%) and female (51.07%) participants. Approximately 10%, 11.5%, 45%, and 63% of the participants identified having not recommended age-specific sleep duration, more than two snortings per week, more than two snoring per week, and more than once daytime sleepiness per month, respectively. The bivariate analysis found a significant relationship of e-cigarette use with daytime sleepiness, snoring, snorting, and age-specific sleep duration. The unadjusted odds ratio did show a significant increase in odds of not recommended sleep duration among the current and former e-cigarette users compared to never e-cigarette smokers. Similar significant results were found for current e-cigarette smokers or former e-cigarette smokers compared to never users ever after adjusting demographic variables. We also found an increase odd in the adjusted demographic group for not recommended age-specific sleep duration in the older age group 26 to 44 years (OR:2.07, CI:1.48-2.9, P:0.0052) and 45 to 65 years (OR:2.29, CI:1.61-3.26, P:0.0001) compared to 18 to 25 years of age group. In summary, we observed less sleep duration in e-cigarette users. Conclusion: The study shows the significant relationship between e-cigarette use with daytime sleepiness, sleep duration, snoring, and snorting. Our results establish an increase in sleep quality disturbance amongst current e-cigarette smokers than non-smokers. This study provides valuable findings to propose preventative measures and determine the impact of with and without nicotine contained e-cigarettes on sleep.

No. 19
WITHDRAWN

No. 20
Intrusive Thoughts of Harm to an Infant in the Context of Postpartum Depression
Poster Presenter: Stefanie Cavalcanti, M.D.
Co-Authors: Jeffrey McBride, M.D., Tori Waters, Miranda Taing, M.D., Teresa Pigott, M.D.

SUMMARY:
Mrs. P., a 29-year-old Caucasian female with a past psychiatric history of Bipolar disorder and Bulimia, presents as a voluntary admission to an inpatient psychiatric hospital with complaints of worsening depression, anhedonia, mood lability, racing thoughts, obsessive thoughts about inadvertently harming her baby, and suicidal ideation. Since the birth of her daughter eight months prior to presentation, the patient felt increasingly depressed with persistent sadness, anhedonia, episodic irritability, inner tension and anxiety, disturbed sleep (difficulty falling asleep and middle of the night awakening), reduced appetite, impaired concentration, pessimistic thoughts, feelings of hopelessness, self-deprecatory ideation, ruminations, and excessive guilt. The patient has no history of substance use and has never attempted suicide. After two months postpartum, the patient''s primary care physician (PCP) started her on sertraline for postpartum depression (PPD). Soon after, the patient began to endorse new symptoms described by her as hyperactivity, distractibility, reduced need for sleep, hyper-talkativeness, and racing thoughts; she denied psychotic symptoms. Of note, she also reported chronic generalized anxiety symptoms that were pervasive in many aspects of her life. The patient''s PCP referred her to a psychiatrist specialist, who added aripiprazole to the previous regimen of sertraline. Consequently, the patient then reported increased agitation and a self-injurious behavior of hitting herself during moments of particularly stressful self-deprecating ruminations. Due to these new symptoms, the psychiatrist added low-dose olanzapine, while the aripiprazole and sertraline were reduced with the intent to taper off the aripiprazole completely. These symptoms continued to worsen; therefore, she sought out inpatient psychiatric care. Furthermore, she stopped breastfeeding her newborn child one month prior to her admission. During admission, the treatment team adjusted and simplified her medication regimen, initiated psychotherapy, and provided psychoeducation on her probable diagnosis and prognosis. Routine clinical labs were unremarkable. The patient''s obsessive thoughts of harming her infant resolved within the first day of her admission. She tolerated the medication adjustments well and reported substantial improvement in her depressed mood and anxiety symptoms from admission. The team discussed the risks and benefits regarding the treatment of choice while keeping the patient''s maternity plans (breastfeeding and future pregnancies) into consideration. This case study addresses the possible protective effects of breastfeeding and discusses this patient''s increased symptoms following the cessation of breastfeeding. For this poster, we also explore this individual''s associated anxiety and obsessive symptoms, as well as its relationship with a previous psychiatric diagnosis.

No. 21
One-Carbon Metabolism Role in Treatment-Resistant Depression and Anxiety: Two Familial Clinical Cases
Poster Presenter: Grigory Rukavishnikov
Lead Author: Evgeny Kasyanov
Co-Author: Galina Mazo

SUMMARY:
Background: Abnormalities of one-carbon metabolism (OCM) are often present in patients with depressive and anxiety symptoms. The recent key studies showed that OCM abnormalities were associated with more severe affective symptoms and with a worse response to antidepressant therapy. Methods: Hereby we describe two familial cases in which genetic and biochemical abnormalities of OCM were identified in patients with major depression and anxiety and their blood relatives. Results: First case – the patient is 23 y/o Caucasian male with a 2 year history of treatment-resistant major depressive disorder. Patient's mother is a 53 y/o Caucasian female who also suffered from several major depressive episodes in the past. Both the

patient and the patient's mother during evaluation showed to have hyperhomocysteinemia (40,72 µmol/l and 15,09 µmol/l, respectively). The patient also had decreased folate levels (4,34 nmol/l). The genetic analyses showed the heterozygous variants of the methylenetetrahydrofolate reductase MTHFR gene (?677? and A1298C) and heterozygous variant of the methionine reductase MTRR gene (A66G) in both family members. Second case – the patient is 47 y/o Caucasian female with 8 month history of major depressive episode with only partial response to previous treatment courses. Patient showed elevated levels of homocysteine (24,36 µmol/l) during evaluation. Patient's daughter is 20 y/o Caucasian female with no previous psychiatric history. However, both patient's daughter and the patient showed high interest in her future risks of mood disorder and asked for psychiatric and laboratory, genetic examination. As a result of evaluation, no psychiatric diagnosis was confirmed and a normal levels of homocysteine (10,7 µmol/l) were obtained for the daughter. At the same time, a homozygous variant of MTHFR A1298C and a heterozygous variant of MTRR A66G were detected in both family members. In all abovementioned cases patients with resistant depression and confirmed OCM abnormalities had a positive effect from combining their antidepressant treatment with methylfolate adjuvant therapy. Conclusions: Checking for OCM abnormalities in patients with treatment-resistant depressive symptoms might be useful. With respect to treatment, any deficiencies should be adequately corrected. Unfortunately, only limited data are currently available on the relationship between mood disorders and OCM abnormalities. Thus, further long-term, high-quality randomized clinical trials with double blinding and placebo control in patients with depression and OCM abnormalities are still needed.

No. 22
Prevalence of Cognitive Decline in Major Depressive Illness
Poster Presenter: Usama Bin Bin Zubair, M.B.B.S.

SUMMARY:
Background: Depressive illness predispose the individuals to a lot of other physical and mental health issues as well. Anxiety and substance use disorders have been studied widely as a comorbidity. Sleep and appetite has also been studied a lot in depressed but cognitive abilities also decline or get affected and need to be looked in detail in depressed patients   Objective: To determine the prevalence of cognitive decline among the patients with major depressive illness and analyze the associated socio demographic factors. Methods: The sample population comprised of 190 patients of major depressive illness presenting at a tertiary care hospital in Islamabad, Pakistan. Depression was diagnosed by a consultant psychiatrist by using the ICD-10 criteria for major depressive disorder. Cognitive decline was assessed by using the British Columbia Cognitive Complaints Inventory (BC-CCI). Relationship of age, gender, marital status, education and tobacco smoking was assessed with the presence of cognitive decline among the patients of depression. Results: Out of 190 patients of depressive illness screened through BC-CCI, 70% showed the presence of cognitive decline while 30% had no cognitive decline. After applying the logistic regression we found that female gender had significant association with the presence of cognitive decline among the patients of depression. Conclusion: This study showed a high prevalence of cognitive decline among the patients of depressive illness in Pakistan. Routine screening for cognitive decline should be done at the psychiatric clinics in the patients of depression and special attention should be paid to the female patients suffering from this illness. No conflict of interest or financial disclosure

No. 23
Role of "Rumination" as a "Recurrent Stressor" in Etiology, Pathology and Treatment of Depression: A Neurobiological Perspective
Poster Presenter: Shrirang Sadashiv Bakhle, M.B.B.S.

SUMMARY:
Background: It is easy to understand that repeated stressful life events can push a person into depression. But can a single stressful life event do the same? It is widely known that rumination is an important risk factor for depression and other disorders. The paper explains how ''recurrent

stressors'' (repeated stressful life events) produce ''sensitization'' (increased reactivity upon repetition) that leads to depression. It proposes that rumination acts as a ''recurrent stressor'' that causes similar neurobiological changes resulting in depression. Methodology: This paper describes different neurobiological mechanisms underlying the link between rumination, depression and its treatment. Rumination leads to repeated use of depression-related pathways. Repeated use of specific neuronal pathways leads to activity-dependent increases in synaptic strength and efficacy. This is the first step in synaptic and neuroplasticity. Increased rumination leads to strengthening of depressogenic pathways. Such individuals fail to appropriately down-regulate DMN activity, and, hence, get "stuck" in self-focused states and have difficulty smoothly shifting to the required task. [1] The paper discusses epigenetic mechanisms that accompany ''sensitization'' and the phenomenon of ''episodes begetting episodes'' i.e. how this sensitization makes a person more prone to further episodes and perpetuation of depression. [2] Rumination also leads to sleep problems that lead to increased symptoms of depression and PTSD. [3] The paper also discusses how treatments such as Metacognitive Therapy, that specifically target rumination, help in the treatment of depression and its recurrence. Conclusion: It is necessary to recognize the importance of rumination in causation, perpetuation and worsening of depression. The different neurobiological aspects of this process present opportunities for intervention. This can help in better amelioration of depression and help to prevent its recurrence.

No. 24
WITHDRAWN

No. 25
Emotional and Psychological Concerns of Untreatable Infertility: Outcomes From a Tunisian Genetic Counselling

Poster Presenter: Nouha Bouayed Abdelmoula, M.D., Ph.D.

SUMMARY:
Background: Infertility is among the most stressful experiences in life and is the cause of many psychoglogical injuries. Despite the emergence of numerous scientific progress in the field of infertility treatment, emotional and psychological impacts of infertility (depression, anxiety, relationship and sexual problems, and personality disorders) remain compromised in untreatable cases. Here, we report our experience as a genetic counsellor in the management of emotional and psychological burdens in infertile couples faced to an untreatable genetic condition to provide personalized counselling interventions that could be adopted in such cases and to highlight the importance of psychological interventions and psychotherapy. **Material and Methods:** During the last two decades of our genetic counselling experience at the Medical University of Sfax, we selected all cases of infertile couples that have been diagnosed with chromosomal and/or molecular genetic abnormalities causing an untreat able infertility regardless of affordable assisted reproduction technologies and advances. We explored, through genetic counselling reports, emotional states of patients and their partners needing psychological support. Results: In this qualitative study, more than 200 North African infertile couples were selected. The most frequent genetic cause of untreatable infertility among men were XX maleness, AZFa-b Y chromosome microdeletions and AURKC microdeletion. Among women, 46,XY formula and Turner syndrome were the most frequent causes. Reciprocal and robertsonian translocations were also frequent. Most of the couples of this group failed to conceive after repetitive ART attempts, even though a coupled pre-implantation diagnosis (n=4). In the majority of selected couples (85,6%), the affected partner expressed depression symptoms but only 50% of cases described relationship and sexual problems. **Conclusions:** The role of genetic tests in fertility has changed significantly and genetic counselors become a good resource for couples unable to conceive in the last few years. Unfortunately, genetic counselling continues to be challenging when managing psychological outcomes of untreatable infertility especially that hopeful solutions based on technological advances are not yet possible to be suggested.

No. 26
WITHDRAWN

No. 27
Palliative Psychiatry: A New Concept?
Poster Presenter: Eduardo Muniz Dias Carvalho Matos
Lead Author: Istefani Silva
Co-Authors: Matheus Henrique dos Santos Barros, Katiene Azevedo

SUMMARY:
Background: According to WHO the palliative care concept is not limited to the hypothesis of terminality, but to any illness without cure perspectives. The involvement of psychiatrists in palliative care of medical conditions such as cancer is well-established. However, the literature about palliative approach to patients with severe and persistent mental illness (SPMI) is yet limited. In this way, the aim of this study was to describe the Palliative Psychiatry as a new palliative approach for SPMI patients. **Methods:** We conducted a narrative review to clarify how the new thoughts on Palliative Care intersect with Psychiatry and Mental Healthcare. The MEDLINE and LILACS databases were used for the research, without language or time constraints, through the following keywords: "palliative care", "palliative care psychiatry", "severe and persistent mental illness", "end-of-life". **Results:** Most patients with SPMI show a potentially refractory range of symptoms, and the treatment for these conditions is scarce and not disease-modifying. Palliative Psychiatry is a specific approach to this population, which has specific features and definitions. The relevance of palliative care has been suggested in certain SPMI such as persistent depression, anorexia nervosa and schizophrenia. Initial evidence suggests that better palliative care strategies for SPMI patients may lead to fewer requests for assisted suicide. A study demonstrated that SPMI and chronic medical-ill (CMI) patients have similar end-of-life care wishes and SPMI patients do not want medical assistance in dying more than CMI patients. A survey with 457 psychiatrists showed lofty agreement that SPMI can be considered terminal illness (93,7%). Regarding professional qualification, a survey with general psychiatry training directors and residents identified that 38% of the 52 responding directors noted that palliative care education was not provided in their programs, even with 97% of the residents agreeing that psychiatrists should be trained in palliative care. Furthermore, one of the difficulties in establishing specific palliative care for SPMI patients is the lack of consensus on what medical futility is, so it is important to stage mental illnesses, just like it is done in cancer care. An innovative form of palliative care for SPMI patients has been developed in Belgium, called Oyster Care. It is a dynamic approach that addresses the needs and pace of each patient, in which the caregivers create an "exoskeleton" or "shell" to care of them. **Conclusion:** Therefore, Palliative Psychiatry emerges as an important new concept, since patients with SPMI represent a vulnerable and complex population, who would benefit from it. Future research is needed both to develop a specific framework and to elucidate the staging of mental illnesses, which would contribute to the definition of medical futility. Finally, there is still a deficiency in psychiatric training, which distances theory from practice.

No. 28
WITHDRAWN

No. 29
The Influence of Parental Incarceration in Child Mental Health
Poster Presenter: Larissa Yano Souza Martins
Co-Authors: Bruna Campos Souza, Matheus Flores, Rafael Felipe Silva Rodrigues, Tatiana Mourao-Lourenco, M.D.

SUMMARY:
Abstract Background: There are recent descriptive statistics showing that children of incarcerated parents are vulnerable in relation to mental health. The prevalence of psychiatric disorders is high in this population, including: post-traumatic stress disorder, attention deficit disorder and attention deficit hyperactivity disorder, in addition to behavioral or conduct problems, developmental delays and speech problems or language. Methods: Systematic literature review of articles between 2010 and 2020, using PubMed and UpToDate databases, in addition

to the American Journal of Psychiatry. Results: The withdrawal caused by parents incarceration threatens children's safety and causes anxiety, in addition to a series of negative events in children''s lives, such as facing changes without the support of a caregiver as a reference. The situation worsens when the mother is the incarcerated relative. In another scenario, it should be noted that the health of the prison population has peculiar aspects and, among them, the significant presence of mental suffering, aggravated by the overcrowding and precarious conditions of the penitentiary units, deserves mention. In the prison system, the traditions, values, attitudes and customs imposed by the prison population are learned by the inmates as a natural way of adapting or even surviving the rigid prison system. From this, aspects that make up the subject''s identity, such as the networks of relationships formed by friends, family and work performed, are completely removed from the prisoner. Changes in the external world are no longer monitored, and everyday practices previously performed are completely excluded from your life. This affects the detainee''s relationship with their offspring, being an aggravating factor in their already weakened mental health. The prisoner''s submission to prison experiences has an impact on the assimilation of prison culture through a process described as "prisoning". This phenomenon concerns the way inmates are shaped by the institutional environment even after their release. Transformations vary and affect the prisoner at different levels, such as in the habit of eating and acting, and in language structures. This impact can occur in much larger dimensions, ranging from increased aggressiveness to extreme passivity. All this dynamics involved in the context of incarceration has a significant impact on the mental health of the children of detainees and is a forgotten factor in the mass incarceration that exists in countries like Brazil. Conclusion: Parental incarceration is an important risk factor for long-term psychopathology in children. Timely intervention strategies and, mainly, prevention must be taken by mental health professionals and prison systems in order to minimize this trend observed in recent studies.

No. 30

Impact of Stressors During Covid-19 Lockdown in Patients With Mental Health Disorders: Results From Clinical Experience in Mauritius

Poster Presenter: Hemlata Charitar, M.D.

SUMMARY:

Introduction: The Covid-19 pandemic , declared by WHO in March 2020, is stressful for many people worldwide. Mauritius is a small island in the Indian Ocean. Very strict sanitary measures were taken during the lockdown period. Since the beginning of the pandemic, the main focus has been on the direct control of the outbreak and the wellbeing of the population. Patients with chronic mental health problems have not been the main focus of research and studies. The aim of this study is to determine the impact of stressors during the lockdown period on chronic patients with mental health conditions. In this study, stressor was defined as any factor which caused a negative impact on the patients' life and was not present before the covid-19 pandemic. Relapse was defined as a reappearance of at least 2 major symptoms which interfered considerably in the daily routine of the patients. Material and method: A group of 65 chronic patients from the Outpatient Department in a private Hospital was selected. Patients were then divided into 2 groups : Group A –Control (patients whose condition remained stable) and Group B-patients who had a worsening of their condition. Results: 40% of the patients were previously diagnosed with bipolar disorder, 36.9% of patients had a diagnosis of Major Depressive Disorder(MDD), 23,1% of patients had an Anxiety Disorder. 50.8% of patients had a worsening of their condition(group B) and 49.2% remained stable. Mean age of patients from Group B was 39.1 years while that from group A was 38.8 years. From group A , 68.75% of patients had no stressors during and after the lockdown period. 31,25% of patients from group A had one stressful factor (either family conflicts or work related stress). From group B, all patients had either 1 or 2 stressors. 60.6% of patients had only 1 stressor while 39.4% of patients had 2 types of stressors. Patients who had bipolar disorders had the greatest percentage of relapse (61.5% versus 38.5% who had no relapse). Patients who had an anxiety disorder had a relapse chance of 53.3%. Patients with MDD had a relapse rate of only

37.5%. Conclusions: Patients who had no stressors during the Covid-19 lockdown period were more likely to remain stable. Patients who had at least 1 stressor were more likely to have a relapse of their symptoms. The risk of relapse was greater for patients with bipolar disorder and who had at least 1 stressor. Those who were diagnosed with MDD were more likely to remain stable and had a small relapse rate. These results may help to design future studies in order to identify patients who have a high risk of relapse during critical times.

No. 31

Relationship of Clinical and Sociodemographic Characteristics of Symptoms Severity of Patients of a Brazilian Mental Health Service

Poster Presenter: Eduardo Muniz Dias Carvalho Matos
Lead Author: Alexandre Rizkalla
Co-Author: Istefani Silva

SUMMARY:

Background: Clinical aspects, such as the early age of onset of symptoms is correlated to the severity of the mental illness. Similarly, sociodemographic characteristics such as gender, marital status and educational level have consequences in the course of treatment. The aim of this study was to correlate clinical and sociodemographic characteristics with the symptoms severity of patients from a Brazilian mental health service, at Western Bahia. In addition, this is the first work to describe this data in the region. **Methods:** We analyzed 181 records of all patients undergoing treatment since their admission. We collected data such as gender, age, marital status, occupation, education, religiosity, diagnosis and age of onset of symptoms. Data regarding income and ethnicity were not found. Regarding the severity criteria, we analyzed psychotic symptoms, psychiatric hospitalizations, apragmatic behavior, impossibility of self-care, heteroagressivity, suicide attempt, catatonia, severe depredation of heritage and severe social exposure. To test the possible correlation between the variables, the Spearman test was used applying the GraphPad Prism 5.0 software. We consider the value of $p < 0.05$ to be statistically significant. The study was submitted and approved by the local and the Brazilian Institutional Ethics Committees on human experimentation. **Results:** The average age was 42.85 ± 11.99 years, 52% were women, 74.6% had no partner, 30% did not complete elementary school, and 98.9% of those who had this information on record had religion/spirituality. The most prominent age of onset was between 13-18 years (28.2%) and 19-29 years (28.2%). Regarding the diagnosis, 59% of the patients had schizophrenia. It was observed that the increase of age is related to decrease of heteroagressivity index (r: -0.2831; p= 0.0003), decrease of psychiatric hospitalizations (r: -0.023; p= 0.006) and decrease of psychotic symptoms (r: -0, 1857; p= 0.0199) and that male gender was more related to heteroagressivity (r: 0.1883; p= 0.0463). Regarding marital status, not having a partner correlated with higher heteroagressivity (r: 0.1933; p= 0.0091), apragmatic behavior (r: 0.1706; p= 0.0216) and psychotic symptoms (r: 0,1663; p= 0.0253). It was also observed that the higher the educational level, the lower the rates of heteroagressivity (r: -0.1566; p= 0.0473) and suicide attempt (r: 0.207; p= 0.0084). Religion proved to be a protective factor regarding severe social exposure (r: -0.149; p= 0.045). In addition, the age at onset of symptoms between 12 and 18 years correlated with higher heteroagressivity (r: 0.206; p= 0.005). **Conclusion:** Our data converge with the current literature and show the influence of some clinical and sociodemographic variables and allow to plan integrated strategies in the service in order to improve the treatment and patient's quality of life.
This study had no financial support and was conducted at the Federal University of Western Bahia.

No. 32
WITHDRAWN

No. 33

A Case Report of an Epilepsy Patient in Bangladesh

Poster Presenter: Mohammed Zubayer Miah, M.B.B.S.

SUMMARY:

Mr. A, 50 years old, graduate, unemployed, middle-aged person hailing from a low socioeconomic family of rural area from a northern District of Bangladesh.

He complains of convulsion two to three times per week for about one & a half years. According to the caregiver (Wife), convulsion is associated with unconsciousness, trauma in different parts of the body during fall, frothy discharge through the mouth. Convulsion is aggravated during long wakeful night. There is no family history of any psychiatric or neurological abnormalities. He was reasonably well during childhood. He has two daughters. No significant history of medical illness. He is a smoker but no history of any other substance use. He is extroverted. He used to play cards in his leisure time. General physical examination was revealed normal. Systemic examinations including the nervous system was normal. Routine investigations were normal. CT scan & MRI was revealed normal. EEG was revealed a slow wave. Mental state examination was revealed: Middle-aged person with average body build, kempt, appearance & behavior was normal, social behavior was maintained, eye to eye contact was present, rapport was established. Speech was normal in rate, rhythm & volume. The mood was euthymic. There was no suicidal or obsessional thought. He was conscious, oriented to time, place & person. His memory was intact, his judgment was intact. His insight was present. The diagnosis was Generalized Tonic-Clonic Seizure. I started oxcarbazepine 300 mg single dose orally for seven days. After one week, he came to me and complained that convulsion occurred one time only but experienced no side effects of the drug. Then I advised him to take oxcarbazepine 300 mg bid & told him to come after one month. There was no history of convulsion after one month. At the time of the third visit, I advised him to take medications with 600 mg daily for 3 years. After 2 two years he came to me & was happy to say that he had no convulsion till now. In conclusion, it is observed that oxcarbazepine is also effective in Generalized Tonic-Clonic Seizure as well as Partial Seizure.

No. 34

A Case Report of Chronic Hyponatremia Caused by Psychogenic Polidpsy

Poster Presenter: Aline Miskulin
Co-Authors: Karime Choueiri, Fabrício P. C. Miskulin, Rosana Antunes, Milenna Padovani

SUMMARY:
Case-report: W.S., 65-year-old, with obsessive compulsive disorder, comes to the psychiatric appointment, due to physical and verbal aggressivity, dysphoric humor, psych-motor agitation and progressive worsening of the obsessive and compulsive symptoms, 3 days ago. Patient also had some clinical comorbities, such as heart failure and hypertension. Patient took some medications, included: olanzapine 5mg/day, sodium divalproex 750mg/day, hydrochlorothiazide 25mg/day, furosemide 40mg/day, carvedilol 50mg/day, enalapril 10mg/day. Physical exam: the patient had bilateral edema on his legs, 3+/4+, not elastic, with hyperemia, no other abnormalities. Patient was hospitalized and some routine exams were made. No alterations were showed on the head computerized tomography. The labs came with an alteration of the levels of seric sodium, which was 123 mEq/l and urine Na of 104. The medical team decided to suspend the sodium divalproex and hidroclorotiazide, add paroxetin 15mg/day and increase the furosemide to 80mg/day. The initial diagnostic hypothesis was syndrom of inappropriate secretion of anti diuretic hormone (ADH) secondary to sodium divalproex and dyazide. The patient evolved with a worsening of the hyponatremia (seric Na 116), mental confusion and slowness speech, even after 10 days of sodium reposition endovenous, hydric restriction and hyper sodium diet. Psychogenic polydipsia was considered and a more detailed evaluation revealed that the patient was drinking excessive amounts of water out of the toilet during the night, accompanied with other behavioral alterations, such as taking 5 showers a day and cleaning compulsion. Discussion: Chronic hyponatremia is a condition when the natremy is reduced (<135mEq/L) and it lasts more than 48 hours. In this case report, the patient had hyponatremia normovolemic. It can have different etiologies, such as syndrome of inappropriate secretion of anti diuretic hormone, that may be caused by different drugs, pulmonary cancer, adrenal insufficiency, etilism, malnutrition and polydipsia. In Psychogenic polydipsia there is a disturbance in thirst control. It is more common at psychotics disorders. Studies have reported that it can affect about 6 to 20 % of psychiatric patients Evidence suggests that the osmotic set point for ADH

secretion may be lower in patients with polydipsia, leading to difficulty in water excretion. The elevated dopamine levels may also stimulate the thirst centers and another hypothesis is that chronic polydipsia changes the feedback regulation of the hypothalamic-pituitary axis. Yet, the cause of polydipsia remains indefinite. The treatment includes acetazolamide, antipsychotics and psychotherapy. Conclusion: Hyponatremia can be fatal and diagnosing precociously Psychogenic polydipsia is very important, due to the high prevalence among psychiatric patients. Such diagnosis also reinforces the importance of a detailed interview with the patient and their family members.

No. 35

Emotional Response to Physical Exercise Following a Negative Emotional Induction in Adults With Borderline Personality Disorder: A Pilot Study

Poster Presenter: Samuel St-Amour
Co-Authors: Lionel Cailhol, M.D., Ph.D., Paquito Bernard

SUMMARY:
Background: Physical exercise is a well-documented treatment for individuals with severe mental disorder such as schizophrenia and mood disorders (1). It helps improve clinical symptoms, functioning and quality of life of these individuals. Moreover, recent studies indicated that exercise decreased negative affects in adults with and without severe mental illness (2). Emotional dysregulation, characterized by a mostly negative and intense affective experience, is a core component in borderline personality disorder (BPD) (3). So, exercise might have important benefits in this population. However, no previous study examined the effects of exercise in individual with BPD. This pilot study documents the feasibility and acceptability of a protocol testing the effects of physical exercise on the emotional response to a negative emotion in adults with borderline personality disorder. Method: Twenty-eight adults from 18 to 65 years old with a diagnosis of BPD have been recruited in a psychiatric hospital in Montreal to test a study protocol. Upon arrival, participants filled several socioeconomic, mental health and substance use questionnaires. Then, they viewed a scene from Silence of the Lambs previously validated to induce negative emotions in BPD population. They were then randomly assigned to either 20 minutes of stationary cycle or a neutral video of 20 minutes. Self-reported affects were assessed prior and after the mood induction and before, every 5 minutes during and after the intervention (7 times). Results: In this sample, 9 participants reported more positive or equal levels of affect after the induction than before. On the other hand, two participants have reacted enough so they had to be taken into psychiatric care afterward. Preliminary results show a tendency of higher response of physical exercise than control on positive affects and no participant had any adverse effect from physical exercise. However, control intervention (neutral video) had a meditative effect on participants who were assigned to this intervention, probably hiding part of the effect of the physical exercise. Conclusion: This pilot study was the very first to test the effects of physical exercise on symptoms of BPD and informs on the best way to conduct the principal study. First, the mood induction strategy used has shown poor results, thus it will be changed and a more adapted induction strategy for the BPD population (e.g., negative images from the International Affective Picture Set) will be used. Then, the control intervention to be used will be a placebo physical exercise (e.g., rotation of the wrists, ankles and shoulders). These modifications will provide better results and enable a better understanding of the effects of physical activity on emotion regulation with BPD population.

No. 36

Nitrofurantoin-Induced Psychosis: A Case Report

Poster Presenter: Lalita Thitiseranee, M.D.

SUMMARY:
Introduction: Nitrofurantoin has been used for the management of urinary tract infections for more than 60 years. Despite the prolonged and extensive use of nitrofurantoin, it has low rates of resistance among common pathogens. It is generally well tolerated with a low incidence of side effects. The mechanisms of antibiotic-associated psychosis remain unclear. Objective: To report a case of a

woman who exhibited acute psychotic symptoms following Nitrofurantoin administration for urinary tract infection. Case scenario: A 65 year old Caucasian female with no past psychiatric history and past medical history of hypertension, asthma and morbid obesity presented with delusional thoughts and bizarre behaviors in May 2020. On admission, patient was noted to have a temperature of 98.9F, BP 141/81 mmHg, PR86/min, RR19/min, and WBC was 8.19 x 103/mm3. Patient was oriented to time, place and person. However, she exhibited delusional thoughts that her family and friends wanted to poison her and police cars were chasing after her. Unspecified schizophrenia was diagnosed as per the DSM-5. All reversible causes of psychosis were sought. Delirium was excluded. Patient was started on Abilify 5mg. Her conditions improved on the following day of admission. Patient reported poorly treated UTI in the past. Her urinary analysis showed nitrite+, WBC5-10, and many bacteria. Nitrofurantoin 100mg was initiated on the second day of admission, however, on the forth day of admission, patient exhibited significant paranoia. She was guarded and was noted to be scanning surroundings. Nitrofurantoin was discontinued and was replaced by Fosfomycin 3mg. Her mental status then normalized the following day. She was discharged on the sixth day of admission, maintaining clinical stability since then. Conclusion: Our patient's Naranjo adverse drug reaction (ADR) probability scale score was +8; Nitrofurantoin was the probable culprit. Although there are limited documentation on psychiatric adverse reactions from Nitrofurantoin use, clinicians should be cautious about the potential psychotic effect from this medication especially when treating elderly patients.

No. 37

Structural Brain Modifications in Patient With Frontoparietal Damage and Psychiatric Disorder Treated With Syncronous Sequential Model for 12 Years

Poster Presenter: Aristotele Hadjichristos, M.D.
Co-Authors: Alessia Lo Grande, Claudia Lacobacci, Pasquale Romano, Christos Hadjichristos, M.D.

SUMMARY:
The present work is a report of the treatment in patient with fronto-parietal damage, mood and selective anxious disorder being treated with the Sincronous-Sequential model for twelve years. Mr G., a 68 years old man, had a stroke in 2006, involving the fronto-insula and the frontoparietal area. Repeated assessments were carried out in 2008, 2015, 2017 and 2019, with both Psychometric Tests (including cognitive tests) and instrumental investigations with brain MR and PET techniques. This battery of tests revealed the presence of a deficit of executive functions with a major involvement of the affective functions: in particular, the patient had a mood disorder, was no longer able to control anxiety and worries about his son. Mr G. received an integrated treatment according to the "Synchronous-Sequential Model": pharmacotherapy (to control the mood disorders, the anxiety and the sleep), psychotherapy (a Cognitive-Behavioural intervention to reduce obsessive thoughts, improving alternative strategies to manage his worries) and neuropsychological rehabilitation (a personalized program of cognitive rehabilitation based on exercises of planning and solving problems of everyday life) were administered. In 2015 the results showed improvements in social skills and insight. Mr G. begins to report changes in quality of life, as he feels able to cope with daily life activities. Even if we noticed an improvement in practical skills, the selective attention, the inhibition behaviours and the deductive logical abilities presented pathological scores. Over the past 4 years, the patient has developed tardive dyskinesia, which responded to the integrated treatment with tetrabenazine, diazepam, trazodone and gabapentin. To date (2020) we have repeated the neuropsychological battery and neuroimaging exams. The results show an improvement of global functioning. The attention and inhibition abilities are been improved and results fall within the regulatory sample. Pratical skills deficits still remain but the patient shows an improvement in deductive logic and a general cognitive functioning. The results and the "Synchronous-Sequential Model" will be discussed in the work. We observed that the "Synchronous-Sequential Model" seems to have good efficacy with patients presenting an organic syndrome with psychological aspects. The Neuroradiological

examinations conducted with various brain MR and PET techniques (2019) showed an important re-arrangement of the brain structures. According to the clinical results, this model represents a new form of intervention that could give more improvement in fewer time thanks to its simultaneous action on multiple levels (psychopharmachological, psychosocial, cognitive, symptomatic, emotional etc.).

No. 38
A Case of Low Dose Sertraline Causing Psychosis
Poster Presenter: You Wang
Co-Author: Viral Goradia, M.D.

SUMMARY:
Introduction: Sertraline is a frequently prescribed SSRI that blocks the reuptake of serotonin and secondarily, dopamine. This increased dopamine activity can, in theory, cause the side effect of psychosis. Sertraline's association with psychosis has been sparsely documented in several case studies, with a minimum dose of 50mg qd before psychosis was observed. This case report describes a rare case of psychosis that started after initiating sertraline intake of 25mg qd, which challenges the currently documented minimum dose required to produce psychosis. Case: The patient is a 16-year-old male with a past medical history of Autism Spectrum Disorder and Arnold-Chiari malformation, presenting with newly onset homicidal ideations 3 days after starting sertraline 25mg qd. Prior to starting sertraline, the patient tapered off fluoxetine that he has been taking for 2 years. The patient's sertraline was discontinued, and his psychotic symptoms subsided within 3 days. Discussion: A confounding factor that may have contributed to this patient's psychosis is his past medical history of Autism Spectrum Disorder, which has been found to be associated with non-affective psychotic disorders. Additionally, the patient was never re-challenged with sertraline, thus the possible causative effect was not re-demonstrated. More research is needed to investigate the possibility that the increased dopamine activity induced by sertraline contributes to the manifestation of psychosis, and whether such effect can be generalized to other SSRIs.

No. 39
WITHDRAWN

No. 40
Indian Avahana Syndrome
Poster Presenter: Porandla Kishan, M.B.B.S.
Co-Authors: Sphurti Pusukuri, Vishnu Vardhan, M.B.B.S.

SUMMARY:
INDIAN AVAHANA SYNDROME A private psychiatric hospital located at a district headquarters, having a database of 69,000 patients of which 2000 patients diagnosed to have trance and possession disorder. Patients presented with a behaviour, as if they are possessed by God - behaving, demanding, and fulfilling wishes (desires). The phenomenology observed is specific to the Indian subculture. On further analysis by gender, socio-economic status, family, social and cultural background and psychological mindedness. ??It was observed that people from the Indian subculture perform prayer, meditation (japa), spiritual practices to god/goddess to attain godliness by allocating various body parts (Karanyasa and Anganyasa) to the formless god (higher being). Karanyasa is a process of meditation, godliness by allocating the five fingers and palm of the hand, whereas Anganyasa is attaining godliness by allocating heart, forehead, crown of the head, eyes, from ears to elbows and around the head for the six parts of mantra. After attainment, the godly energy vacates the body on reversing the Karanyasa and Anganyasa. Trance and possession disorders are more prevalent in the Indian subculture and seen especially in countries of Indian subcontinent like India, Bangladesh, Pakistan. The analysis and conclusions will be presented in the poster.

No. 41
Klingsor Syndrome, a Rare Clinical Entity: A Case Report From Rural Central India
Poster Presenter: Rashmi Subhedar, M.D.
Co-Authors: Pawan Rathi, Jayasudha Gude, M.B.B.S., Jatminderpal Bhela, M.D., Pratik Jain

SUMMARY:
Background: Majority of cases of self-mutilations are related to psychotic illness and alcohol addiction, but

they can also occur in non-psychotic people with bizarre autoerotic acts or for a desire for a change of sex which is then mostly medical castration. The patient sometimes may perform the act under the influence of religious delusions and hallucinations. The aim of presenting this case report is to explore an unusual presentation of a married man without having a history of addiction or sexual abuse victimization. Case Description: A 22year old married male patient was brought to the emergency department of a tertiary centre of Central- India from a nearby rural village. He was discovered in a pool of blood by the family members after he stayed overnight in a locked room where he amputated his penis and scrotum himself. He received the emergency treatment first and later underwent reconstructive surgery and graft placement for his amputated organs. Psychiatry consultation was done after the patient was stabilized. In the interview, the patient explained that his act was a result of the voices he was hearing and commanding him. He reported that people around him were alleygating him with a rape case and they also made some vulgar video of him which has been circulating on social media. He felt that all that was happening because of the long penis he had which was very obvious to observers even under his pants due to the erections he always had which according to him made the surrounding people judgemental about his hypersexuality. Family members also reported a change in his behavior and sleep for 3 months prior to the incident. They said he was behaving bizarre and talking irrelevantly. He started hearing many voices of gods and religious people commanding him to mutilate his penis and scrotum which he felt was the only remedy over his problem. Due to the continuous fear of people''s allegations and these voices he finally decided to perform the act of amputing his genitals. He had no family history or previous history of psychiatric illness or addiction history before this episode. The mental status examination revealed the presence of auditory hallucinations and delusions and he was diagnosed with Schizhophrenia and the patient was started on Olanzapine 5 mg BD which was gradually increased to 20 mg/day over 3-4 weeks. Around 90 percent of his symptoms improved over a period of 3-4 months. Conclusion: Though known risk factors are single men, aged 20-29 years, victims of sexual abuse or committers of sexual crime, addiction, etc, our case reports a married man, who never had an addiction history, and no past or family history of any psychiatric illness. Timely psychiatric intervention along with surgical management showed good treatment outcomes. Educational Objective: To understand the occurrence of self mutilation in the first episode of psychosis and the importance of timely intervention for better treatment outcomes.

No. 42
My Mind Is Not Listening to Me

Poster Presenter: Porandla Kishan, M.B.B.S.
Co-Authors: Vishnu Vardhan, M.B.B.S., Sphurti Pusukuri, Ayesha Sultana, M.B.B.S.

SUMMARY:

MY MIND IS NOT LISTENING TO ME A phenomena observed on analysis of 1500 obsessive compulsive disorder patients visiting a private psychiatric hospital at the district headquarters with a total database of 69000 patients. The patients suffering from OCD always want to be certain. On their first visit to the clinic, along with the common complaints of obsessions and compulsions the patients presented with a peculiar phenomenon stating that their mind is not listening to them. The ancient Indian scriptures written by Rushi-Munis, scholars and philosophers contain very rich and empirically derived psychological teachings that have sensitized our people for keeping one's mind always under their own control. In Indian subculture the obsessive patients are under the influence of a number of factors namely family, culture, social, educational and psychological. An analysis of all the above factors of the patients who are distressed when they experience the phenomenon will be analysed. The patients were started on SSRI and were called for review every 10 days following which after 100 days of treatment the patients claimed of their minds listening to them again. The analysis and conclusion of the phenomenology will be presented in the paper.

No. 43
WITHDRAWN

No. 44
WITHDRAWN

No. 45
The Prevalence of Tobacco Use in Schizophrenia: A Systematic Review
Poster Presenter: Wélissa Moura
Co-Authors: Ciro Marco, Yasmin Carvalho, Lorenna Santos, Laura Souza

SUMMARY:
Introduction: There´s a great amount of data that suggest a strong association between tobacco use disorder and schizophrenia, showing a vulnerability in these patients. They also have a higher use of tobacco, at any forms, than the general population (78.5%) (Hassanzadah et al., 2019), specially the male population (Fang et al., 2019) and it's use usually starts even before the onset of the schizophrenia. It can also be associated with a worse quality of life (Desalegn et al., 2020). The main objective of this study is to review the prevalence of tobacco use in schizophrenic patients. Methods: We conducted a systematic review on PubMed and Google Scholar (GS) utilizing the following search strategies, respectively; "Tobacco Products"[Mesh] OR "Tobacco" [Mesh] OR "Tobacco use"[Mesh] AND "Schizophrenia"[Mesh] and "tobacco and schizophrenia". As inclusion criteria we used: articles in English, Portuguese or Spanish, clinical studies, observational studies, datasets and multi-centric studies that sought the prevalence of tobacco use among schizophrenic patients at any context. There weren't any sample age or publication date limitations. The data gathered was treated with the Statistical Package for the Social Sciences software. Results: The search strategy found 50 papers on PubMed and 46 on GS. After Reporting Items for Systematic reviews and Meta-Analyzes (PRISMA), 51 articles met our inclusion criteria (35 from PubMed and 16 from GS). These articles were published between 1983 and 2020 (19,6% from 2002 to 2003 and 15.6% from 2009 to 2011). The articles were from United States of America (23,5%), Japan (19,6%) and Spain (11,8%). The most common criterion set used was the Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition (DSM – IV) (43,1%), followed by DSM-III (17,6%) and the Structured Clinical Interview for DSM Disorders (SCID) (11,8%). Outpatients represented 54,6% of the total population studied and inpatients were 29,4%. The mean age of the studies was 41,20 years. About gender, (male/female): the median found was 1.56 [Inter Quartil Range (IQR) 0,9275-2,3475]. The median of studied population was 250 (IQR 116-540) and the median prevalence of tobacco use in patients with schizophrenia was 61% (IQR 42,4 to 69%). Conclusion: The prevalence of tobacco use in patients with schizophrenia is close to the prevalence in patients with Chronic Obstructive Pulmonary Disease (COPD). In spite of the dual diagnosis being highly prevalent it is usually referred as a silent comorbidity, a term that unfortunately seems to be quite accurate considering the number of articles about this topic. It is important to remember that tobacco can compromise the physical health of the patient beyond the deterioration of schizophrenia, reducing life's expectancy and quality.

No. 46
WITHDRAWN

No. 47
16-Year Treatment of Bipolar Mood Disorder With Maintenance ECT: A Case Report and Review of Literature
Poster Presenter: Antonio Leandro Carvalho de Almeida Nascimento, M.D., M.Sc.

SUMMARY:
Introduction: Bipolar Disorder (BD) is a mental disorder which causes recurrent episodes of mania and depression. This disorder affects 1.5 to 3% of the population and has a typical onset between the ages of 13 and 30. Mood stabilizers and antipsychotics are usually recommended by treatment guidelines, however, patients who are refractory to pharmacological treatment might be treated with Electroconvulsive Therapy (ECT), both in acute and in maintenance phases of treatment. In spite of its 80-year history there are few studies and reports of long term treatment with maintenance-ECT (mECT). Objective: to report the treatment of a patient with BD who presented manic episodes refractory to treatment with lithium carbonate, valproate sodium

and carbamazepine combined with haloperidol and chlorpromazine who was successfully treated with ECT in the acute phase of treatment and who is currently on mECT for 16 years with positive results and to review the literature on mECT for the treatment of bipolar disorder. Case report: we report the case of a 61-year old man diagnosed with BD at the age of 32 who had 5 manic episodes in 6 years. The episodes where severe, required hospitalization and the patient presented poor response to lithium carbonate, valproate sodium and carbamazepine, haloperidol and chlorpromazine either alone or in combination. The patient was treated with ECT in his last hospitalization and has been treated with mECT for the last sixteen years. Since starting mECT the patient did not present any manic or depressive episode, has not been hospitalized and did not present cognitive decline as measured by the Mini-Mental State Examination. Literature Review: We reviewed the literature on mECT and Bipolar Disorder and found 23 case reports and series, 9 prospective studies and 18 retrospective studies. mECT duration ranged from four weeks to eight years, from two to 430 ECT sessions. mECT has been shown to be an effective and safe intervention in reducing relapses, recurrences and hospitalizations. Conclusion: mECT is an effective and secure option for maintenance treatment of BD patients. More studies are needed to evaluate which populations might be best suited for this treatment method.

No. 48

From Waging Wars Against Demons With an Invisible Magic Sword to Starting a Job: ECT to the Rescue

Poster Presenter: Ahmad Rehan Khan, M.D.
Co-Authors: Ali Awan, M.B.B.S., Darakhshan Adam, M.D., M.B.B.S., Mehreen Abbas, M.D., M.B.B.S., Sukhmani Kaur Sadana

SUMMARY:

Electroconvulsive therapy (ECT) is the electric stimulation of the brain to induce a seizure under anesthesia (1). It is used in the treatment of various psychiatric disorders, including treatment-resistant major depressive disorder (MDD), schizophrenia (TRS), obsessive-compulsive disorder (OCD), and catatonia. Though the utility of ECT in schizophrenia goes way back to 1938(2), its usually limited to treating catatonic patients or for the augmentation of antipsychotic medications, particularly Clozapine. Clozapine is the treatment of choice for TRS. Some of the recent studies show the use of ECT in TRS patients who either don't respond to Clozapine or develop lethal side effects(3). The application of ECT is limited by several factors, including cognitive side effects, use of anesthesia, availability, and lack of ECT certified psychiatrists. There is minimal data regarding the use of maintenance ECT in preventing relapse in individuals with schizophrenia. We report a patient with Treatment-Resistant Schizophrenia, who was tried on multiple atypical, typical, and depot formulations of antipsychotics with no significant improvement in The Positive and Negative Syndrome Scale (PANSS) score. He was put on Clozapine twice but developed neutropenia. His PAANS symptom score was 110. He was not able to have a normal conversation even for 10 seconds due to auditory and visual hallucinations. After 26 sessions of bilateral ECT, the PAANS scale score was reduced to 65, and he was transferred to a Transitional Living Facility. After further 14 sessions of Bilateral ECT, he was discharged home with significant symptomatic improvement. PAANS scale score after 40 sessions was 50. He is on monthly bilateral ECT and one antipsychotic medication. He is maintaining a reasonably functional lifestyle, which includes a job, going out with friends, and helping his father in farming. ECT was very successful in reducing both positive and negative symptoms. ECT helped him from being not able to have a normal conversation for a minute to getting discharged back to home and starting a job. Keywords: Positive and Negative Syndrome Scale, Treatment-Resistant Schizophrenia, Electroconvulsive Therapy, ECT, Clozapine

No. 49

Age and Gender Differences in Utilizing Suicide Prevention Resources During COVID-19

Poster Presenter: Ji Yoon Park
Co-Authors: Jenelle Richards, M.A., Igor I. Galynker, M.D., Ph.D., Sungeun You, Ph.D.

SUMMARY:
Background: The recent outbreak of the novel coronavirus disease 2019 (COVID-19) has brought deleterious effects throughout the world, both physically and mentally. With more than 850,000 global deaths, many lost their loved ones, their work, their security, and most importantly, their freedom. Due to the drastic changes in people's daily lives, the prevalence of anxiety and depressive symptoms, as well as suicidal ideation has elevated significantly over the past several months (Czeisler et al., 2020). Promulgating the access to psychological resources to the right people that are in need of help is momentous than it has ever been. This study aims to examine whether people with suicidal ideation (SI) utilize suicide prevention resources. It also aims to identify age and gender differences in those who take advantage of those resources. **Methods**: 497 Korean participants who were residing in South Korea during COVID-19 were recruited to complete an online survey. We assessed the Korean version of the Patient Health Questionnaire (PHQ-9) to measure suicidal ideation in item 9 ("Thoughts that you would be better off dead, or thoughts of hurting yourself in some way") and inquired participants' interest in utilizing suicide prevention resources that were provided during the survey. Chi-square test was used to examine the statistical significances between the variables. **Results**: SI was not significantly associated with the usage of suicide prevention resources, X^2 (1, N = 497) = 0.81, *p* = .37. 243 (48.9%) participants reported that they would either use or consider using the resources. Among them, 191 (78.6%) did not have SI and 52 (21.4%) had SI. This indicates that almost four times as many people who are not suicidal would use suicide prevention resources compared to those who are suicidal. Within those who completed item 9 of the PHQ-9, a higher percentage of people who are not suicidal (50%) plan to use suicide prevention resources than those who are (45.2%). In addition, age was significantly associated with the use of suicide prevention resources, X^2 (4, N = 497) = 20.25, $p < 0.05$. Participants between ages 19 – 29 had the highest interest in using the services, while participants between ages 50 – 59 had the least interest. Moreover, there was no significant gender differences in the use of prevention services, X^2 (1, N = 497) = 0.33, *p* = .57. This suggests that females were not more likely to utilize suicide prevention resources than males. **Conclusion**: Not everyone who has SI seeks help and not everyone who seeks help has SI. We must reconsider the role of SI and conduct further studies on the underlying reasons of why people with no SI still utilize suicide prevention resources. Also, novel methods of prevention services targeting the population who are in need of support is pressing.

No. 50
Role of Ketamine in Alleviating Suicidal Thoughts During Covid-19 Pandemic: A Meta-Analysis
Poster Presenter: Jayasudha Gude, M.B.B.S.
Co-Authors: Zeba I. Murtaza, M.D., Srinagesh Mannekote Thippaiah, M.D., Ya-Ching Hsieh, M.D., M.P.H.

SUMMARY:
Background: The COVID-19 brought unprecedented challenges in providing mental health services. It's persistence and spread has caused tremendous and progressive negative psychological consequences. It is likely to increase the suicide risk in vulnerable people both during and after the pandemic. Identifying an effective treatment strategy which rapidly alleviates the suicidal thoughts and behavior is in dire need. Lately, several research pieces of evidence have highlighted the role of ketamine in rapidly reducing suicidal ideation and depressive symptoms. This systematic review with meta-analysis aims to determine the efficacy of ketamine in alleviating the suicidal thoughts and behavior in vulnerable individuals. **Methods**: We searched PubMed using the keywords "ketamine" and "suicidal ideation" for studies from January 1st, 2015 to date. Out of 464 studies, 152 relevant studies were reviewed, and the final seven studies were included, which met the inclusion criteria. The inclusion criteria were patients having baseline suicidal ideation and receiving either single or multiple doses of Intravenous or Intranasal Ketamine. Exclusion criteria included studies not measuring the baseline suicidal ideation. Primary Outcomes were measured using Scale for suicidal ideation (SSI) and Montgomery Asberg Depression rating scale (MADRS) pre-infusion and 24 hours post-infusion. PRISMA guidelines standards were used for

data extraction with the consensus of two independent reviewers; subsequently, data were analyzed using Review Manager 5.4. The statistical measure used was; mean difference and standard errors, and forest plots were created using random-effects models. The p-value < 0.05 was considered statistically significant, and for heterogeneity (I^2) >20% was considered significant. **Results**: Data was extracted from the eligible seven studies. The total of 253 patients was randomized to receive either ketamine or placebo. Out of 253 patients; 128 patients received ketamine and 125 received placebo. A significantly greater improvement in SSI and MADRS score was observed in the ketamine group compared with the placebo group at 24 hours post-infusion. Reduction in the mean SSI scores was 3.74 times greater in the ketamine group compared to placebo. Post-infusion, the ketamine group, was associated with a statistically significant decrease in the mean suicidal ideation compared to the placebo group (p<0.0001; 95% CI =3.31- 4.17).**Conclusions:** The result of the current meta-analysis reflected that ketamine has a significant effect in reducing suicidal ideation in patients presented with acute suicidal thoughts. Such critical information, on the treatment which alleviates suicide thoughts and behavior is helpful to strategize necessary preventive measure, especially during current COVID-19 crisis where suicide is likely to increase. To establish its long-term efficacy and safety we need more longitudinal studies with larger sample size and multiple infusions.

No. 51

The Need of Electronic Health Records to Make Information Available Beyond the Paper Charts

Poster Presenter: Konstantina Soultana Kitsou
Lead Author: Maria Bakola
Co-Authors: Thomas Hyphantis, Philippos Gourzis, Eleni Jelastopulu

SUMMARY:

Background: Since the end of the 20th century, the use of personal computers and hardware has become more affordable, and the access to medical information through the internet faster. However, there are still countries like Greece which are left behind due to financial and technological bottlenecks. Our aim is to describe the difficulties of conducting a study in a University Hospital in Greece by using paper based medical records and to explore the need of developing an electronic health record database to record, map and interpret the clinical and epidemiological patterns. **Methods**: A cross-sectional study was conducted regarding all patients who were hospitalized in the Psychiatric Clinic at the University Hospital of Ioannina, Greece, in the year 2017. All handwritten medical patient files were converted in an electronic health record (EHR) based on a self-developed "checklist" including all necessary health information which should be electronically stored. The ICD-10 criteria were used to classify the mental disorders. **Results**: A total of 468 patients, 55.8% males and 44.2% females, mean age 46.0 (±13.7) years, were recorded. 68.2% was aged between 30-60 years, while the age groups >60 years and <30 years accounted for 17.3% and 14.3% respectively. The most common psychiatric diagnoses were schizophrenia (42.3%, F20-F29) and mood disorders (39.5%, F30-F39). Average length of stay in the ward was 19.3 (±27.2) days. **Conclusion**: EHR technology can help to provide applications that use health, social, economic and behavioral data to act intelligently upon complex healthcare information to foster easier access to information.

No. 52

HUS Helsinki University Hospital Personnel's Psychological Well-Being During the Covid-19 Pandemic

Poster Presenter: Tanja Laukkala, M.D.
Co-Authors: Henna Haravuori, Katinka Tuisku, Jaana Suvisaari, Pekka Jylhä

SUMMARY:

COVID-19 pandemic has challenged health care professionals worldwide. A majority of the Finnish COVID -19 –patients have been cared for in the HUS Helsinki University hospital, located to highly populated area in the southern part of Finland. To assess and ensure HUS personnel psychological well –being during and immediately after the pandemic outbreak a prospective 18-month cohort study in the form of an electronic survey was initiated. The HUS HEHY COVID -19 survey takes 10-15 minutes to fill in and consists of few sociodemographic background

and open questions and validated scales to assess psychological distress, insomnia and symptoms of depression, anxiety and unusual stress (Mental Health Index MHI-5, Insomnia Severity Index ISI, two questions about depression PHQ-2/PRIME-MD, Primary Care Posttraumatic Stress Disorder Scale for DSM-5 PC-PTSD -5 and Overall anxiety and impairment scale OASIS). Potentially traumatic events related to work with pandemic patients or personal involvement were inquired. By each access to survey it delivers information on psychosocial support services. After the 18 month follow-up perceived distress will be compared between first – line and other HUS personnel. After HUS ethical committee`s approval and permission to conduct the study the electronical survey link was delivered to all HUS employees via email and personnel website (HUS Intra). Almost 5000 employees (N=4805) participated to the first survey during June 4-26 2020. Personnel website link (HUS Intra) answers from the same time-frame were included. All new HUS employees are eligible to join the study through this open link for personnel. SPSS was used to analyse the dataset. Altogether 19% of the HUS work-force participated on June 2020. A majority of the answerers were female (88%),11 % male and 1% other or preferred not to answer, 62% represented nursing staff, 9 % medical doctors and 29% other personnel. Changes in work due to COVID -19 pandemic were common (82%, N=3943) and 26% (N=1227) of the respondents had cared for COVID-19 patients. COVID-19 related potentially traumatic events among those who directly cared for COVID-19 patients were common (43.4%; N=532) vs other personnel (21.8 %; N=760) and the difference was statistically significant; $p < 0.001$. Limitations of this study include possibility of selection, e.g. distressed individuals with contact to pandemic patients may be more interested to participate and another limitation is that we report self-rated symptoms. However, these symptom scales are widely used with defined cut-offs. The preliminary results of this study highlight the need of tailored psychosocial support services to ensure personnel well-being during and immediately after the COVID-19 pandemic.

No. 53
WITHDRAWN

No. 54
WITHDRAWN

No. 55
Depression Among Pregnant Women With Husbands Abroad: Case Control Study in Hostile Region of Azad Jammu and Kashmir
Poster Presenter: Usama Bin Bin Zubair, M.B.B.S.

SUMMARY:
Background: Depression is emerging as a major public health problem among the population of both the developed as well developing countries. Various groups of the population have been at a higher risk of developing this debilitating illness and young woman is one of the huge groups of population with increased vulnerability towards depressive illness. Developing countries have a unique socioeconomic structure which affects the lives of its inhabitants in number of ways.4Going abroad for employment is one of the common social problems which have been faced by the young males of developing countries. This included both highly qualified individuals as well as the labor class **Objective**: To determine the difference in the presence of depressive symptoms among pregnant women with husbands living abroad and those with husbands living with them in Azad Jammu and Kashmir **Methods**: The sample population comprised of pregnant women reporting for ante natal checkup at Amna hospital Rawalakot. Cases constituted the pregnant women with husbands living abroad while controls were the pregnant women with husbands living with them. Patient health questionnaire-9 (PHQ-9) was used to record the presence and severity of depressive symptoms. Age, gestation, parity, rural or urban origin, education, level of family income, daily contact hours on telephone or what's app, previous pregnancy loss or complications, number of years abroad and visits to home per year were associated with depressive symptoms. **Results**: Mean age of the study participants was 29.73 (±5.395). 66 had significant depression in the case group while 14 had in the control group (p-value<0.001). Education and rural

background had significant difference among the case and control group. Less number of visits per year of husband was strongly linked with presence of depressive symptoms among the cases. **Conclusion**: This study showed a high frequency of depressive symptoms among pregnant women with husbands abroad as compared to those with husbands living with them. Special attention should be paid to the women whose husband had lesser number of visits to the country. No financial disclosure or conflict of interest

No. 56
WITHDRAWN

No. 57
Can We Image a Thought From the Past? Neuro-Imaging and Psychiatry in the Courtroom
Poster Presenter: Kamal S. Bhatia, M.D.

SUMMARY:
Rapid advances in neuro-imaging have made it critical for us to be up-to-date with the latest research. Over the last few years, these developments have provided valuable insights into the brain and its functions. Additionally, "live-imaging" in addition to simultaneous molecular and behavioral studies provide interesting information about human actions and behaviors. This continued progress in structural and functional imaging has also made inroads into the courtroom. The persuasive power of using colorful images in the courtroom cannot be overstated. As we move towards a more biological approach, a psychiatrist (as an expert witness) needs to be aware of these newer technologies. This presentation will review some of the latest advances in neuroimaging technologies from a medico-legal perspective. Neuro-imaging studies conducted in the future (i.e. present) about possible actions or behaviors in the past, provide a unique situation for the psychiatrist to interpret for the courtroom. Hence, despite these significant improvements, a cautious approach is recommended. It is the ethical responsibility of the psychiatrist to educate patients, as well as the courts, and be aware of the biases this can introduce.

No. 58
Reduced Reward Responses and Brain Volume in Psychiatric Inpatients With Depression
Poster Presenter: Hyuntaek Oh
Co-Authors: Michelle Patriquin, Ph.D., Ramiro Salas

SUMMARY:
Depression is a common mental health symptom characterized by a reduced modulation of behavior as a function of rewards. We investigated whether neural activation in the prefrontal cortex and dorsal striatum during reward processing and associated brain volumes are altered in adults with depressive symptoms receiving inpatient psychiatric treatment. Adults (N = 216) who were receiving inpatient psychiatric treatment were recruited at The Menninger Clinic (Houston TX) and divided into severe depression (n = 108) and low depression (control; n = 108) based on the Patient Health Questionnaire - Depression (PHQ-9) scores. Patients with severe depression had a PHQ-9 score ≥ 20. Demographic characteristics (age and sex) and psychiatric diagnoses (except for depression-related diagnoses) were matched between patients with severe depression and the control group. Average PHQ-9 scores for patients with severe depression and the control were 23.3 ± 2.0 and 12.8 ± 5.1, respectively ($p < 0.001$). Patients were scanned in a 3T Siemens Trio MR scanner in the Center for Advanced MRI at Baylor College of Medicine. A 4.5 min MPRAGE (1mm isotropic voxels, TE = 2.66ms, TR = 1200ms) was collected, followed by 4 functional scans (3.4x3.4x4mm voxels, TE = 40ms, TR = 2s). The first two runs included 55 normal events (a 1s duration yellow light followed by sweet juice 6s later). The last two runs included 24 normal events and 12 catch events (juice delivery delayed by 4s). Juice reward data were analyzed in AFNI by fitting a general linear model that included 2 regressors (normal and catch events). The structural images were analyzed using the FreeSurfer 'recon-all' pipeline to explore brain volume differences. Preliminary analyses revealed that patients with severe depression showed less responses to juice delivery in bilateral putamen and right caudate when compared to the controls (FDR corrected $q < 0.01$). We also found that patients with severe depression had less responses in bilateral middle frontal gyrus and left medial frontal/precental gyrus than the

controls (FDR corrected $q < 0.01$). Further, patients with severe depression showed less responses to catch events in left cuneus and left medial frontal gyrus than the controls ($p < 0.05$, uncorrected). Finally, bilateral middle frontal volume in patients with severe depression was found to be significantly smaller than in the controls ($p < 0.05$). This study investigated reward processing and brain volume differences between patients with severe depression and controls. The results suggest that reward processing in the dorsal striatum and the brain volume of middle frontal gyrus may be altered in patients with severe depression. Moreover, our findings suggest that brain responses in left cuneus and medial frontal gyrus are reduced when disappointment occurs in patients with severe depression. Additional research examining functional connectivity within these areas may inform a better understanding of depression.

No. 59

A Case of Excessive Weight Gain With Guanfacine ER: 13.6 kg in Two Months

Poster Presenter: Kelly Chen
Co-Authors: Clinton Martin, Janaki Nimmagadda

SUMMARY:
The patient is an 11-year-old Caucasian female with a past psychiatric history of Attention deficit hyperactivity disorder, Post-traumatic stress disorder, and Disruptive mood dysregulation disorder. When she first presented to our clinic, she weighed 44.9 kg. At that time, she was on Aripiprazole 2 mg, Methylphenidate ER 54 mg, and Guanfacine ER 2 mg. We changed Guanfacine to Clonidine 0.1 mg to help with insomnia and continued the other two medications. 3 months later she had a psychiatric hospital stay when Aripiprazole was discontinued and Guanfacine ER 3 mg was started while continuing Methylphenidate ER 54mg and Clonidine 0.1mg. After that, her mother reported increased appetite and weight gain. Her mother also mentioned that the patient had a similar pattern of weight gain when she was previously on Guanfacine ER. 1 month after being on Guanfacine ER 3mg she weighed 54.4 kg. Despite dietary alterations and physical exercise, her weight progressively increased to 58.9 kg at the next monthly visit, and we decided to discontinue it per the mother's request. Weight gain is not among the adverse reactions in FDA labeled short-term adjunctive studies of Guanfacine ER. However, in FDA clinical trials patients taking Guanfacine ER for at least 12 months gained an average of 8 kg in weight compared to placebo. Furthermore, a recent genetic study found that patients on Guanfacine ER who possessed the 1291 C/G polymorphism of the α-2A receptor had severe weight gain compared to subjects who did not have extreme weight gain. This case exemplifies the importance for health care providers prescribing Guanfacine ER to monitor patient growth parameters and provide diet and exercise education to prevent excessive weight gain.

No. 60

An Adopted Child With Interracial Parents: Racial Identity in the Therapy Relationship in 2020

Poster Presenter: Sara VanBronkhorst, M.D., M.P.H.
Co-Authors: Andre Burey, M.D., Cristiane Duarte, Rebecca Rendleman

SUMMARY:
A 13-year-old girl of Sub-Saharan African and Caucasian ancestry, adopted at birth by a Black mother and a White father, presented to the clinic with generalized anxiety disorder, school avoidance, and family conflict. School avoidance began after the patient transferred to a predominantly White, higher-income school. Treatment began with individual therapy for anxiety and family therapy to address family conflict. In individual therapy, the patient attended sessions regularly and without objection, however she spoke little and was hesitant to engage more actively in therapy. She denied any difficulty about being adopted or about being part of a biracial family; gave no reasons for why she avoided school; and minimized family conflict. In family therapy, the patient's father shared that he thought the patient's behaviors were normal, teenage, oppositional behaviors. Her mother attributed the patient's school avoidance to feeling uncomfortable being one of the only students of color in the school. A family genogram, including what was known about the patient's biological parents, was constructed to gain understanding

about how these family dynamics had developed. As the narratives of the genograms unfolded, the effect of racism emerged as a recurrent theme. The mother shared how she and her daughter encountered racism in many aspects of their lives. The father at times disagreed with the mother regarding the role racism in these life experiences. He shared that he had been rejected and shunned by his family when he married a Black woman, but he did not believe racism had impacted his relationships with his wife and daughter. These therapy sessions occurred concurrently with George Floyd's death and the subsequent protests. Exploring family members' reactions to these events further deepened the conversations about racism. Although the patient was resistant to talking about race, she was able to listen to her parents talk about their own racial identities and about how race played a role in how they were chosen as adoptive parents. The patient acknowledged feeling pulled to choose between her parents. The therapists spent time in supervision exploring how the therapists' own races (one Black and the other White) could be influencing the dynamics present in therapy and they talked about this with the family. In this poster, we discuss issues pertinent to the development of racial identity in children growing up in interracial families. We explore the task of integrating two racial identities for these children and how this may differ from the development of racial identity for children where all members are from a non-dominant racial group. We discuss the importance of therapists exploring how their own racial identities and biases affect therapy. Finally, we discuss how interracial adoption can be a part of the process of racial identity formation.

No. 61

Anti N-Methyl D-Aspartate (NMDA) Receptor Encephalitis in Pediatric Patients: A Systematic Review and Analysis of Reported Cases

Poster Presenter: Yam R. Giri, M.B.B.S.
Co-Authors: Sreedevi Damodar, M.D., Allison Parrill, B.Sc., Ijendu Peace Korie, M.D., Nisrin Ayed

SUMMARY:
Background: Anti-N-Methyl-D-Aspartate Receptor encephalitis (anti-NMDARE) is a potentially fatal neuropsychiatric, autoimmune disorder. Previous studies indicate anti-NMDARE affects one out of 1.5 million people per year and is possibly the most common etiology of autoimmune encephalitis [1]. Sixty-five percent of these cases occur in patients less than 18 years of age [2] with a median age of 8.4 years [3]. We aimed to compile the largest pooled analysis examining anti-NMDARE clinical presentation, viral and tumor associations, diagnostic modalities, treatments, and patient outcomes in pediatric patients. Method: We performed a comprehensive literature search of PubMed, PsycInfo, and OVID from January 1, 2000, through December 31, 2019, with search terms "anti-NMDA receptor encephalitis," "anti-NMDA receptor psychosis," "auto-immune encephalitis," and "auto-immune psychosis". We included case reports and case series with anti-NMDAR antibody-positive patients in our pooled analysis. Results: 527 case reports and case series were identified. 208 articles met inclusion criteria comprising 283 pediatric cases total. The mean age was ~10.8 years and three-quarters were female. The most common prodromal symptoms were seizures (29.7%) and (headache 17.7%). Common clinical course symptoms were seizures (63.3%), EPS (63.3%), agitation (52.7%), altered mental state (51.6%), speech abnormality (48.8%), orofacial dyskinesia (44.5%), bizarre behavior (42.8%), psychosis (36.4%) and autonomic instability (33.9%). Viral infection was present in 6.7% and teratoma in 17%. Abnormal MRI and abnormal EEG was present in 34.6% and 41%, respectively. Treatment included steroids (71.7%), IVIG (71%), immunosuppressants (33.9%), plasmapheresis (25.1%) and tumor removal in 15.5%. Patient outcome was full recovery in 40.3%, partial recovery in 32.2%, and death in 1.4%. Multivariate logistic regression analysis found many significant associations, as follows. Delusion was associated with increased odds of abnormal MRI (OR:2.95, 95% CI:1.25, 6.94, p <0.05), while aggressive behavior was associated with decreased odds (OR:0.47, 95% CI:0.23, 0.97, p<0.05). Waxing/waning of symptoms was associated with increased odds of abnormal EEG (OR:2.51, 95% CI:1.20, 5.22, p<0.05). Older age (OR:1.25, 95% CI:1.11, 1.40, p<0.001) and psychosis (OR:3.33, 95% CI:1.39, 7.94, p<0.01) were each associated with increased odds of tumor presence. Sleep disturbance (OR:0.33, 95% CI:0.11, 0.94, p<0.05) and orofacial

dyskinesia (OR:0.37, 95% CI:0.15, 0.94, p<0.05) were each associated with decreased odds for tumor presence. Conclusion: This study further characterized pediatric anti-NMDAR encephalitis and uncovered unique associations. The severity of anti-NMDAR encephalitis may lead to ICU admission and morbidity and mortality in children. Future research and increased clinical suspicion are required to diagnose and treat anti-NMDAR encephalitis appropriately.

No. 62

Association of Cyberbullying With Low Mood and Suicidality in Adolescents: The CDC Youth Risk Behavior Survey

Poster Presenter: Ya-Ching Hsieh, M.D., M.P.H.
Co-Authors: Tapan Parikh, Batool Sheikh

SUMMARY:

Background: Cyberbullying is defined as electronic aggressive behavior intended to cause harm or distress. Prior research has shown low mood and suicidality among bullied individuals. In 2017, 30-33% of middle and high school students reported cyberbullying. Present study examines the association of low mood and suicidality in cyberbullied youths. Method: The data from 1991-2017 CDC National Youth Risk Behavior Surveillance (YRBS) was used to conduct the analysis. Data were extrapolated from the responses to questions in the YRBS related to low mood and suicidality. The respondents' age, sex, grade, race/ethnicity, and the association of cyberbullying with sadness/hopelessness and suicidality were analyzed using adjusted prevalence rates and chi-square tests. The relationship between cyberbullying and other risky behaviors was determined with multivariable survey logistic regression analysis. The association of cyberbullying with sadness/hopeless and suicidality adjusted for age, sex, grade, race, tobacco, alcohol and substance use was modeled. Results: Total of 10,463 adolescents, 14.8% adolescents faced cyberbullying. There is a higher prevalence of cyberbullying in youths aged 15-17 years (25vs26vs23%; p<0.0001), which included more females (68%) to males (32%), p<0.0001. Caucasian ethnicity has the highest number of responses to being cyberbullied at 53% followed by Hispanic 24% then African Americans 11% (p<0.0001). The youths attended grades 9 to 12, almost evenly spread out with slightly more in grade 9 at 29% in comparison to others. There was increased prevalence of cyberbullied youths with feelings of sadness and hopelessness (59.6vs25.8%; p<0.0001) in comparison to non-cyberbullied . Cyberbullied youths also had higher numbers considering suicide (40.4vs13.2%; p<0.0001) and made a suicide plan (33.2vs10.8%; p<0.0001). Furthermore, there were significantly greater number of youths who were not cyberbullied that made no attempts at suicide compared to cyberbullied youths (93.9vs77.3%; p<0.0001). Multiple attempts at suicide were also significantly increased in cyberbullied youths compared to youths not cyberbullied. There are more injury that needed medical attention resulting from attempted suicide in the cyberbullied youths (8.9%) compared to not cyberbullied (1.7%), p<0.0001. On the regression model, cyberbullying had a 155% higher chance of feeling sad and hopeless (OR=2.55, p<0.001). Cyberbullying also had higher odds of suicidality variables amongst the respondents: considered suicide (OR=1.52, p<0.001) and made suicide plan (OR=1.24, p<0.001). Conclusion: Cyberbullying has been associated with negative mental health outcomes, with similar results in our study. The most commonly associated conditions being sadness, hopelessness, suicidality, anxiety, substance use/misuse. Further research is warranted to examine the impact and outcomes of cyberbullying on guiding policies tackling cyberbullying and its consequences.

No. 63

Can Low Dose Sertraline Cause Serotonin Syndrome in Pediatric Patients? Two Case Reports

Poster Presenter: Sultana Jahan, M.D.

SUMMARY:

Background: Serotonin syndrome (SS) is a potentially life-threatening condition associated with increased serotonergic activity in the central nervous system.The true incidence of serotonin syndrome may be underrepresented for a number of reasons. Manifestations of serotonin syndrome may be dismissed or wrongly attributed to another cause; alternatively, clinicians may have a low suspicion for

the condition in the first place. The Hunter Criteria for serotonin syndrome (SS) are fulfilled if the patient has taken a serotonergic agent and has one of the following symptoms: 1) spontaneous clonus, 2) inducible clonus and agitation or diaphoresis, 3) ocular clonus and agitation or diaphoresis, 4) tremor and hyperreflexia, 5) hypertonia, or 6) temperature above 38°C and ocular clonus or inducible clonus Method: Patient A was a 16-year-old Caucasian male with history of major depressive disorder, social anxiety and OCD who presented to the emergency room with multiple complaints: twitching of bilateral cheeks, intermittent tremor of his hands and feet, mental fogginess/confusion, stuttering when attempting to speak, agitation, profuse sweating and headache. 3 weeks prior, his sertraline dose was increased from 25mg daily to 50 mg daily. His physical exam was remarkable for elevated blood pressure and heart rate as well as hyperreflexia noted on patellar reflex testing. No significant abnormalities were noted on routine labs. He was told his symptoms were likely due to medication side effects. The patient was discharged with instructions to decrease his sertraline dose from 50 mg to 25 mg daily and follow up with his outpatient psychiatrist. Subsequently sertraline was tapered off by his out-patient child psychiatrist. After stopping the medication, the patient's symptoms resolved. Patient B was a 16-year-old female with generalized anxiety disorder and major depressive disorder who presented to general pediatric clinic with progressively worsening hand tremors and body shaking since her Zoloft dose was increased from 25mg to 50mg daily. She also felt it was more difficult to hold objects. On physical exam she had an elevated heart rate to 93 and elevated blood pressure to 182/75. Her deep tendon reflexes were 4+ bilaterally. Upon consultation with child psychiatry, the patient was recommended to taper off sertraline. After the discontinuation of sertraline, her symptoms resolved. Result: These 2 patients developed mild to moderate symptoms of serotonin syndrome with low doses of sertraline. Symptoms resolved after the discontinuation of the SSRI. Discussion: In the pediatric patient population, serotonin syndrome can develop even with lower doses of an SSRI. To avoid a missed diagnosis, clinicians should familiarize themselves with the Hunter Criteria for serotonin syndrome. It is also vital to educate parents and caregivers about the toxicities of SSRIs, including serotonin syndrome, so they may monitor treatment and take appropriate action if needed.

No. 64
WITHDRAWN

No. 65
Does Sexual Abuse Affect Suicidality and Psychiatric Illnesses in Post-Traumatic Stress Disorder in Children and Adolescents

Poster Presenter: Pranita Mainali, M.D.
Co-Authors: Fatima Motiwala, M.D., Mahwish Adnan, Shailesh Jain, M.D.

SUMMARY:
Introduction: Sexual Abuse in minors (6-17 years) is a significant public health concern. Before children and adolescents (C/A) turn 18, about 1 in 7 females and 1 in 25 males become victims of sexual abuse in the US (1). Early exposure to sexual abuse is directly linked to a higher suicide intent (2) and the future development of psychopathology in the victims (3). PTSD develops in 30 -50 % C/A sexual abuse victims. Our primary objective was to assess the baseline characteristics of PTSD patients with the history of sexual Abuse (PTSD +S) and compare it with PTSD patients without the history of sexual abuse (PTSD – S). The secondary objective was to evaluate the psychiatric comorbidities and suicidality between the groups. Methods: The National Inpatients Sample (NIS) database (4) was analyzed for the year 2006-2014 using the International Classification of Diseases, Clinical Modification [ICD-9] code of PTSD, and history of sexual abuse. PTSD+S (n= 251) subjects were were compared (PTSD-S, n=24243 using t-test and chi-square test). Univariate and multivariate logistic regression analysis was performed with suicidal behavior (suicidal ideation/attempt) as the outcome variable, PTSD, sexual abuse, gender, age, and other psychiatric comorbid conditions as independent variables. Results: Predominantly nonwhite (52% vs. 42%, p Conclusions: PTSD associated with sexual abuse is associated with a higher risk of comorbid psychiatric illnesses (MDD and Substance use disorder) and suicidal behavior. Further extensive

clinical trials are warranted, which will focus on childhood sexual abuse characteristics that will potentially help develop therapeutic strategies to reduce the risk and severity of psychiatric illnesses and self-harming behavior.

No. 66

Efficacy and Safety of a Dextroamphetamine Transdermal System in the Treatment of Children and Adolescents With ADHD: Results From a Phase 2 Trial

Poster Presenter: Andrew J. Cutler, M.D.
Co-Authors: Katsumi Suzuki, M.S., Brittney Starling, Pharm.D., Kanan Balakrishnan, Pharm.D., Marina Komaroff, D.P.H.

SUMMARY:

BACKGROUND: Amphetamines are a first-line treatment for Attention Deficit Hyperactivity Disorder (ADHD). The Dextroamphetamine Transdermal System (d-ATS) was designed as an alternative to current extended-release oral formulations of amphetamine. OBJECTIVES: To assess efficacy and safety of d-ATS in the treatment of children and adolescents 6-17 years of age with ADHD in the randomized, laboratory classroom study. METHODS: The study was conducted in two periods: a 5 week, open-label, Dose Optimization Period (DOP) and a 2-week, randomized, cross-over Double-Blind Treatment Period (DBP). All eligible subjects started the open-label DOP receiving 5mg/9 hr and were evaluated weekly for possible dose increase to 10 mg/9 hr, 15 mg/9 hr, and 20 mg/9 hr. Once reached, the optimal dose was maintained for the DOP and utilized for the DBP. The primary objective was to assess the efficacy of d-ATS compared to placebo in the DBP as measured by the Swanson, Kotkin, Agler, M-Flynn, and Pelham Scale (SKAMP) total score averaged across post-dose time points. Key secondary objectives were to assess onset and duration of efficacy of d-ATS compared to placebo as measured by the SKAMP total score. A mixed model repeated measures (MMRM) was used for efficacy analysis where evaluation of carry-over effect was addressed. Safety assessments included treatment-emergent adverse events (TEAE), suicidality, ECG, vital signs, physical exam, labs and assessment of dermal safety. RESULTS: 110 subjects were enrolled in the DOP and 106 subjects were randomized in the DBP. In a laboratory classroom setting, subjects receiving d-ATS demonstrated significant improvement relative to placebo in ADHD symptoms as measured by the SKAMP. The difference in Least Squared (LS) means (95% Confidence Interval) of d-ATS versus placebo in DBP was -5.87 (-6.76, -4.97; $p<0.001$). Because of significant carry-over effect ($p=0.009$), the analysis of the first week of DBP: -4.67 (-5.92, -3.42; $p<0.001$) and permutation test ($p=0.008$) was performed that supported the significant effect of d-ATS. The initial onset of efficacy of d-ATS was observed at 2 hours post-dose and lasted through all post-dose time-points up to 12 hours post-dose ($p<0.05$). The most common adverse reactions (incidence ≥2% and greater than placebo) were: decreased appetite, hyperkalemia, headache, insomnia, affect lability, abdominal pain upper, vomiting, and nausea. Three subjects in DOP and none in DBP discontinued due to TEAE. Dermal reactions, including irritation, discomfort and pain, occurred in 25% (27/110) of patients in DOP and 2% (2/106) in DBP, resolved within 4 hours after patch application and did not lead to discontinuation. CONCLUSION: d-ATS is efficacious for the treatment of ADHD in children and adolescents and met both its primary and key secondary endpoints. d-ATS was safe and well tolerated, showing a similar systemic safety profile to oral amphetamines. This study was supported by Noven Pharmaceuticals, Inc.

No. 67

Electroconvulsive Therapy in Children and Adolescents: A Case Series and Perspective on Treatment Recommendations

Poster Presenter: Brent R. Carr, M.D.
Co-Author: Srinath Gopinath, M.D.

SUMMARY:

Electroconvulsive therapy (ECT) is a well-tolerated and efficacious treatment modality in adults. Practitioners substantially differ in their practice of using ECT as a first-line treatment and often it is used as a “last-line resort” when other trials fail. ECT in children aged 4-12 years old dates to 1942 when Lauretta Bender used it as a treatment modality at Bellevue Hospital, NY. Evidence base for ECT in

children and adolescents (referred as pediatric ECT in the current context) consists of case reports, case series and chart reviews mostly. American Academy of Child and Adolescent Psychiatry have developed criteria for use of ECT this population. Pediatric ECT is indicated for a variety of disorders including mood disorders, catatonia and severe self-injurious behaviors associated with severe intellectual disability or autism spectrum disorders. A systematic review by Rey and Walter (1997) showed that about 80% children with depression and 63% children with mania improved when treated with ECT, while in the treatment of psychotic disorders, ECT is mostly used as an adjunct treatment. Furthermore, remission rates have shown to be improved with continuation ECT. Pediatric ECT in children has not been without controversies. The American Psychiatric Association has over the years given up its efforts to tightly regulate the indications and procedure for pediatric ECT. Currently, there are still many gaps in Pediatric ECT research for many reasons. We aim to describe 10 adolescents who were aged between 11-18 with diagnoses including major depressive disorder, and severe self-injurious behaviors in autism spectrum disorder who underwent index and continuation ECT at University of Florida with varying outcomes. These patients were admitted to the inpatient child and adolescent unit and after failing adequate trials, they were treated with ECT. We present these cases to demonstrate the successes or the lack thereof of ECT. While ECT is an established and time-tested treatment modality, there are many unidentified factors influencing the short-term and long-term outcomes. We aim to expand on some of these variables with our current case-series.

No. 68

Exploring the Outcomes of System Supports for Youth With Mental Illness and/or Addictions and Their Families: A Randomized Controlled Trial

Poster Presenter: Andreina Da Silva
Lead Author: Anthony Levitt
Co-Author: Roula Markoulakis

SUMMARY:

Background. Youth mental health and addiction (MHA) issues can be a source of strain across the whole family. Caregiving for an individual with MHA can be more stressful than other caregiving roles, with a main source of this stress being finding MHA related services. Family navigation is a model of care that aims to guide families and patients through this system and reduce barriers to accessing timely care. At present, no randomized controlled trials (RCT) exist that investigate outcomes of navigation for youth with MHA concerns and their families. The current RCT was designed to examine whether families of youth ages 13-26 with MHA concerns who receive Navigation services experience improved clinical outcomes compared to families who interact with the MHA care system on their own. Methods: A total of 65 caregivers of youth (ages 13-26) with MHA issues were recruited in the pilot trial, with a planned recruitment target of 180 caregivers. Participants were randomly assigned 1:1 to one of two conditions: Family Navigation condition (FN), or the Self-Navigation condition (SN), in which participants were provided with a website listing various services. Participants were not aware of the alternative group condition. Navigators at the Family Navigation Project were unaware of client participation in the study. Clinical outcomes were assessed through the Caregiver Strain Scale, Family Satisfaction Scale, and the Symptoms and Functioning Severity Scale. Participants also completed service utilization questionnaires. Results: The pilot trial was designed to determine sample size requirements for the larger trial. Nonetheless, preliminary findings using ANOVA (N=51), comparing mean change in caregiver strain, youth functioning and service utilization across the two experimental groups indicated that caregivers in the FN condition experienced a greater reduction in days of lost productivity (M= 4.18, M= 2.11), as compared to caregivers in the SN condition (M= 2.18, M= 2.23), (F (1,42)=.54, p = .46). Days of lost productivity for caregivers in the FN condition reduced by 49.5%, while for caregivers in the SN condition, days of lost productivity increased by 2.1%. Caregivers in the FN condition showed a greater reduction in total money spent in accessing services (M= 380.53$, M= 210.71$; 44.6%). Caregivers in the SN condition's total money spent in accessing services increased (M= 663.59$, M= 664.81$; .2%), (F (1,42)=2.83, p = .10). Findings from the larger trial on group differences on clinical outcomes between experimental groups will be

presented. Conclusion. A sample size of 180 is adequate for a larger trial, with 90 participants allocated per condition. The pilot RCT suggests that navigation may potentially aid families in reducing days of lost productivity, and money spent accessing services.

No. 69

Necessity of Routine EKGs in Patients Admitted to the Child Psychiatry Inpatient Unit: A Retrospective Study

Poster Presenter: Faryal Mallick, M.D.
Co-Authors: Samar Abdel-Jabbar, M.D., Kishan Nallapula, M.D.

SUMMARY:

EKGs are common for patients admitted to child psychiatry inpatient units. The literature suggests that routine diagnostic testing generally is low yield, costly, and unlikely to be of value or affect the disposition or management of psychiatric patients. Current APA guidelines recommend obtaining EKG and serum potassium level before use of thioridazine, mesoridazone or pimozide, and ziprasidone when cardiac risk factors present. The American College of Emergency Physicians indicates that when the patient is clinically stable (alert, cooperative, normal vital signs, with noncontributory history and physical examination and psychiatric symptoms), routine laboratory testing need not be performed as part of the emergency assessment. At a standalone psychiatric hospital, the standard protocol of admission orders included lab work and EKG on all admissions. On the basis of a study, this was changed to obtaining EKGs only for high risk patients. Data on all pediatric admissions to UF Health Shands Psychiatric Hospital during October 2019 was obtained utilizing University of Florida Business Analytics Team. The following data points were extracted: total EKGs, number of abnormal EKGs, patients on medication upon admission, patients started on medications during admission, history of cardiac disease, and history of stimulant use. Preliminary data was reviewed for the purpose of this abstract. Our final result will include a comparison of two months of data. Preliminary analysis included 81 admitted pediatric patients. Of those, 74 received EKGs, with 55 being confirmed by pediatric cardiology. There were 22 confirmed abnormal EKGs, most of which were clinically insignificant (sinus arrhythmia, sinus bradycardia, etc.). Two of the abnormal EKGs were significant (Partial RBBB and Right Bundle Branch Block). The patient that had a partial Right Bundle branch block also had a history of a heart murmur, was worked up further with an echocardiogram. The other patient was discharged without further workup. Of note, a patient with prior cardiac workup of syncope had a normal EKG that was never confirmed by cardiology. Another patient with a congenital heart defect had an abnormal EKG with ST elevation that was not confirmed by cardiology. Two out of the confirmed 55 EKGs that were obtained during the month of October required further cardiac workup or any change to patient''s management. Only one out of these two (who also had history of cardiac illness) resulted in any actual change in workup. We preliminarily conclude that routine EKGs upon admission to inpatient child psychiatric unit are clinically irrelevant and an unnecessary burden on cardiology.

No. 70

Parent-Adolescent Agreement: Impact on Depression and Anxiety Symptoms in an Inpatient Psychiatric Hospital

Poster Presenter: Tiffany T. Tran, B.S.
Co-Authors: Megan E. Rech, Katrina Rufino, Ph.D.

SUMMARY:

Gathering data from multiple informants is important in the assessment of child and adolescent psychopathology (De Los Reyes, 2013). In general populations, it has been shown across multiple societies that the level of agreement between parent and child total problem scores is low to moderate and children tend to report more problems than their parents (De Los Reyes et al., 2015; Rescorla et al., 2013). However, among clinical samples, parents have been shown to report more problems than their children (Salbach-Andrae et al., 2009). Past research has found that adolescents who report more internalizing problems than their parents have a poorer prognosis and are subject to more adverse outcomes later in life (Ferdinand et al., 2004). Previous studies have suggested that the type

of adverse outcomes may be predicted based on whether the parent or adolescent reports more problems (Ferdinand et al., 2006). The current study examined the direction and degree of parent-adolescent agreement and its influence on treatment outcomes among an adolescent clinical sample. Participants were 197 adolescents admitted to an inpatient psychiatric hospital (57.4% female; $M = 15.45$ years). Emotional and behavioral problems were assessed at admission using the Child Behavior Checklist (CBCL; parent-report) and Youth-Self Report (YSR). Changes in depression and anxiety symptoms from admission to discharge were measured using the Beck Depression Inventory for Youth (BDI-Y) and Beck Anxiety Inventory for Youth (BAI-Y), respectively. Consistent with previous studies, poor agreement (ICC = 0.28) was found between the parent and youth report of total problems. Parent-adolescent (dis)agreement was categorized into three groups based on the direction and degree of the scores: (1) parent score (P) $<$ adolescent score (Y), (2) $P \approx Y$, and (3) $P > Y$. A one-way ANOVA compared progress in treatment based on agreement groups and found a significant difference between groups on the BDI-Y [$F(3, 193) = 4.8$, $p = .001$] and BAI-Y [$F(3, 195) = 7.17$, $p < .001$]. Post-hoc comparisons using the Tukey HSD test revealed a significant difference between the mean BDI-Y change scores of the $P < Y$ ($M = 15.50$, $SD = 11.61$) and $P > Y$ ($M = 6.73$, $SD = 11.51$) groups. A significant difference was also found between the mean BAI-Y change scores of the $P < Y$ ($M = 15.00$, $SD = 12.48$) and $P > Y$ ($M = 4.86$, $SD = 11.21$) groups. Overall, results indicate that adolescents who report more emotional and behavioral problems than their parents report the greatest improvement in depression and anxiety symptom scores from admission to discharge. Adolescents who report fewer total problems than their parents report the least amount of improvement in symptom scores throughout treatment. These results provide further evidence of the relationship between parent-adolescent agreement and prognosis and suggest that severity and directionality of disagreement may serve as a predictor of treatment outcomes.

No. 71

Personalized Mental Health Care Using GeneSight Testing in Child and Adolescent Psychiatry Clinics

Poster Presenter: Anjali Dagar, M.B.B.S.
Co-Authors: Suneela Cherlopalle, Tatiana A. Falcone, M.D.

SUMMARY:

Background The availability of GeneSight pharmacogenomic testing allows the selection of psychotropic medication based on an individual's genetic profile. As the GeneSight test's use becomes prevalent, we need systematic analysis of the real-world experiences of utilizing it in routine clinical care. The objective of our study is to evaluate the changes in medication management, side effects, and clinical outcomes after GeneSight testing in routine clinical practice of children and adolescents at a tertiary care psychiatry practice. **Methods** After IRB approval, we used our prospectively maintained database of patients undergoing GeneSight testing in the Cleveland Clinic child and adolescent psychiatry clinics. We reviewed electronic medical records (EMR) of all these patients. We included children and adolescents with psychotropic medications data at the time of testing and on a clinic visit before and 8-weeks after the testing. We calculated the Clinical Global Impression (CGI) scores for baseline (GeneSight sent) and 8-weeks follow-up visits. Descriptive statistical tools were used. The differences in CGI scores were computed using a one-sample t-test. **Result** GeneSight test was performed on a total of 370 patients. Based on inclusion criteria, 281 (75.9%) of the 370 patients, with a mean age of 15.8 ± 4.5 years (111 females; 39.5%), were included in the study. The number of medications on the visit prior to sending GeneSight was 2.1 ± 1.1 and increased to 2.4 ± 1.2 on the visit after the test. The study population showed a significant improvement ($p<0.001$) in the CGI severity, efficacy, and global improvement indices. The study population could be divided into three categories based on changes in medications: addition group (123; 43.7%); replacement group (92; 32.7%), or no-change group (66; 23.5%). Medication side effects were reported by 21 (17.1%) patients in the addition group, 11 (12%) in the replacement group, and 6 (9.1%) patients in the no-change group. **Conclusion** Our initial analysis of a real-world clinical

experience of GeneSight test use in a large cohort of children and adolescents reveals that it impacts medication management in three-quarter of them without clear benefits in side effect profile. However, the study population showed an overall improvement in clinical outcomes during follow-up. Our on-going analysis of factors influencing the choice of management change, and the specific medications used would shed more light on the promise of GeneSight in improving clinical care.

No. 72

Psychiatric Diagnoses and Gender Differences Associated With Pre-Adolescent Nonsuicidal Self-Injury

Poster Presenter: Erin O'Keefe
Co-Authors: Michelle Miller, Nicole McLaughlin, Ph.D.

SUMMARY:
Background: Nonsuicidal self-injury is increasingly common among adolescents and up to 50% of adolescents who self-harm do not seek help for this behavior. As the age of onset for nonsuicidal self-injury continues to decrease, a younger population of self-harming individuals may further rely on the adults in their life to identify and address self-harm behavior. However, there is little research on potential identifying characteristics, such as psychiatric diagnoses, of pre-adolescent self-harm behavior. This study examines the prevalence of various psychopathology in female and male pre-adolescents who currently self-harm. Method: Data was obtained from Version 2.0 of the Adolescent Brain Cognitive Development (ABCD) study released in 2019, funded by the National Institutes of Health. The ABCD study used a school-based recruitment strategy to recruit over 11,000 nine and ten-year-old children at twenty-one various sites across the United States. Current and past symptoms of mood, anxiety, psychosis, and disruptive behaviors were measured via the Kiddie Schedule for Affective Disorders and Schizophrenia Present and Lifetime Version (K-SADS-PL) for DSM V. Chi-squared tests were used to compare the prevalence of psychiatric disorders among participants who were currently self-harming to participants with no history of self-harm and to compare the prevalence of psychiatric disorders between boys and girls who currently self-harm. Results: 182 participants met diagnostic criteria for current nonsuicidal self-injury (42.9% female, 57.1% male) , with 68% of those meeting diagnostic criteria for a psychiatric disorder before they started self-harming. Among those meeting diagnostic criteria for current nonsuicidal self-injury, there was a significantly higher prevalence of attempted suicide (X2(1, N=11,426)=113.51, p<.0001), as well as both past and present: (1) Attention Deficit Hyperactivity Disorder (X2(1, N=11,426)=121.88, p<.0001); (2) Obsessive Compulsive Disorder (X2(1, N=11,426)=77.38, p<.0001), (3) Oppositional Defiant Disorder (X2(1, N=11,426)=122.39, p<.0001); (4) Conduct Disorder (X2(1, N=11,426)=179.02, p<.0001); (5) General Anxiety Disorder, (X2(1, N=11,426)=158.38, p<.0001); (6) Specific Phobia (X2(1, N=11,426)=5.673, p=.02), (7) Separation Anxiety (X2(1, N=11,426)=80.64, p<.0001); and (8) Major Depressive Disorder (X2(1, N=11,426)=201.99, p<.0001) as compared to those with no history of nonsuicidal self-injury. Among males currently self harming, there was a significantly higher prevalence of lifetime MDD (X2(1, N=11,426)=8.40, p<.0037), Conduct Disorder (X2(1, N=11,426)=6.47, p<.0109), OCD (X2(1, N=11,426)=4/04, p=0.0444), and Suicidal Ideation X2(1, N=11,426)=4.172, p=0.0411), but not suicide attempt. Conclusion: Considering past or present psychiatric diagnoses and gender may aid clinicians and parents in identifying pre-adolescents who are currently self-harming or at risk of developing self-harm behaviors in pre-adolescence.

No. 73

Quality Improvement on Prevalence of Four Point Restraints in Child and Adolescent Unit in an Inner City Hospital After Intervention With Medications

Poster Presenter: Monika Gashi, M.D.
Co-Authors: Jose Arturo Sanchez-Lacay, M.D., Marilena Adames-Jennings, M.D.

SUMMARY:
During any admission across the child and adolescent psychiatry first 72 hours are the most challenging. This is phase three of a quality improvement study reviewing the implementation of the as needed medications (PRN) to determine if this

resulted in a decrease number of restraints among child and adolescent population and minimizing the need of restraints for children <9 years old. Evaluation of four point restraints after the intervention of PRN medications, phase three. During the first and second phase it was noted that 4 point restraints were highest among children 8 years or younger on an inpatient unit, while highest prevalence of 4 point restraints in psychiatric ER was among adolescents, once the introduction of PRN medications was done, it was noted that restraints decreased from 20% to now less than 12%. Method: This study was a retrospective study, approved by the Institutional Review Board (IRB). Revision of admissions during a seven month period (January 1st-July 31, 2020) to our child and adolescent emergency room (comprehensive psychiatric emergency program (CPEP), and inpatient psychiatric units were evaluated. Revision of the completed orders of physical holds, seclusions or restraints in 8 years or less and Seclusion and Restrains 9-17 years of age, medications administered, before during and or after the restrains, any as needed medications present. Results: During the January to July month periods, there were 148 admissions reviewed, less than 12% of patients necessitated seclusion/restraint or physical hold. The total numbers of orders entered and completed were 50. Noting 80% use of the orders in inpatient unit; while 20% in ER unit. Restraints being less than 40% for group age of 9-17 years old in inpatient unit. The outlier patients that were an imminent danger of self and others necessitating seclusions, restraints and physical holds were 17 patients; with predominance of males 2.5:1 ratio of male to female. The outlier patients' diagnosis encompass: ADHD, DMDD, Conduct disorder, Schizophrenia and intellectual disability. Conclusion: It is noted that both seclusions and restraints in children less than 9 years of age have diminished drastically in comparison to the previous phases, while physical hold has increased. Seclusion among 9-17 years is used more frequently than four point restraints in this particular patient population. In comparison to phase 2, restraints in inpatient unit have decreased from 66.7% to 37.5%. It is recommended that preventive crisis management situation continues to evolve, utilization of PRN medications, obtaining consents from the legal guardians to prevent utilization of seclusions/restraints and physical holds.

No. 74

Subthreshold Manic Symptoms (Sleep Disturbance and Irritability) and Response to Lurasidone in Children and Adolescents With Bipolar Depression

Poster Presenter: Manpreet Singh, M.D.
Co-Authors: Cynthia Siu, Ph.D., Michael Tocco, Ph.D., Andrei A. Pikalov, M.D., Ph.D.

SUMMARY:

Background: The objective of this post-hoc analysis was to investigate the effect of baseline mixed depression and subthreshold manic symptoms, specifically sleep disturbance and irritability, on overall response to lurasidone in children and adolescents with bipolar depression in a 6-week acute double blind placebo controlled trial followed by a 104-week open-label extension study. Methods: 10–17 year old youth with a Diagnostic and Statistical Manual of Mental Disorders, 5th ed. (DSM-5) diagnosis of bipolar I depression were randomized to 6 weeks of double-blind treatment with once-daily flexible doses of lurasidone 20–80 mg or placebo, followed by a 104-week open-label treatment extension with lurasidone. The effects of sleep disturbance (YMRS 4) and irritability (YMRS 5) on overall response to lurasidone treatment were evaluated using MMRM and logistic regression methods. Results: A total of 182 (53.1%) patients had "decreased need for sleep" (YMRS item 4 > 0) and 288 (84.0%) had "irritability" (YMRS item 5 > 0) at pre-treatment acute study baseline. LS mean changes in sleep disturbance symptoms (YMRS item 4) and depression (CDRS-R item 4, "sleep disturbance") at week 6 were significantly greater for lurasidone compared to placebo ($p<0.05$). Moderator analysis showed that the baseline presence or absence of "decreased need for sleep " or "decreased need for sleep " combined with "irritability" predicted response to lurasidone (vs. placebo) treatment as assessed by LS change in CDRS-R total score and global functioning (CGAS) at week 6 (all Ps< 0.05). Treatment with lurasidone was associated with continued improvement in "decreased need for sleep" and "irritability" symptoms as well as the overall CDRS-R score and

CGAS score over the 104-week open-label extension study. The absence of sleep disturbance and irritability symptoms at week 6 (extension study baseline) was associated with higher rates of recovery (symptomatic remission CDRS-R 71) (77.4% vs. 57.8%, NNT=6, P<0.05. Conclusion: Results from this post-hoc analysis suggest that in children and adolescents with bipolar depression, the co-occurrence of specific manic symptoms (sleep disturbance and irritability) at baseline may be associated with acute and long-term treatment response to lurasidone. This study was supported by Sunovion Pharmaceuticals, Inc.

No. 75
Teacher-Delivered Child Mental Healthcare in Primary Schools of the Darjeeling Himalayas: A Mixed Methods Feasibility Study
Poster Presenter: Christina Melissa Cruz, M.D., Ed.M.
Co-Authors: Molly Lamb, Priscilla Giri, Michael Matergia

SUMMARY:
Background: The mental wellbeing of children is an important global health issue. With 20% of all children facing a significant mental health challenge and few trained mental health providers, innovative models are urgently needed to support these children. Methods: We conducted a single-arm mixed-methods study to assess the feasibility of teacher-delivered mental health care in a low-resource setting of India. In a task-shifting intervention (Tealeaf-Mansik Swastha), teachers provided evidence-based mental health care to school-aged children identified with mental health challenges. Results: Twenty teachers and 42 students in 5 primary schools of the Darjeeling Himalayas, India, participated in this study. Coverage rates for intervention activities were greater than 80% and the proportion of teachers meeting quality benchmarks for these activities ranged from 72 to 100%. However, time devoted to intervention activities (mean 19 minutes/week) was less than anticipated. On teacher assessment via the ASEBA Teacher Report Form (TRF), children showed reduced mental health scores at endline (mean 60.09 percentile, standard error [SE] 4.98) compared to baseline (mean 77.51, SE 3.47) suggesting improvement in mental wellbeing. There was a significant correlation (Pearson correlation coefficient 0.45, P=.009) between teachers' time spent on intervention activities and children's mental health outcomes. Teachers identified barriers such as a lack of dedicated professional time and real-world application of techniques learned in training. Key facilitators included the flexibility to adapt intervention activities to fit their school days and the availability of coaching and support. Conclusion: Findings of this study support the feasibility of task-shifting children's mental healthcare to classroom teachers in resource-limited primary schools. Although intervention activities were limited by a lack of available time, teachers were able to deliver care with fidelity, and this was associated with improvement in children's mental health. Continued innovation and research around teacher-delivered mental health care has the potential to improve the life trajectories of children with mental health challenges in low-resource settings.

No. 76
The Dilemma of Conversion Disorder or Stiff Person Syndrome: A Case Report
Poster Presenter: Sultana Jahan, M.D.

SUMMARY:
Background: Many patients are referred to psychiatrists to treat psychogenic illnesses. The main objectives of this case study are: 1. to emphasize that clinicians should maintain a wide differential diagnosis despite a history consistent with conversion disorder, 2. to Increase awareness about rare neurologic conditions may appear as psychogenic illnesses; 3. to remind clinicians to be advocates for their patients. Conversion disorder is a mental condition In which a person presents with one or more symptoms of altered voluntary motor or sensory function, or other neurologic symptoms that can not be explained by medical evaluation. Stiff Person Syndrome (SPS) is a rare disabling autoimmune central nervous disorder characterized by progressive muscle rigidity, gait impairment with superimposed painful spasms. SPS is commonly associated with high anti-glutamic acid decarboxylase (GAD) antibody titers.The dominant

antigen recognized by these antibodies is the GABA-synthesizing enzyme GAD. Method: Patient X, a 17-year-old Hispanic female, presented to the child and adolescent psychiatry outpatient clinic with the complaint of ataxia and aphasia associated with anxiety. The patient was referred by the neurology clinic after no organic cause of her ataxia or aphasia was identified. After through psychiatric evaluation at the child psychiatry clinic, she was given diagnosis of anxiety secondary to the ataxia and aphasia and "rule out" conversion disorder. She was initiated on treatment with Sertraline for her anxiety. Over several months her Sertraline dose was increased gradually up to 100mg daily. From the beginning patient received counseling as well as physical therapy. However, despite these treatments, the patient''s symptoms worsened rather than improved. At this point, child psychiatrist sent a message to the neurology clinic for further evaluation of the patient due to her progressive gait and speech impairments. Results: The patient was seen again in neurology clinic and further testing was performed. The patient was positive for high titers of anti-glutamic acid decarboxylase antibodies (Anti-GAD). At that time, the patient was given diagnosis of "Stiff Person Syndrome". The patient was hospitalized for further management. She was treated with benzodiazepines, intravenous immune globulin (IVIG) as well as steroids. Soon after being discharged from the hospital, the patient was seen at the child psychiatry clinic. Per patient''s mother, the patient''s symptoms had improved. Conclusion: It is essential that clinicians look for neurologic and other medical conditions while evaluating a patient with possible conversion disorder. Childhood-onset SMS is a rare but underrecognized disorder in child neurology practice.The above history emphasizes the importance of a careful second look at this complex illness.

No. 77

The Impact of Parental Substance Use History on Reward Processing in the Adolescent Brain

Poster Presenter: Amy E. Kwarteng
Co-Authors: Muhammad Rahman, Ph.D., Brenda Curtis, Ph.D.

SUMMARY:
Background: Substance use research has focused on family history of alcohol abuse but has not adequately addressed other abused substances. The present study examined how parent history of alcohol (ALC) and drug problems affect reward processing in pre-adolescents. **Methods**: Publicly released data from the Adolescent Brain Cognitive Development Study Data Release 2.0 (N = 11,875) were examined. The current study included participants with usable fMRI data from the Monetary Incentive Delay Task and data regarding parent substance use history. Participants were denoted as parent history positive (PH+) if they had at least one parent with two+ problems with ALC (n = 741) and/or drugs (n = 638). Of the participants who were parent history negative for ALC and/or drugs (PH-), a stratified random sample based on six sociodemographic variables was created and matched to the PH+ group (FHN ALC n = 699; FHN drugs n = 615). The contrast of interest was all anticipation of large reward vs. neutral response, and the analyses focused on activation within the left/right nucleus accumbens (NAcc) and left/right putamen (Pu). Analyses were conducted using the Pandas package in Python. **Results**: There was a significant main effect of parent history of ALC problems on right NAcc activation, $F(1, 1440) = 3.98$, $p = 0.046$, R-squared < .01, $\omega^2 = 0.002$. Participants who were PH+ for ALC problems showed increased activation in the right NAcc during the anticipation of large rewards ($M = 0.100$, $SD = 0.36$) relative to PH- participants ($M = 0.064$, $SD = 0.33$). In contrast, there was a non-significant main effect of parent history of ALC problems on left NAcc, $p = 0.278$, right Pu, $p = 0.131$, and left Pu, $p = 0.478$, activation during the anticipation of large reward trials. The effect of parent history of drug problems on left Pu activation during the anticipation of large rewards was significant, $F(1, 1253) = 4.12$, $p = 0.043$, R-squared < .01, $\omega^2 = 0.002$. PH+ participants showed enhanced left Pu activation during the anticipation of large reward trials ($M = 0.07$, $SD = 0.21$) compared to PH- participants ($M = 0.05$, $SD = 0.23$). Conversely, there was a non-significant main effect of parent history of drug problems on activation in the right Pu, $p = 0.074$, right NAcc, $p = 0.991$, and left NAcc, $p = 0.243$, during the anticipation of large rewards. **Conclusion**: Results from the present study demonstrate that

pre-adolescents who are PH+ for ALC problems show enhanced activation in the right NAcc during the anticipation of large rewards compared to PH- pre-adolescents. This effect, however, is not seen in other areas of the brain implicated by drugs of addiction, namely the left NAcc and the Pu. In addition, pre-adolescents who are PH+ for drug problems only show increased activation in the left Pu relative to their PH- peers. These findings suggest that pre-adolescents who are PH+ for substance-related problems process rewards differently relative to their PH- peers.

No. 78

The Relationship Between Obesity and Mood Disorders in Children: A Systematic Review

Poster Presenter: Sayeda Basith, M.D.
Co-Authors: Farhana Zaman, Sivaranjani Ayyanar, M.B.B.S., Ijendu Peace Korie, M.D., Marusa O. Obele, M.B.B.S., M.P.H.

SUMMARY:
Background: The prevalence of childhood obesity has been on the rise from 13.9% in 1999-2000 to 18.5% in 2015-2016. According to the Centers for Disease Control and Prevention (CDC), obesity is not only known to increase risk for serious health issues, but also has been shown to be "related to psychological problems such as anxiety and depression, low self-esteem and lower self-reported quality of life, and social problems such as bullying and stigma" (1). Objective: We aim to explore the nature of the relationship between obesity and mood disorders in children. Methods: A systemic literature search from 2000-2019 was conducted using three databases (PubMed, OVID, and Psychinfo). The following search terms were used as inclusion criteria: childhood/adolescents, obesity, mood disorders. Exclusion criteria included: adult obesity, eating disorder, drug pharmacology, gut flora. Screening was performed by two independent researchers. Initially, 5,963 articles were obtained from our search, of which 283 met criteria. Discussion: One 2019 meta-analysis that looked at 11 studies with 17, 894 subjects showed that there is a greater prevalence of depression and anxiety symptoms in overweight/obese children/adolescents than in their non-overweight counterparts, suggesting a one directional relationship (2). Conversely, other studies propose a bidirectional relationship (obesity preceding a mood disorder or a mood disorder preceding obesity). A study on BMI, waist circumference, and the development of depression two and six years later suggested that adolescents with higher BMI are at greater odds of developing depression (3). Another study in favor of this direction is the study by Gomes, A. P and Soares that explored the relationship between adiposity, major depressive disorder (MDD), and generalized anxiety disorder (GAD) over 18 and 22 years. This study suggested that while there is a strong relationship for obesity preceding depression, there was no association between adiposity and GAD (4). Conversely, there is a stronger strength of association of depression preceding obesity in a study by Korczak et al. However, they also acknowledged the presence of bi-directionality. Additionally, they looked at gender differences and found a stronger strength of association for females as compared to males (5). Furthermore, another study showed that bi-directionality was stronger for females in young adulthood as opposed to late adolescence (6). Conclusion: The reviewed articles provide initial evidence that a relationship exists between obesity and mood disorders which impacts children. We hope to highlight the nature and contributory key elements of this relationship, identify significant risk factors in the pediatric population, and aim to make recommendations for early intervention.

No. 79

The Silent Epidemic: Increases in Child Abuse and Neglect in the Aftermath of Natural Disasters and Pandemics

Poster Presenter: Laura Thompson, M.S.
Co-Authors: Diana Clarke, Ph.D., M.Sc., Tami D. Benton, M.D., Nitin Gogtay, M.D., Jonathan E. Alpert, M.D., Ph.D.

SUMMARY:
The effects of climate change influence the intensity and frequency of extreme weather events as well as the emergence of pandemics. Damage is typically calculated in human casualties and economic terms however, child maltreatment, including neglect,

physical, sexual, and psychological abuse, is an underemphasized negative health outcome of events associated with climate change. Known risk factors for child maltreatment in normal settings are exacerbated following natural disasters. This year, the effects of natural disasters will be compounded as the COVID-19 pandemic endures across the US. Welfare organizations have seen a considerable decrease in reports of child maltreatment since the onset of the COVID-19 pandemic. It is unlikely that this drop is due to a decrease in incidence, but rather a consequence of community center and school closures resulting in a diminished opportunity for professionals to detect and intervene in cases of suspected maltreatment. With many school districts transitioning to online instruction, a vital link between reporters and victims has been broken. Stay-at-home orders, isolation, and other measures meant to combat the spread of COVID-19 may put children at an increased risk of violence by limiting the ability for individuals outside of the household to detect and report cases of maltreatment. This ecological study uses secondary population-based datasets to examine trends in child maltreatment in the aftermath of major natural disasters. The National Child Abuse and Neglect Data System (NCANDS) Child File datasets, which contain case-level data on demographics of children and perpetrators, types of maltreatment, report date and source, risk factors for children and perpetrators, and the state and country were the report was made will be used to identify incidence of child maltreatment. Data from the Federal Emergency Management Agency (FEMA) is used to identify major natural disasters. Only major natural disasters such as storms that received the Major Disaster Declaration according to FEMA are categorized as events for the study. In addition, data from the Centers from Disease Control (CDC) COVID-19 Case Surveillance Public Use Data is used to analyze the number of COVID-19 cases across regions. The study utilizes a difference-in-differences analytic approach (separate analyses) to examine the impact of major natural disasters and pandemics on the incidence of child maltreatment reports. Time periods of interest include one year prior to and 4, 6, and 12 months after the event. Geomapping is also used to illustrate the potential impact of climate change on child maltreatment. Child maltreatment presents a considerable cost to society and is a significant risk factor for negative outcomes in throughout the lifespan. It is paramount that we understand the trends in child maltreatment following natural disasters and pandemics to ensure prompt reporting, intervention, and preventative measures can be implemented.

No. 80

Association Between Adverse Childhood Experience (ACE) and Cognitive Decline in the BRFSS Survey Participants

Poster Presenter: Darshini Vora, M.D.
Co-Authors: Chintan Trivedi, Gaurav Chaudhari, Preetam Nallu Reddy, M.D., Shailesh Jain, M.D.

SUMMARY:
INTRODUCTION Adverse Childhood Experiences (ACEs) are adverse events posing a significant threat to optimal development and functioning in adulthood. ACE's can disrupt several critical cognitive functions, such as threat processing, reward processing, emotional regulation, and executive functioning (1). In this study, we aim to study the impact of ACE's on Cognitive Decline during adulthood. **METHODS** ACE's were stratified into eight domains (emotional abuse, physical abuse, sexual abuse, household mental illness, household substance abuse, domestic household violence, parental divorce/separation, and incarcerated household member) (3) in the 2015 Texas Behavioral Risk Factor Surveillance System (BRFSS) survey (2). In addition, data was obtained on subjective cognitive decline (SCD) for those ≥ 45 years of age. Logistic regression analysis was used to assess the association between ACE's and SCD. Odds ratio (OR) and 95% confidence interval (CI) were used to present the association. **RESULTS** A total of 2900 adult patients (mean age: 60.9 years, male: 46%) were analyzed. Almost half (50.5%) of the patients had experienced at least one ACE. The most common ACE was substance abuse (22.4%), followed by parental divorce/separation (20.9%). The prevalence of SCD in those having at least one ACE was significantly higher than those with no ACE's (16.5% vs. 8.0%, $p < 0.001$). SCD was also found to be correlated with the number of ACE's ($p<0.001$). Adjusting for socio-demographic factors, those with

at least one ACE had higher odds of SCD (OR: 2.31, 95% CI 1.54-3.47) compared to those with none. An ACE score of ≥ 5 was associated with almost three times the odds of subjects reporting SCD compared to those without ACE (OR: 2.99, 95% CI: 1.53-5.86). **CONCLUSIONS** Compared to those who did not experience any ACE, those with at least one ACE reported significant SCD in later adulthood. This suggests a strong positive association between ACE and subsequent cognitive decline. This finding should be replicated in a larger population while controlling for confounding factors.

No. 81

Associations Between Coccidioidomycosis and Depression in a Community Clinic

Poster Presenter: Chandan K. Samra, M.D.
Co-Author: Matthew Louie

SUMMARY:

Background: Coccidioidal infection or "Valley Fever" is common to endemic regions, including the California, Arizona, Nevada, New Mexico, Texas, Utah and Northern Mexico with approximately 100,000 new infections each year. Although spontaneous recovery of primary Coccidioidal infection is most common, chronic and disseminated infections occurs in 3-5% of those infected and can have debilitating consequences on patients. Many chronic medical conditions increase the risk of subsequent depression and worsen the prognosis of medical comorbidities. n this pilot study, we investigate the prevalence of depression among patients with Coccidioidal infections in our community clinic. **Methods**: The study was conducted in the endemic area of Bakersfield, California. 273 outpatients completed a CES-D (Center for Epidemiologic Studies – Depression) scale which was used to measure depression in both Coccidioidal infected patients and control patients. All Coccidioidal patients were further divided into isolated pulmonary disease and disseminated disease. Case-control analysis (odds ratios) were calculated for all Coccidioidal disease, isolated pulmonary Coccidioidal disease, and disseminated Coccidioidal disease. **Results**: The prevalence of depression in controls was 39.53%. When case was defined as all Coccidioidal disease, the prevalence of depression was 55.88% with an odds ratio of 1.795 (p=0.0090). was defined as isolated pulmonary Coccidioidal disease, the prevalence of depression was 52.54% with an odds ratio of 1.6933 (p=0.0830). Finally, when case was defined as disseminated Coccidioidal disease, the prevalence of depression was 59.52% with an odds ratio of 2.2491 (p=0.0209). Using a CES-D cut off score of 20 for depression instead of 16, yielded similar prevalence and odds ratios while maintaining statistical significance. **Conclusion**: The prevalence of depression in patients with Coccidioidal infections is high. Depression is an often-overlooked comorbidity of chronic disease. Improving depression may potentially improve adherence to treatment as well as improve quality of life. Our findings suggest that using a CES-D cut-off score of 20 may increase specificity while maintaining relatively the same sensitivity.

No. 82

WITHDRAWN

No. 83

Pandemic Acceptance and Commitment to Empowerment Response (PACER) Training for Healthcare Providers and the Chinese Community in Canada

Poster Presenter: Kenneth P. Fung, M.D.
Co-Authors: Jenny Liu, Mateusz Zurowski

SUMMARY:

Introduction: With a global pandemic, it is essential to develop an efficient way to support the mental health and resilience of subgroups most highly impacted by the pandemic. Frontline healthcare providers face the stress of increased work demands, fear of getting infected themselves or transmitting the infection to their family, and rapidly changing health protocols. The Chinese Canadian community has been severely impacted by racism in addition to pandemic stress. Objective: Discuss the design and findings of an online intervention to increase the resilience of healthcare providers (HCP) and Chinese Canadian community (CH-COM). Methods: Based on Acceptance and Commitment Therapy (ACT) and principles of Social Justice and Equity, we developed an intervention model, Acceptance and Commitment to

Empowerment (ACE), to enhance psychological resilience and collective empowerment. In view of social distancing precautions, our intervention is delivered online, consisting of 6 interactive self-guided modules complemented by 6 weekly video-conference group sessions. Eligible participants included HCP and CH-COM. Participants are evaluated at pre, post, and 3-month follow-up in their resilience (MSMR), empowerment (ES), and mental distress (GHQ). Results: To date, we have recruited 42 HCP and 41 CH-COM. Preliminary results from our first two pilot groups, including 13 HCP and 14 CH-COM, provide early evidence that the group is feasible and well accepted. There was a significant improvement from pre to post in MSMR and ES, and significant reductions GHQ scores. Conclusions: Preliminary findings suggest that a hybrid self-directed and group online intervention based on the ACE model is an effective way of increasing resilience and empowerment while reducing mental distress during the pandemic.

No. 84

Transitions From Primary Care to Specialty Mental Health: Understanding Characteristics of Successful Referrals in the Public Mental Health System

Poster Presenter: Nathan Kyle Jamison, M.D.
Co-Authors: Andrea Nicolei Ponce, B.A., Jessica A. Koenig, M.D., Rachel Loewy, Ph.D.

SUMMARY:

Background: Specialty medical referral from primary care (PC) is a complex process with frequent breakdowns and inefficiencies (1, 2). For many specialties, referral coordinators, warm hand-offs between providers, and other methods help to ensure referral completion (3, 4, 5). However, specialty mental health (SMH) referrals often lack formalized procedures and depend on patients' ability to navigate this process independently (6). Limited research has described referral patterns for behavioral health conditions (7). Our quality improvement study seeks to address this gap by characterizing current procedures for Federally Qualified Health Clinic (FQHC) referrals to SMH and identifying potential strategies for successful referrals. Setting: The Healthright360 Integrated Care Clinic (ICC) is a community-based FQHC in San Francisco, CA that offers an array of services including primary care, mild-moderate mental healthcare, and substance use treatment for underserved and otherwise marginalized low-income individuals. Informal interviews indicate the SMH referral process is often unsuccessful, although no data are formally collected to assess this. Methods: This mixed methods study will utilize data from two electronic health records (EHR) and qualitative interviews with staff to better understand ICC's current SMH referral process. We will manually search clinical notes in the ICC EHR for patients seen from 01/2019 through 12/2020, focusing on terms such as "specialty mental health" and names of specific SMH clinics, in order to identify visits when an initial SMH referral was made (expected N=300). We will then link the referrals to data in the San Francisco Department of Public Health (DPH) EHR to determine the referral outcome, defined as patient seen or not seen at SMH clinic. If applicable, we will calculate the time from PC referral to SMH visit. Predictors of referral outcome will include (1) patient demographics and clinical characteristics and (2) documented provider actions intended to support the referral process such as phone calls to SMH clinics, transportation provided, etc. Hierarchical linear models will examine whether these patient characteristics or provider behaviors predict referral outcome or time to SMH visit. Finally, intake coordinators from SMH clinics will be invited to complete a semi-structured interview about their experiences and recommendations for supporting referrals. Results: Data collection and analysis will be completed by the 2021 Annual Meeting of the American Psychiatric Association. Conclusions: Findings from this study will aid ICC to identify potential strategies to improve care coordination. We aim to develop best practice guidelines that address gaps in the referral process which could be generalizable to other safety-net clinics with limited resources.

No. 85

A Complex Case of Factitious Disorder and Alcohol Use Disorder

Poster Presenter: Huseyin Bayazit, M.D.
Co-Authors: Anna Nevels, Lydia Kong, Astik Joshi

SUMMARY:
Case Ms. J., a Caucasian female in her 40s, who is a nurse, presents to the emergency department with alcohol intoxication and suicidal behavior. She was admitted to the intensive care unit (ICU). However, she left the hospital against medical advice before psychiatric evaluation and was later found unconscious in a convenience store, surrounded by empty wine coolers and ant poisoning packages. She was treated for delirium tremens and monitored for suicidal ideation in ICU. She displayed confabulation, and her answers were evasive. She was diagnosed with alcohol use disorder and Alcohol-Induced Mild Neurocognitive Disorder (MOCA:23/30). After a month, she was stable and was about to be transferred to the inpatient psychiatric unit, and she attempted to ingest hand sanitizer. Although she was transferred to the inpatient psychiatry unit, she was transferred back to the medical floor due to an asthma attack. And she was planned to discharge to an alcohol rehab facility, but she ingested hand sanitizer and admitted to ICU. She had another two attempts in the following two weeks period. She had a long history of alcohol use, which started 15 years ago. The longest period of sobriety was three months. She usually drinks one bottle of vodka and one box of wine daily. She was recently living in an alcohol rehabilitation facility, but she was let go due to attending while intoxicated.   Discussion The patient ingested hand sanitizer prior to discharge after a month from the admission when she had no withdrawal symptoms or craving. So, it was not alcohol intoxication, delirium tremens. Other differentials considered to be mood disorders, psychosis, malingering, and Ganser syndrome. There was no evidence of psychosis or affective disturbance throughout the hospitalization. She did not meet the criteria for a mood or psychotic disorder. She had no clear external reward, which ruled out malingering. She could not explain why she ingested it repeatedly and even didn't recall how she did it. One time, she reported hearing a voice in her head telling her to do so that it may be a brief episode of dissociation, which may suggest Ganser Syndrome (1). The feature which rules in FD is the motivation, which is to "assume the sick role"(2). She only attempted to ingest when she was planned to be discharged. FD patients were found to have subtle brain pathology (3). Microscopic brain pathology due to a long history of heavy alcohol use may be an underlying reason for FD in this patient. Since there would be no significant laboratory findings in FD, the most valuable tools a psychiatrist possesses is psychiatric evaluation, clinical observation, and collateral information. In addition to acute complications, alcohol use might have a lot of long-term complications such as dementia and contributes to underlying pathologies of rare conditions.

No. 86

Amiodarone Induced Hallucinations: A Case Report

Poster Presenter: Peter J. DeVries, M.D.
Co-Authors: Jessica Molinaro, Jennifer Ha, Jennifer Knight

SUMMARY:
We present the case of a 63-year-old female with a history of estrogen and progesterone receptor positive invasive ductal carcinoma with osseous metastases to ribs and skull, major depressive disorder, and unspecified anxiety. She was diagnosed with invasive ductal carcinoma 12 years prior and underwent a lumpectomy with axillary lymph node dissection and radiation and is currently maintained on anastrozole and trastuzumab for the past 11 years. Her major depressive disorder and anxiety have remained in remission on a regimen of bupropion, duloxetine and trazodone without recent dose changes. This patient presented to the emergency department with dyspnea and was admitted to the general medical floor with new-onset atrial fibrillation. She was subsequently started on amiodarone for rhythm control. While amiodarone is an antiarrhythmic drug with FDA approval for ventricular fibrillation and tachycardia, it is commonly used for atrial fibrillation1. Shortly after its initiation, the patient developed new onset auditory and visual hallucinations with an unremarkable extensive medical evaluation. Auditory hallucinations consisted of music and unintelligible conversations while visual hallucinations were of a family member crying on the floor and a man carrying a gun. The differential diagnoses included depression with psychotic features, delirium, and amiodarone-induced hallucinations. Given the lack of current depressive

symptoms, absence of altered mentation and cognition, and the temporal relationship between the initiation of amiodarone and the onset of hallucinations, amiodarone-induced hallucinations was considered the most likely diagnosis. For this reason, amiodarone was replaced with dronedarone. Both the visual and auditory hallucinations ceased within days after the discontinuation of amiodarone. Neuropsychiatric adverse reactions are rare with amiodarone, however there have been reported cases of delirium and one case of catatonic depression2,3. Isolated hallucinations have not been reported with amiodarone to the best of our knowledge. While the risk of visual and auditory hallucinations appears to be low with amiodarone initiation, we recommend that clinicians should be aware of this potential side effect.

No. 87

C(ardiac)-PTSD: The Association Between PTSD and Aortic Disease

Poster Presenter: Amit Batta, D.O.
Lead Author: Melanie Schwarz, M.D.

SUMMARY:

Background: Though risk of post-traumatic stress disorder (PTSD) from combat, injury, and assault is well-described, its relation to major cardiac events has been a relatively recent development. Among this burgeoning area of research, trauma from aortic disease in particular is less understood. Psychiatrists consulting a cardiothoracic surgery service at an urban medical center hypothesized that many patients with aortic disease experienced their illness as a traumatic event. This interdisciplinary team designed a study to: 1) determine if there existed a correlation between PTSD and aortic disease, and 2) if it was compounded by COVID-19 as a possible extrinsic stressor. **Methods**: In this IRB-approved project, participants with history of aortic disease were studied phenomenologically to ascertain PTSD as a potential psychiatric consequence. Four types of aortic diseases were identified as possible traumas: Type A Aortic Dissection, Type B Aortic Dissection, Aortic Aneurysm with Surgical Repair, “Watch and Wait” Aortic Aneurysm. Symptoms of PTSD were measured at one month and beyond using the PTSD Checklist for the DSM-5 (PCL-5). This self-reporting scale was distributed via a patient support group email list and anonymized. Included were optional free-text sections to comment on the impact of aortic disease, impact of COVID-19, feedback for providers, and advice for survivors of aortic disease. **Results**: There were 158 respondents (60 males; 98 females) ranging from 27 to 78 years old. 49.43% had Type A Aortic Dissection, 12.07% had Type B Aortic Dissection, 26.44% had Aortic Aneurysm with Surgical Repair, and 12.07% had “Watch and Wait” Aortic Aneurysms. Over 70% of these were diagnosed 1 to 10 years prior to September 2020. Preliminary data analysis show that 29% met criteria for PTSD with a PCL-5 cut-off score of 32, 66% respondents were bothered by repeated disturbing memories, 35% had strong physical reactions when reminded of the stress, 81% experienced loss of interest in activities they once enjoyed, 82% felt distant or cut off from other people, and 82% had difficulty concentrating. Correlations with COVID-19 and qualitative data are pending analyses. **Conclusion**: Examples of traumatic events in the DSM-5 are specified as war, physical assault, sexual violence, kidnapping, torture, and MVC. A life-threatening illness or debilitating medical condition is not necessarily considered a traumatic event. However, psychiatrists consulting on patients with aortic emergencies who had no known family history or connective tissue disorder had experiences that were particularly stressful. Family medical history conversations may educate people on potential familial diseases that they may suffer in the future and make them better prepared for the event. The life-changing impact of these conditions raises questions about broadening the concept of trauma and about how recovery in itself (e.g. medication compliance, follow-up appointments) could act as potential triggers for these related stress disorders. Future efforts in introducing early interventions to target psychological stress, as opposed to as an afterthought, could enhance recovery and improve outcomes in cardiac patients with comorbid, and potentially related, mental illness.

No. 88

Delirium Due to Covid-19 in a Schizoaffective Disorder Patient

Poster Presenter: Huseyin Bayazit, M.D.
Co-Author: Christopher N. Neel, M.D.

SUMMARY:
The patient is a twenty-six-year-old, Caucasian, female with a reported past psychiatric history of schizoaffective disorder, who presented to the emergency department with altered mental status. The patient was found at a gas station aimlessly wandering around. She was unable to give any identifying information, and was agitated. She was admitted to the critical care unit for monitoring due to being unresponsive to questioning and directions. She had a bedside sitter ordered to prevent any self-harm. Initial workup included Complete Blood Count, Complete Metabolic Panel, Urine Drug Screen, Brain Magnetic Resonance Imaging, and Electroencephalogram all of which were unremarkable. After a psychiatric evaluation, the patient was diagnosed with catatonia due to her presentation of unresponsive behavior, mutism, negativism, and posture. A lorazepam challenge was conducted, returning positive. She did not display delusional thought and was not observed responding to internal stimuli. Due to her catatonia, the treatment team was unable to obtain much information regarding her psychiatric history and treatment. She refused the COVID-19 test on admission, but the psychiatric consult team decided that she did not have medical decision capacity. Subsequently, the COVID-19 test was done, returning positive. Treatment for COVID-19, and catatonia treatment with lorazepam was initiated, with which she improved quickly. Medical evidence demonstrates that COVID-19, can have effects on the brain, causing delirium (1). Moreover, delirium can be a sole presenting symptom in COIVD-19 patients (2). In addition to the delirium, catatonia was another reported symptom of COVID-19 (3). Although this patient had a history of mental illness, there was no evidence of psychosis or affective disturbance. Clinicians should be aware and diligent in patients with complicated psychiatric symptoms, especially during the COVID-19 pandemic. Psychiatric patients can be at high risk of getting infected with COVID-19 due to poor self-care. It is recommended that a thorough medical workup and history be performed to determine the underlying pathology, etiology, and sequelae of this complex presentation.

No. 89
Multiple Severe Suicide Attempts in a Patient With Ehlers Danlos Syndrome

Poster Presenter: Michael Trobiano, M.D., M.P.H.
Co-Authors: Reena Baharani, M.D., Mitchell S. Nobler, M.D.

SUMMARY:
Ehlers Danlos Syndromes (EDS) are a group of genetic disorders caused by defects in collagen that affect connective tissues throughout the body. EDS are characterized by joint hypermobility, skin hyperextensibility and tissue fragility. To date, there are 13 types of EDS (1). Recent literature has demonstrated a higher prevalence of psychiatric conditions in those affected with the hypermobile subtype of EDS (hEDS). hEDS patients appear to have increased responsiveness in the emotional processing brain areas including the amygdala and insular cortex, possibly leading to higher affective reactivity (2). hEDS patients also experience amplification of sensory stimuli such as greater exteroception, nocioception, hyperalgesia and kinesiophobia, leading to periods of severe anxiety . Here we present a case of a young female with several near-lethal suicide attempts and multiple psychiatric hospitalizations, who was admitted to our tertiary care hospital for another suicide attempt by overdose. She presented with recurrent intrusive thoughts and catastrophic thinking that led her to believe she was going to be arrested and die in prison after contacting her health insurance and telling them she believed a medical diagnosis of hers was incorrect. In the hospital, she was able to recognize that her initial thought process was illogical and modulated by uncontrollable intense anxiety that did not respond to her usual coping mechanisms. As researchers continue to find increasing associations between anxiety and hEDS, a new “neuroconnective phenotype” has been proposed to be used as a model to better target and guide appropriate treatments in those suffering from both anxiety and hEDS. This model includes five different dimensions such as behavioral components, somatic illnesses, psychopathology, somatosensory symptoms and somatic symptoms. The patient described in this case fits many of the “dimension” subtypes of this proposed new phenotype. The model should be further developed

and studied to establish evidence based treatment that targets the specific psychological, psychiatric and physical symptoms these patients endure using a multidisciplinary approach.

No. 90

New Onset Seizure in a Pediatric Patient Without Psychiatric History Assumed to Be Psychogenic

Poster Presenter: Alexandra Rossi, D.O.
Co-Authors: Phebe Mary Tucker, M.D., Robyn L. Cowperthwaite, M.D.

SUMMARY:

Background: Many medical conditions present with psychiatric manifestations which makes a comprehensive medical workup and a multidisciplinary approach essential. Furthermore, early psychiatry involvement may allow for advocacy of the patient to avoid mental health stigma. We describe a pediatric patient who was referred to psychiatry due to concern for psychogenic nonepileptic seizures (PNES) before a complete medical workup was completed resulting in a delay of care. Clinical Case: Patient is a 14 year old female with history of obesity who presented with seizure-like activity and behavioral changes. Initial workup was unremarkable except for nonsensical speech and mildly elevated WBC. She was admitted and psychiatry and neurology were consulted due to concern for PNES. Patient was delirious and psychotic with agitation requiring sitters, restraints, and quetiapine. Patient's mother denied any recent stressors, substance abuse, history of abuse or trauma, or psychiatric history. EEG showed left temporal seizure. Patient was started on levetiracetam after which she had no further seizures. MRI brain and CSF studies were unremarkable except for mildly elevated CSF white count. Pelvic US showed ovarian teratoma for which she underwent an ovarian cystectomy. She was given IVIG and high dose steroids for presumed NMDA limbic encephalitis and her mental status improved. She was discharged on levetiracetam and quetiapine. Autoimmune panel showed NMDA antibodies and final pathology revealed immature teratoma so patient underwent chemotherapy outpatient. She was weaned off levetiracetam and quetiapine and recovered well without further psychiatric follow-up. Discussion: Anti-NMDAR encephalitis can be associated with an underlying paraneoplastic disease. It is usually seen in younger women with associated tumors, but tumors are found less frequently in children. The course is varied, but there may be neuropsychiatric symptoms including seizures. Treatment includes removal of underlying tumor and IVIG or IV steroids. While PNES may present with seizure-like activity, it is ultimately a diagnosis of exclusion without organic etiology that is thought to be due to increased psychological burden. PNES presents with nonspecific clinical features that may also occur in epileptic seizures, but a diagnosis is made when there is seizure-like activity in the absence of epileptiform discharges on 24 hour video EEG. Treatment is psychotherapy and medication management of underlying psychiatric conditions. As the case described, the patient was assumed to have PNES based on clinical presentation causing a delay in care, as other diagnoses were not explored until her EEG showed epileptic activity. However, neurology and psychiatry were involved leading to an eventual positive outcome. Therefore, anti-NMDAR limbic encephalitis is best managed by a multidisciplinary treatment approach.

No. 91

Pilot Assessment of Characteristics Predicting Satisfactory Tele-Consultation in Psychiatry

Poster Presenter: Stephanie G. Cheung, M.D.
Co-Authors: Justin G. Capote, M.D., Adrienne D. Mishkin, M.D.

SUMMARY:

Background: The COVID-19 pandemic created pressure to attempt performing consultations remotely. Telepsychiatry has been shown to be satisfactory to patients and psychiatrists (Hubley et al 2016) and feasible in a wide range of settings, age ranges, and cultural groups, and with high diagnostic reliability (Shore 2013). However, there are limited data on outcomes (Koblauch et al 2018) and the use of telehealth in general, and almost none about the experiences of telehealth in a consultation-liaison setting let alone those involving psychiatrists who engaged in it because of extreme circumstance rather than self-selection. Methods: A retrospective

review of 11 CL attendings' surveys and 8 attendings' tele-encounter logs, at a major New York City hospital over the interval from when the pandemic necessitated a change in operations in March 2020, through June 2020, was completed to assess for patient and provider characteristics associated with barriers to using telepsychiatry. Results: The vast majority of 223 tele-psychiatric encounters were acceptable to attendings in terms of technology (82%) and their ability to form a connection with the patient (78%). An unresolvable difficulty utilizing the platform was less common for female patients (OR = 0.239, p = 0.002) and more common for patients speaking a non-English language (OR = 9.059, p < 0.001). Conclusions: Telepsychiatry has previously been limited to outpatient use, and generally for providers and patients who specifically preferred it. However, abrupt transition to use of telehealth to limit contagion risk was mostly satisfactory in our center. Identifying types of patient encounters for which it is most and least appropriate will help guide future use.

No. 92

Religious Indulgence in an Acute Care Setting: Psychopathology or Faith?

Poster Presenter: Saba Mughal, M.D.
Lead Author: Guitelle St.Victor, M.D.
Co-Author: Chukwunonso Azubuogu

SUMMARY:
Objective: To create awareness about the importance of avoiding the premature diagnosis of psychosis in very religious or spiritual patients in the acute health care setting. Introduction: Historically, religious practices have borne the blunt of being mislabeled as psychopathology and confused with psychosis in some cultures. However, with the world becoming a huge diverse village, and with more mingling of different cultures, the differentiation between psychotic phenomena and spiritual experiences remains a challenge .Thus, there is a growing need for mental health practitioners to become more aware of the patients religious background as well as their cultural or religious beliefs. Discussion: This is a case of a 45-year-old Hispanic female patient who was brought in after a level 1 trauma secondary to motor vehicle accident with extensive injuries and fractures, leading to quadriplegia. She was admitted to the surgical intensive care unit and was observed by a night nurse mumbling to herself two nights in a row. The primary care team thought the patient was internally preoccupied and psychotic which generated the psychiatric consult. During the psychiatric evaluation done in Spanish with Spanish speaking providers, the patient was calm, cooperative, alert and coherent and on her bedside table, a small statue of the Virgin Mary was seen. She was not delirious nor did she exhibit any depression, mania or psychosis. In fact, she was able to describe the whole accident and confirmed that she was praying as part of her daily ritual, but thinks nurses noted it more at night as the unit was more quiet. Collateral information obtained from her son confirmed that the patient was a woman of strong faith who prays routinely daily but more often when she is in distress. This case reminded us of the case of Hannah in the Bible (1 Samuel 1:12-16), who was also seen mumbling in the temple, which was falsely interpreted by the high priest Eli as an intoxication delirium. Hannah was a woman of faith who was praying silently, asking God for a son. These two cases teach us that religious rituals can sometimes present with behaviors that can be interpreted as psychopathology. It is common for clinicians to confuse the two processes due to lack of cultural sensitivity, disinterest and discomfort with religious themes or simply an inherent bias against religious interpretations. Conclusion: This case highlights the challenge in differentiating religious and spiritual practices from psychopathology in an acute clinical setting. There is no doubt that all clinicians and specifically psychiatrists need to perform thorough mental health evaluations in patients with so- called abnormal behaviors. It is however of utmost importance that all health care providers be also aware of how a lack of cultural education and unfamiliarity with some religious beliefs and practices can affect their approach to diagnosis and treatment in these religiously inclined patients.

No. 93

Serotonin-Like Syndrome in “Spice” Intoxication: A Case Report

Poster Presenter: Darshana Sachin Pai, M.D.
Co-Author: J. Luke Engeriser, M.D.

SUMMARY:
Introduction : The use of synthetic cannabinoids (spice) is on the rise due to several factors including low cost, easy availability and non-detection on standard urine drug screen. This has led to an increase in the number of patients presenting to the emergency department with symptoms of overdose. There are case reports which have shown ischemic stroke after the use of synthetic marijuana, but there is limited evidence for additional medical sequelae of spice use. We describe the case of a middle-aged male with end-stage renal failure on dialysis who developed a serotonin-like syndrome following consumption of synthetic cannabinoids. Case report: The patient is 59-year-old African-American male with history of hypertension, end stage renal disease on hemodialysis, heart failure, hyperlipidemia and pulmonary hypertension who presented to the emergency department for altered mental status. There was a history of abnormal behavior including confusion and agitation lasting for one day prior to admission. There was no history of fever, convulsions, alcohol use, traumatic brain injury, or loss of consciousness. At the time of admission, the patient had confusion, tremors, rigidity in all extremities, autonomic instability, exaggerated deep tendon reflexes, hyperthermia, and clonus, both spontaneous and inducible. The patient''s laboratory workup revealed a mildly elevated WBC count, a negative urine drug screen, elevated serum creatinine and high RPR titer 1:32. MRI of the brain findings were suggestive of autoimmune or limbic encephalitis. CSF analysis for infectious etiology and autoimmune workup were negative. The patient was empirically treated with broad-spectrum antibiotics, antivirals, and antifungal for possible infectious etiology. The patient received hemodialysis and showed minimal improvement initially and after a few days, the patient''s mental status began to improve. During the course of recovery, the patient gave a history of consuming spice one day prior to admission. Discussion: The diagnosis of serotonin syndrome is clinical, and there are no laboratory tests to make a diagnosis of serotonin-like syndrome. In our literature review we found that synthetic cannabinoids may act by inhibiting monoamine oxidase and the reuptake of serotonin, thereby potentially increasing the risk of serotonin syndrome. There have been reports of high incidence of serotonin syndrome in patients with end-stage renal disease on SSRIs (Selective Serotonin Reuptake Inhibitors) and hemodialysis who could be vulnerable to develop serotonin toxicity possibly secondary to decreased renal functioning. Conclusion: Synthetic cannabinoid consumption may be associated with the development of serotonin syndrome especially in patients with end stage renal disease. The results of this case may need to be validated by systematic studies.

No. 94

Significance of Prolactin Levels in Differentiating Psychogenic Non-Epileptic Seizures From Epileptic Seizures: A Case Report

Poster Presenter: Usman Ghumman, M.D., M.P.H.
Co-Authors: Roshni Ashok Mandania, Lynn Vu, Marrium Ghumman, Aghaegbulam Harachi Uga

SUMMARY:
Introduction: 50 million- According to the World Health Organization, this is the number of people affected with epilepsy worldwide, making it a very common neurological disease. Epilepsy occurs due to excessively discharging electrical activity in brain cells resulting in recurrent seizures. Psychogenic non-epileptic seizures (PNES) are pseudo-seizures with a psychological origin that can get misdiagnosed as epilepsy. Although EEG is commonly used to record brain activity for a diagnosis of Epilepsy, it is only 20 to 55% sensitive. Prolactin (PRL) is seen as a comparable alternative and has been used in multiple studies. In the setting of epileptic seizures, one study reported PRL levels as 69% sensitive and 93% specific in differentiating epileptic seizures from PNES if blood is drawn within a certain time limit. Case Report: We present a previously healthy 27-year-old male with no past medical or psychiatric history who presented to the ED for seizure-like activity. For the past 2 years, the patient has been exhibiting depression and anxiety symptoms and was started on antidepressants without any significant improvement. The patient later started having a “blank staring” seizure-like activity once a week lasting almost 30 minutes, accompanied by confusion. Brain imaging including brain MRI was unremarkable. During these seizures

like activities, his body would become rigid and he had no recollection of these events. Neurology was consulted and during their evaluation, the patient experienced a panic attack. Due to a lack of evidence for a seizure disorder and having depression and anxiety in the past, no EEG was ordered yet. Psychiatry was consulted to rule out factitious disorder and to distinguish between PNES and epileptic seizures. After taking an extensive history and getting collateral information from the family, a diagnosis of generalized anxiety disorder with dissociative symptoms and major depressive disorder, severe, recurrent was given. To rule out epileptic seizures, PRL levels were ordered; it was 43 mg/dL (>2x the upper limit of normal) 3 hours after a seizure-like activity that morning. Psychiatry requested a 24-hour EEG; it showed bursts of high voltage 4 to 5 hertz sharp waves with bifrontal preponderance, and cortical irritability consistent with primary generalized epilepsy. The patient was discharged on anti-convulsants and his symptoms improved significantly. Conclusion: The role of PRL in seizures is vital so collecting blood at the earliest indication that a patient is experiencing seizure-like activity can be beneficial in distinguishing between PNES and epileptic seizures. Some clinicians question the credibility of blood samples collected during transport, as compared to hospital blood draws; studies show these samples have equivalent stability and validity. Therefore, PRL levels from blood draw should be considered in patients presenting with seizure-like activity to avoid misdiagnosis and unnecessary treatments.

No. 95
WITHDRAWN

No. 96
The Conundrums of Managing an Adult Case of ARFID in the General Medical Setting
Poster Presenter: Annafi Chowdhury, M.D.
Co-Authors: Philip R. Muskin, M.D., M.A., Jennifer Sotsky, M.D., Jeffrey Zabinski, M.D.

SUMMARY:
Avoidant/restrictive food intake disorder (ARFID) is a new diagnosis in the DSM 5. There is a limited literature describing adult cases of ARFID and the extreme difficulties of management when admitted medically. We will discuss an adult with a presentation consistent with ARFID and the complexities of this case in a general medical setting. The patient is a 41-year-old female who self-presented to our hospital requesting a reversal of her ileostomy. Her initial BMI was 10.5. She reported medical history of voltage-gated potassium channel antibody (VGKC), postural orthostatic tachycardia syndrome (POTS), salt-wasting syndrome, among other rare medical diagnoses. With extensive involvement of a multi-disciplinary team, it was determined that her medical history could not fully explain her significantly low BMI. Treatment was initiated to increase her weight. Her course was challenging secondary to her rigid ideas about which medical issues deserved priority and the cognitive impact of her low weight on her insight and judgment. During the hospitalization both TPN and NG tube feeding were attempted. Judicial opinion was sought to treat her medically over objection and she required ICU admission. She further complicated treatment with surreptitious behaviors (clamping of TPN line, removing the NG tube and vigorous exercising). The CL team was active in clarifying the psychodynamics at play such as projective identification, splitting, and primitive denial. With court approval, she was treated over objection with an increase in weight. On expiration of court ordered treatment, our interdisciplinary team sought an extension but it was denied. The patient was discharged at her request. With no formal guidelines on treatment of an eating disorder in a medical setting, a multidisciplinary approach was employed with behavioral and psychopharmacological intervention. The challenges in treatment included active and surreptitious treatment interfering behavior, legal obstacles, an inadequate surrogate decision maker, and clarifying powerful psychodynamic manifestation of ARFID patients with personality pathology on the treatment team.

No. 97
When Should Denial of Pregnancy Warrant Psychiatric Consultation?
Poster Presenter: Ulziibat Shirendeb Person, M.D., Ph.D.
Co-Author: Guitelle St.Victor, M.D.

SUMMARY:
Introduction: Denial of pregnancy, defined as a woman's lack of awareness of being pregnant, is an unexpectedly common phenomenon. A US study (1) reported the frequency of denial of pregnancy to be 1 in 516 births (0.19%). Suggested risk factors include being young, primiparous, poor social support, learning difficulties, and a history of substance use or psychiatric disorder (1). Denial of pregnancy is associated with negative maternal and fetal outcomes: refusal of antenatal care, precipitous delivery, child abuse, postpartum emotional disturbances in the mother and neonaticide (2). Denial of pregnancy is subdivided into psychotic or non-psychotic. Psychotic denial is due to impairment caused by psychosis (3). Non-psychotic denial is classified as affective (intellectual awareness of pregnancy without emotional or physical preparation for the birth), pervasive (lack of awareness of the pregnancy), or persistent (late discovery of her pregnancy; 1). A striking finding is that Psychiatry consultation was rarely requested for women who denied pregnancy (1). Denial of pregnancy is often accompanied by depersonalization and dissociation (4). Depersonalization is the feeling that one's sensations are not real, while dissociation is the suppression of excessive, painful, or intolerable stimuli from awareness (4). These facilitate denial as the patient is less aware of her pregnancy. Methods: We conducted a literature review, searching articles in PubMed and Google Scholar. Case report: We present the case of a 19-year-old Hispanic female with no past psychiatric history who was unaware of her pregnancy until she home-delivered, causing her 18-year-old sister to call 911. Psychiatry was consulted in the hospital for evaluation and disposition. The patient is an El-Salvadorian immigrant, unemployed, domiciled with her parents without prenatal care. She reported being forced into a sexual encounter by an ex-boyfriend but denied that she was raped. She misinterpreted the fetal movement as bowel gas, due to possible dissociation. Her parents, strict Catholics, remained unaware of her pregnancy. She also thought she was having a bowel movement during labor. However, after delivery, she acknowledged her pregnancy and bonded well with her baby. No psychiatric conditions warranting inpatient admission were identified. A social worker helped establish a safe discharge plan with a male friend from her Catholic Church as her parents would not accept her back home. Discussion: This case clearly demonstrates a pervasive denial of pregnancy. It is important for psychiatrist, particularly for Consultation-Liaison psychiatrists to be aware of the frequency, morbidity, mortality, and psychopathology associated with denial of pregnancy. Once suspected, a psychiatric evaluation should always be undertaken. A social work assessment is also warranted to assess the patient's parenting ability and for referral to outpatient Psychiatry (1).

No. 98
A Dose-Dependent Increase in Risk of Depression With 5-Alpha-Reductase Inhibitor Use
Poster Presenter: Jihoon A. Kim, M.D., M.Sc.
Co-Authors: Jinsol Yoo, Daein Choi, Jaewon Lee, Sang Min Park

SUMMARY:
Background: 5α-reductase inhibitors (5ARIs) are medications commonly long-term prescribed to elderly men for treatment of benign prostate hyperplasia and/or androgenic alopecia, with recent reports suggesting a possible link to depression and suicidality. We investigated if there is a dose-dependent increase in the risk of depression following the use of 5α-reductase inhibitors. Methods: A nationwide population-based retrospective cohort study was performed using the Korean National Health Insurance Service database. The study consisted of 48,860 men aged 60 years or older who underwent health examinations between 2005 and 2006. A distinction was made between 5α-reductase inhibitor users and non-users based on drug exposure between 2003 and 2006. Individuals using a 5α-reductase inhibitor were additionally divided into tertiles based on cumulative 5α-reductase inhibitor exposure. Incident depression was defined as documentation of ICD-10 code for depression (F32-33) plus prescription of antidepressant medication, and the individuals were followed up for 7 years from January 1, 2007 to December 31, 2013. Results: 5α-reductase inhibitor users were at a significantly increased risk of developing depression compared to non-users (HR,

1.61; 95% CI, 1.43-1.81). Depression risk increased in a dose-dependent manner with 5α-reductase inhibitor exposure: Tertile 1 (1-29 defined daily doses (DDDs); hazard ratio (HR), 1.43; 95% confidence interval (CI), 1.16-1.77); Tertile 2 (30-130 DDDs; HR, 1.57; 95% CI, 1.30-1.89); Tertile 3 (>131 DDDs; HR, 1.80; 95% CI, 1.51-2.15). There was a significant trend of increasing depression risk with increasing cumulative DDDs of 5α-reductase inhibitor (p for trend <0.0001). Conclusions: In a large cohort of men aged 60 years or older, 5α-reductase inhibitor users were at a significantly increased risk of developing depression compared to 5α-reductase inhibitor non-users. Risk of depression increased in a dose-dependent manner with 5α-reductase inhibitor use, with a significant trend. Physicians and patients should be aware of this risk associated with the use of medication, and dose reduction or discontinuation of the medication may be appropriate in these circumstances.

No. 99

A Pooled Analysis of Phase 3 Studies of Fremanezumab for the Preventive Treatment of Chronic Migraine in Patients With Comorbid Depression

Poster Presenter: Dawn C. Buse
Co-Authors: Joshua Cohen, Xiaoping Ning, Verena Ramirez-Campos, Richard B. Lipton

SUMMARY:

Background: Depression is common in patients with migraine,1 affecting up to 57% of patients with chronic migraine (CM).2 Fremanezumab, a fully humanized monoclonal antibody (IgG2Δa) that selectively targets calcitonin gene-related peptide (CGRP), is approved for the preventive treatment of migraine in adults. The efficacy of fremanezumab for the preventive treatment of CM has been demonstrated in two 12-week, randomized, placebo-controlled phase 3 trials of fremanezumab (HALO CM and FOCUS).3,4 This pooled analysis of data from those 2 studies evaluated reductions in migraine days and headache days of at least moderate severity in a subgroup of patients with CM and comorbid depression (score ≥10 on the 9-item Patient Health Questionnaire [PHQ-9]). Methods: The HALO CM study included patients with CM, and the FOCUS study included patients with episodic migraine or CM and prior inadequate response to 2 to 4 prior classes of migraine preventive medication. In both studies, patients with CM were randomized to receive subcutaneous injections of quarterly fremanezumab (Months 1/2/3, 675 mg/placebo/placebo), monthly fremanezumab (Months 1/2/3, 675/225/225 mg), or matched monthly placebo. Changes from baseline in the monthly average number of migraine days and headache days of at least moderate severity were evaluated in the subgroup with moderate to severe comorbid depression. Results: A total of 368 patients with CM and comorbid depression were included in this pooled analysis (quarterly fremanezumab, n=131; monthly fremanezumab, n=130; placebo, n=107). Over 12 weeks of double-blind treatment, mean reductions from baseline in the monthly average number of migraine days were 4.6 (standard error [SE], 0.56) with quarterly fremanezumab, 4.9 (0.59) with monthly fremanezumab, and 1.9 (0.63) with placebo (both P<0.001 vs placebo). Mean reductions from baseline in the monthly average number of headache days of at least moderate severity over 12 weeks with quarterly and monthly fremanezumab were 4.6 (0.53) and 5.2 (0.56), respectively, versus 1.7 (0.59) with placebo (both P<0.0001 vs placebo). Reductions from baseline in the monthly average numbers of migraine days and headache days of at least moderate severity to months 1, 2, and 3 were also significantly greater among patients treated with fremanezumab versus placebo (P<0.02). Conclusions: In patients with CM and comorbid depression, fremanezumab treatment resulted in statistically significant reductions in the number of migraine days and headache days of at least moderate severity versus placebo at all follow-up time points.

No. 100

Acute Dose of Intranasal Oxytocin Decrease Negative Bias in Recognition of Facial Emotion in Postpartum Women

Poster Presenter: Flávia L. Osório

SUMMARY:

Objective: To assess the effects of an acute dose of oxytocin (24IU) on the recognition of facial

expressions of emotion (RFEE) in mothers in postpartum, with and without depression. **Materials & Methods**: This is a cross-over, clinical, randomised, double-blinded, placebo-controlled trial in which a total of 55 postpartum women (> 18 years old; 37% with postpartum depression) were evaluated for RFEE by means of a static task with basic emotions (30 and 70% of emotion) following use of either oxytocin 24IU or placebo. **Results**: Analyses performed with ANOVA 2.0 for cross-over models showed absence of changes in the percentage of correct judgment of emotions for both groups (p>0.27). However, there was a decrease in negative bias for the sadness emotion, either for the depression or healthy group: mean estimated difference: -6.62 (95% CI: - 11.37 to -1.87) and -6.34 (95% CI: -9.81 to -2.87) respectively only after oxytocin use. **Conclusion**: Oxytocin has been shown to be effective in improving the social cognition deficits in postpartum period. These findings may have clinical implications since the correct recognition of facial expressions at this stage of life favors maternal responsiveness and strengthens the mother-baby bond.

No. 101

Add or Switch? Major Depressive Disorder Interactive Decision Support App Reveals Discordance Between Expert and Community Clinicians

Poster Presenter: Zachary Schwartz, M.Sc.
Co-Authors: Anne Roc, Ph.D., Christoph U. Correll, M.D., Leslie L. Citrome, M.D., M.P.H., Roger McIntyre, M.D.

SUMMARY:

In many patients with major depressive disorder (MDD), remission is not achieved with the initial antidepressant. Most guidelines recommend switching to or adding another treatment for residual symptoms, but clinicians often fail to measure response or adjust treatment.[1-4] To address this practice gap and to help clinicians make individualized treatment recommendations for such patients, we developed a decision support app based on recommendations from 5 experts. Methods: In March 2020, 5 depression experts provided treatment recommendations for 45 unique MDD case scenarios based on an agreed upon, simplified set of patient variables: ·Efficacy of current treatment ·Tolerability of/adherence to current treatment ·Concerns about sexual dysfunction, weight gain/metabolic abnormalities, activation/sedation Patient variables, expert recommendations, and their reasoning were built into a custom app, available at www.clinicaloptions.com/AdvancingMDDTreatment. Clinicians using the app are prompted to specify a patient scenario using the variables and select their intended treatment plan. Afterwards, the app shows the experts' treatment recommendations for the patient scenario and, if discordant, asks clinicians if the expert recommendations changed their plan. Results: From April to November 2020, 431 learners entered 630 unique patient case scenarios. Of these learners, 111 were anonymous and 320 were authenticated, of which 99% (n=317) were from the US; 64% (n=204) were physicians; 18% (n=58) were nurses, NPs, or PAs; and 11% (n=35) were pharmacists. In most cases (87% [n=548]), learners'' intended therapy differed from the experts. A comparison of expert and community clinician treatment choices in select patient case scenarios is shown below. Case Scenario Expert Consensus, % Cases Where Learners' Intended Treatment Matched Expert Consensus, % (n/N) In remission Monitor: 100 22 (15/67) No remission Optimize dose; rule out bipolar disorder, substance use disorder: 100 63 (316/498) No remission, ≥ 25% symptom improvement Add therapy: 80 56 (82/147)
No remission, Switch therapy: 80 21 (31/148)
No remission, poor adherence or tolerability Switch therapy: 80 11 (8/71) Of cases in which learners' intended therapy differed from the experts', 42% indicated they planned to change their treatment choice. Conclusions: The results from the app highlight continuing gaps in clinicians' consideration of patient factors in choosing antidepressant treatment and clinicians' ability to optimize treatment options for multiple patient scenarios. A point-of-care app can be part of an implementation strategy to positively influence practice behaviors: Clinicians can see if their intended treatment choice is congruent with a panel of experts and reconsider their plans as appropriate.

No. 102
Adjunctive Treatment Patterns Among Patients With Major Depressive Disorder
Poster Presenter: Sara Higa
Lead Author: Rakesh Jain
Co-Authors: Amanda Harrington, Andrew J. Cutler, M.D., Julie Park

SUMMARY:
Background: Major depressive disorder (MDD), a highly prevalent mental health disorder, is often treated with antidepressants, which generally require several weeks of continued treatment before a clinical response is achieved. Further, many patients fail to achieve a clinical response and are subsequently prescribed a treatment switch or adjunctive therapy. The objective of this retrospective study was to describe adjunctive treatment patterns among patients with MDD. Methods: Adults with newly diagnosed MDD and ≥1 major depressive episode (MDE; defined as ≥1 medical claim and ≥1 antidepressant claim within 60 days of diagnosis) from January 1, 2009 to December 31, 2017 were identified using the IBM MarketScan Commercial database. Eligible patients had 12 months of continuous enrollment before and after diagnosis. Lines of therapy (LOTs) were periods of continuous treatment with ≥1 antidepressant claim. Dopamine-serotonin receptor modulator (DSRM, also known as atypical antipsychotic) adjunctive regimens and non-DSRM adjunctive regimens, including mood stabilizers and combination treatments with multiple antidepressants, were characterized by LOT and MDE. Descriptive analyses were performed. Results: A total of 455,082 patients with MDD met criteria, of whom 40,315 (9%) received adjunctive therapy. Of patients who received adjunctive therapy, 8,024 (20%; 2% of all patients) received DSRM adjunctive regimens. The majority of treatment regimens were monotherapy, which decreased with subsequent LOTs, while adjunctive treatments increased with subsequent LOTs. There were 1,860 different adjunctive regimens identified; 68% of patients with any adjunctive therapy had at least one of 30 most common adjunctive regimens. Further, 76% of all adjunctive patients received an antidepressant combination (≥2 antidepressants). Of all treatment regimens, DSRM adjunctive regimens generally remained under 5% across multiple LOTs within each MDE; however, of patients with adjunctive therapy, 17-55% within each LOT included treatment with a DSRM. The most common DSRMs were aripiprazole (44%), quetiapine (33%), and risperidone (10%). Among patients who received an adjunctive DSRM, on average it occurred as their third LOT and over a year after initial antidepressant treatment. Compared with monotherapy-treated patients, patients treated with DSRMs as part of their adjunctive therapy discontinued treatment less frequently (19% vs 42% for monotherapy). Across MDEs, psychiatrists and mental health specialists were approximately 3 times more likely to prescribe DSRMs than primary care physicians. Conclusions: Few patients were treated with DSRMs as part of their adjunctive regimens despite many patients experiencing multiple treatment changes. These results suggest a lack of adherence to treatment guidelines with underutilization of potentially effective treatments, illustrating an opportunity to optimize therapy regimens for patients with MDD. Sponsorship: AbbVie

No. 103
Change in Individual MADRS Items in a Phase 4 Randomized Withdrawal Study in Adults With Recurrent Major Depressive Disorder Administered Vortioxetine
Poster Presenter: Elizabeth Hanson
Co-Authors: Max Tolkoff, Jingtao Wu, Naga Venkatesha Murthy

SUMMARY:
Background: Treatment to full remission and continued treatment to prevent relapse and recurrence are the main goals in the management of recurrent major depressive disorder (MDD). Efficacy of vortioxetine (VOR) in acute episodes of MDD has been demonstrated in the dose interval between 5 and 20 mg. The Montgomery-Åsberg Depression Rating Scale (MADRS) is a well-established tool for assessing the severity of depression symptoms and drug effect; it comprises 10 items, each being scored between 0 and 6 (total score 0-60). Higher scores indicate more severe depressive symptoms. **Methods**: This is a post hoc analysis of a

phase 4 study that enrolled patients with recurrent MDD (MADRS ≥26) in a 16-week open-label period (OLP) on a fixed dose of VOR 10 mg. During the OLP, patients were administered the MADRS every 2 wks. Throughout this period, patients were evaluated to assess response to treatment (≥50% reduction in MADRS total score from baseline) or remission status (MADRS ≤12). Upon stabilizing at a fixed dose of VOR 10 mg, eligible responders entered the 32-week double-blind treatment period and were randomized to 5, 10, or 20 mg or placebo. Here we examined the mean change from baseline for each of the 10 MADRS items to wks 2, 4, and 6 of the OLP; assessment occurred before patients were removed from the study for not meeting responder entry criteria. Patients were grouped as 1) responder by OLP wk 6 (n=543), 2) nonresponder by OLP wk 6 (n=371), and 3) those who responded by OLP wk 8 or later (omitted from this analysis). **Results**: During the OLP, mean MADRS total scores (±SE) for responders and nonresponders at baseline were 33.9±0.2 and 34.1±0.2, respectively, and at wk 6 were 9.9±0.2 and 23.1±0.6, respectively. The mean scores for these 2 groups were noticeably different by wk 2, both in total MADRS score (23.2±0.4 and 28.5±0.4, respectively) and in most individual items, with the exception of suicidality; patients who had a suicidality rating >1 were screened out per the study design. At wk 6 of the OLP, percent reduction for each MADRS item score from baseline for responders were: Suicidal Thoughts: −93.5%; Apparent Sadness: −82.0%; Reduced Appetite: −81.6%; Pessimistic Thoughts: −76.7%; Inability to Feel: −74.7%; Lassitude: −70.9%; Reported Sadness: −69.6%; Concentration Difficulties: −66.5%; Inner Tension: −58.1%; Reduced Sleep: −55.4%. In comparison, the reductions from baseline for each MADRS item score for nonresponders ranged between −22.1% and −43.2%. **Conclusion**: In this analysis, VOR was effective in addressing all symptoms of depression as captured by the 10 items of the MADRS. Visual presentations of longitudinal changes in individual MADRS items during the OLP suggest most items (eg, Apparent Sadness, Reduced Appetite, Pessimistic Thoughts, Suicidal Thoughts) can be distinguished between responders and nonresponders by wk 2, and to a full extent by wk 6.
Funding: Takeda Pharmaceuticals U.S.A., Inc., and Lundbeck LLC.

No. 104

Change in Neurocognitive Functioning in Patients With Treatment-Resistant Depression With a Single Intravenous Ketamine Infusion

Poster Presenter: Balwinder Singh, M.D., M.S.
Co-Authors: Matthew Powell, Ph.D., Brandon Coombes, Ph.D., Jennifer L. Vande Voort, M.D.

SUMMARY:

Introduction: Major depression is associated with significant impairment across different neurocognitive domains.1 Intravenous (IV) Ketamine has been recently purposed as a robust and rapid antidepressant.2 There is limited data on the impact of IV ketamine and change in cognition.3 **Methods**: This was an open-label feasibility trial where we enrolled adult (18-65 years of age) patients with treatment-resistant unipolar major depression, who received one IV ketamine infusion (0.5 mg/kg, infused over 40 minutes). We used the Repeatable Battery for the Assessment of Neuropsychological Status (RBANS) to assess cognitive functioning before the IV ketamine infusion (baseline) and 24-hour post-infusion. **Results**: 12 patients received a single IV ketamine infusion, of which ten patients (mean age 47.5± SD 13.4 years, 60% females, mean MADRS score 23.7±SD4.8) completed the baseline and end-point RBANS. There was a significant improvement in the depression symptoms at 24 hours post-infusion (mean change 12.4±SE 2.5). The patients also noticed a significant improvement in global cognition (20.2±3.44, p<.0002). Index and subtest score analyses suggest that cognitive benefits are best characterized by significant improvement in working memory and speed (coding subtest), memory acquisition (immediate memory index), retention (delayed memory index), and semantic fluency. There was no improvement in the visuoperception domain. **Limitation**: Small sample size. **Conclusion**: This small study suggests patients who receive IV ketamine infusion experience improved cognition and depressive symptoms at 24 hours post-infusion. These finding needs to be replicated in a large sample size study with greater power to explore if improvement in depression is moderating the change in cognition. If replicated,

long-term effects of IV ketamine need to be evaluated.

No. 105

Characteristics of United States (US) Veterans With Major Depressive Disorder and Their Current Standard of Care: A Real-Word Data Analysis

Poster Presenter: Swapna Karkare

Co-Authors: Abigail Nash, John Sheehan, Maya Aboumrad, Xiaohui Zhao

SUMMARY:

Background: Real-world data on treatment patterns among veterans with major depressive disorder (MDD) is limited. This study described characteristics of US veterans with MDD and their treatment regimens during the first observed and treated major depressive episode (MDE). Methods: This retrospective study leveraged the Veterans Health Administration (VHA) database from 4/1/2015 to 2/28/2019 (study period), supplemented with Medicare Part A/B/D data from 4/1/2015 to 12/31/2017 (latest data available). Veterans aged ≥18 years with ≥1 MDD diagnosis in the VHA database between 10/1/2015 and 2/28/2017 and ≥1 line of therapy (LOT) within a complete MDE in the study period were included. A complete MDE was defined as starting on the date of the first observed MDD diagnosis (index date), ended on the later of the date of the last MDD diagnosis or the end of the last observed MDD treatment (antidepressant [AD] with or without augmenting agents, psychotherapy, or somatic therapy [electroconvulsive therapy, repetitive transcranial magnetic stimulation]), and was preceded and followed by ≥6 month period without an MDD diagnosis or MDD treatment. A LOT was defined as any of the following: a) ≥1 AD at adequate dose and duration (≥6 weeks of continuous therapy with no gaps longer than 14 days) with or without an augmenting medication; b) ≥1 psycho-/somatic therapy cycle at adequate frequency; or c) any combinations of a+b. VHA benefit enrollment was required for ≥6 months before (baseline) and ≥24 months after index to allow evaluation of patient baseline demographic and clinical characteristics as well as the number and type of LOTs received during the first observed and treated MDE. Results: The analysis included 37,123 veterans with MDD (mean±standard deviation [SD] age: 51.3±16.3 years; 83.5% male), with the majority White (63.1%), non-Hispanic (88.6%), and unemployed/retired (59.9%) during the study period. The most common baseline comorbidity was hypertension (27.6%), followed by hyperlipidemia (20.8%) and diabetes (15.0%); 11.5% of patients had post-traumatic stress disorder and 10.8% had substance use disorders. During the first observed and treated MDE (mean±SD duration: 14.4±8.5 months), patients received an average of 1.6 (SD=1.0) LOTs, with 15.7% receiving ≥3 LOTs. The median (Q1-Q3) duration from index to LOT1 initiation was 34 (1-168) days. SSRI monotherapy was the most commonly observed therapy in the first six LOTs, followed by psychotherapy alone in LOT1-LOT3 and AD augmented with anticonvulsants in LOT4-LOT6, respectively. Conclusion: Based on this evaluation of the current standard of care among veterans with MDD, almost one in six veterans received ≥3 LOTs and could be considered treatment-resistant during the first observed and treated MDE. Monotherapy with SSRIs, psychotherapy alone, and combination therapies of AD with anticonvulsants were the most common therapies in the first six LOTs observed.

No. 106

Childhood Trauma Influences the Occurrence and Onset Age of Major Depressive Disorder Via Social Support and Brain Functions

Poster Presenter: Suzhen Chen

Lead Author: Yonggui Yuan

SUMMARY:

Objective: To explore the role of environmental factors and brain in the pathogenesis of major depressive disorder (MDD), childhood trauma (CT), social support (SS) and brain functions were used to investigate the differences between MDD and healthy controls (HC), and the mediator between CT and MDD. Methods: 102 MDD and 36 HC received resting-state fMRI scan, 24-item Hamilton Rating Scale for Depression (HAMD-24), Hamilton Anxiety Rating Scale (HAMA), CT questionnaire (CTQ) and social support rating scale (SSRS) evaluation. MRI data between groups was firstly analyzed by the amplitude of low-frequency fluctuation (ALFF), and

brain regions with altered ALFF relating to CT or SS were selected as regions of interest for the further functional connectivity (FC) analysis. Correlation analysis was performed to determine the associations between brain dysfunction and clinical variables of MDD. Mediation analysis was used to investigate the mediator between CT and the features of MDD. Receiver operating characteristic (ROC) curve analysis was used to further test the identification capability of different indicators alone and combination building from logistic regression. Results: Compared to HC, MDD showed more CT and less SS, and decreased ALFF in right posterior cingulate (PCC) and left postcentral gyrus (PCG), and decreased FC in left PCC (FC_PCC_L), bilateral PCG and middle temporal gyrus (MTG). FC_PCC_L mediated the association between sexual abuse and baseline HAMD-24, while SS itself or together with FC_PCC_L mediated association between CT and occurrence as well as onset age of MDD. ALFF and FC in the differential brain regions were able to distinguish MDD from HC. Moreover, combined CT, SS and brain functional indicators would show more excellent effect for distinguishing MDD from HC. Conclusion: This study further confirmed that CT, SS and abnormal functions of the brain especially PCC involved in the underlining mechanisms of MDD. SS and brain functional indicators are serial mediators between CT and MDD, and the combination of relevant indicators of CT, SS and brain functions could distinguish MDD from HC well.

No. 107

Combinatorial Pharmacogenomic Algorithm Is Predictive of Sertraline Metabolism in Patients With Major Depressive Disorder

Poster Presenter: Sagar V. Parikh, M.D.
Co-Authors: Daniel Hain, Rebecca Law, David Lewis

SUMMARY:

Introduction: Pharmacogenomic testing can aid in treatment selection for patients with Major Depressive Disorder (MDD) by identifying gene-drug interactions that may impact medication metabolism. Although there have been rapid advancements in this field, there is not a consensus about the approach to pharmacogenomic testing or even what genes are relevant for many antidepressants. Here we assessed the ability of a combinatorial pharmacogenomic test (weighted assessment of multiple genes) to predict meaningful variations in sertraline metabolism relative to the Clinical Pharmacogenetics Implementation Consortium (CPIC) guidelines for CYP2C19. Methods: All patients were enrolled in the GUIDED trial – a large, patient- and rater-blinded, randomized, controlled trial that included patients diagnosed with MDD who had an inadequate response to ≥1 psychotropic medication (N=1,167). A subset of 124 patients reported taking sertraline within 2 weeks of the screening blood draw and had sertraline blood concentrations quantified using LC-MS/MS. The combinatorial pharmacogenomic test produced a combined phenotype that included multiple pharmacokinetic genes based on the metabolic pathway for each medication. For sertraline, this included CYP2C19, CYP2B6, and CYP3A4. Medications were categorized according to the predicted level of gene-drug interactions (GDI) and change in metabolism (increase, decrease). Sertraline log-transformed concentration/dose ratios were compared between combinatorial pharmacogenomic test categories and CPIC CYP2C19 phenotypes. Tests were linear trend tests. Results: Sertraline concentration/dose ratios were significantly different between CY2C19 phenotypes (p=0.0003) and gene-drug interaction categories from the combinatorial pharmacogenomic test (p=5.8e-06). Sertraline blood levels were 71% lower when the combinatorial pharmacogenomic test predicted significant GDI with increased metabolism compared to no GDI (p=0.001). Similarly, sertraline blood levels were 134% higher when the combinatorial pharmacogenomic test predicted significant GDI with decreased metabolism compared to no GDI (p=2.7x10-5). In multivariate analysis that included CYP2C19 and the combinatorial pharmacogenomic algorithm, only the combinatorial pharmacogenomic algorithm remained significant (p=3.8x10-5). Discussion: Combinatorial pharmacogenomic testing was a significant predictor of sertraline blood levels for patients within the GUIDED trial, accounting for all variance predicted by CYP2C19 alone and adding significant, independent information. This suggests that the combinatorial pharmacogenomic test may provide more clinically relevant information to

inform medication decisions regarding sertraline compared to CYP2C19 alone.

No. 108
Combinatorial Pharmacogenomics in MDD Has Greatest Potential Utility for Patients Taking Medications With Significant Gene-Drug Interactions
Poster Presenter: John Francis Greden, M.D.
Co-Authors: Rachel Daut, James Li, Sagar V. Parikh, M.D., Mark H. Pollack, M.D.

SUMMARY:
Trial-and-error prescribing is a widely employed treatment approach for major depressive disorder (MDD), despite a reduced likelihood of achieving remission following subsequent antidepressant trials. The Genomics Used to Improve DEpression Decisions (GUIDED) trial was a large, randomized controlled trial that evaluated the impact of combinatorial pharmacogenomic testing on outcomes for patients with MDD and an inadequate response to ≥1 psychotropic medication [1]. The present post hoc analysis assessed the relationship between number of medication failures at baseline and outcomes in GUIDED. Patients were randomized into treatment as usual (TAU) or combinatorial pharmacogenomic-informed (guided-care) arms. All patients received testing, though results were only available for those entering guided-care. All patients and raters were blinded until after week 8. Medications on the test report were categorized based on the predicted gene-drug interactions (GDI): 'use as directed' (no GDI), 'use with caution' (moderate GDI)', 'use with increased caution and with more frequent monitoring' (significant GDI). Week 8 outcomes were assessed using the HAM-D17 rating scale [symptom improvement (% change from baseline), response (≥50% reduction), remission (score of ≤7)]. Analyses were conducted for the subgroup of patients who took ≥1 incongruent (significant GDI) medication at baseline and by their number of medication failures at baseline. Patients who were taking ≥1 incongruent medication at baseline had significantly improved outcomes when they changed to congruent medications at week 8 compared to those who remained on incongruent medications (see Table). In addition, patients who had <5 medication failures tended to have better outcomes compared to those with ≥5 medication failures (see Table). In TAU, there was a 2-fold decrease in congruency with subsequent medication failures. In contrast, the proportion of patients taking congruent medications in the guided-care arm was consistent regardless of the number of prior medication failures.

Poster Session 10

No. 1
Computer-Assisted Cognitive-Behavior Therapy for Depression in Primary Care
Poster Presenter: Jesse H. Wright, M.D.

SUMMARY:
Objective: Assess the effectiveness and durability of a clinician-supported method of computer-assisted cognitive-behavior therapy (CCBT) compared to treatment-as-usual (TAU) in primary care patients with depressive symptoms. Method: 175 primary care patients who scored at least 10 on the Patient Health Questionnaire-9 (PHQ-9) were randomly assigned to a 12-week course of CCBT or TAU. Computer-assisted treatment consisted of use of the multimedia program “Good Days Ahead” and up to 12 weekly phone calls with a clinician. The Patient Health Questionnaire-9 (PHQ-9), General Anxiety Disorder-7 (GAD-7), the Automatic Thoughts Questionnaire, and the Satisfaction with Life Questionnaire were administered before treatment, after 6 and 12 weeks, and 3 and 6 months after treatment was completed. Results: The primary treatment goal was to reduce symptoms of depression, and effect sizes on the PHQ-9 showed significant advantages for CCBT at all time intervals. There was enduring benefit observed in depression at the 3- and 6- month follow-up. The mean effect size for the PHQ-9 in the ITT analysis was 0.52 when measured 6 months post-treatment There were significant treatment effects favoring CCBT for all measures at all time points with one exception. There was no longer a significant effect for CCBT vs TAU for the GAD-7 at the 6-month follow-up. Conclusion: CCBT significantly improved outcomes

for depression, anxiety, automatic thoughts, and quality of life.

No. 2

Depression and Burnout Among Health Schools' Students at the University of Jordan

Poster Presenter: Zaid Alkayed, M.D.
Lead Author: Majd Al-Soleiti, M.D.
Co-Authors: Sebawe Syaj, Loai Alzghoul, Ph.D., Nafez Abu Tarboush, Ph.D.

SUMMARY:

Title: Depression and Burnout among Health Schools' Students at The University of Jordan Background: Burnout and Depression are recognized phenomena in current educational systems worldwide. Few studies on academic burnout and depression can be found in Jordan and the Arab region in general. This study measured depression and burnout among health sciences schools' students at the University of Jordan,
and investigated certain factors which may be associated with them. **Methodology:** A survey containing demographics, the Patient Health Questionnaire 9 (PHQ-9) for depression, and the Maslach Burnout Inventory – Student Survey (MBI-SS) for burnout, was distributed to health schools students at The University of Jordan. Descriptive, correlational and multivariate regression statistical analyses were carried out to find out prevalences, significant correlations, and independent associations between certain factors and depression/burnout. Results: 1167 students (mean age=20.9, 73% female) participated in the study from the schools of Dentistry, Medicine, Nursing and Pharmacy. The overall prevalence of depression in the sample was 33.5% (n=366). The average burnout scores in the sample were 21.4/30 for Emotional Exhaustion, 14.4/30 for Cynicism, 20.7/36 for Competence. Nursing students had the highest depression rate (39%) while medical students had the lowest prevalence (27.3%), even after correcting for gender (p3.0 correlated with lower levels of depression (OR=0.66, CI 0.51-0.85 and 0.45, CI 0.35-0.84, respectively), while unhealthy diet and below-average perceived level of knowledge in specialty correlated with higher odds of depression (OR=2.1, CI 1.1-4.2 and 2.6, CI 1.4-5.0, respectively).

Conclusion: This study shows significant rates of depression and burnout among health schools students at The University of Jordan, with varying degrees among different schools. The rates are higher than the international averages. Student's personal choice of specialty, perceived level of knowledge in specialty and extracurricular activities may have an important role in students'' depression and burnout. High burnout means emphasize the need to revise the workload put on students, and to assess the methods students use to cope with stress. *Choosing university specialty personally, regardless of external/social pressure.

No. 3

Difficulties in Emotion Regulation Mediate the Relationship Between Mood Symptoms and Nightmares in an Inpatient Psychiatric Sample

Poster Presenter: Anika Wiltgen Blanchard, L.P.C.
Co-Authors: Katrina Rufino, Ph.D., Michelle Patriquin, Ph.D.

SUMMARY:

Nightmares are characterized as dysphoric dreams which typically occur during late-night rapid eye movement (REM) sleep (Rek, Sheaves & Freeman, 2017). Nightmares are highly prevalent in patients with various psychopathology including depression (Luca, Luca & Calandra, 2013) and anxiety (Tsypes et al 2013). Emotional processing and regulation of affect are often impaired in depressed and anxious patients (Joormann & Gotlib, 2010; Brühl, Herwig, Delsignore, Jäncke, & Rufer, 2013). For those who are unable to experience or express their emotional distress during waking hours, REM sleep may provide a pathway for emotional processing (Vandekerckhove & Cluydts, 2010). The current study aims to examine how changes in depression and anxiety relate to difficulties in emotion regulation and change in nightmares over the course of inpatient treatment. This study also seeks to explore whether difficulties in emotion regulation mediate the relationships between these changes in depression, anxiety and nightmares from admission to discharge. Participants were 2,728 inpatients between the ages of 17 and 88 (M = 34.89, 47.8 % female; average length of stay = 44.3 days, SD = 19.1). Depression and anxiety symptoms were

assessed using the Patient Health Questionnaire-9 (PHQ-9) and Generalized Anxiety Disorder-7 (GAD-7) at admission and discharge. Problems with emotion regulation were assessed at admission using the Difficulties in Emotion Regulation Scale (DERS) total score. Nightmare severity was assessed using an in-house measure, the Sleep Disturbance Scale (SDS). Mediation analyses were conducted using the PROCESS macro (Hayes, 2017). Mediation analyses showed that changes in depression predicted the total DERS score ($a = 1.92$, $p = .000$), and nightmare change ($c = .06$, $p = .000$). The DERS was associated with nightmare change ($b = .01$, $p = .000$). Mediation of the total DERS score ($c' = .04$, $p = .000$) was found. A second set of mediation analyses demonstrated that changes in anxiety also predicted DERS score ($a = 2.17$, $p = .000$) and SDS change ($c = .08$, $p = .000$). DERS was also associated with nightmare change ($b = .01$, $p = .000$) and mediated the relationship between anxiety change and nightmare change ($c' = .05$, $p = .000$). Overall, difficulties with emotion regulation were found to significantly mediate the relationship between depression change and anxiety change and nightmares from admission to discharge. Findings from this study identified emotion regulation problems as a key component to the connection between depression and anxiety changes and changes in nightmares during the course of inpatient treatment.

No. 4

Effect of Percentage of Life-Years From the Start of Major Depressive Disorder on the Therapeutic Response to REL-1017

Poster Presenter: Marco Pappagallo
Lead Author: Maurizio Fava, M.D.
Co-Authors: Luca Pani, Sara De Martin, Paolo Manfredi

SUMMARY:
Background: Chronicity of depression has not proven to be a reliable predictor of response to standard antidepressant treatments (SATs) or response to placebo. However, early improvements after treatment are generally associated with better outcomes and earlier and more severe first episodes of depression may play a role in the prognosis of MDD. NMDAR channel blockers are emerging as a promising novel treatment for MDD. The mechanism of action of NMDAR channel blockers is related to BDNF and mTor-dependent neural plasticity. REL-1017 (dextromethadone) is a novel safe and well tolerated NMDAR channel blocker that increases BDNF in humans. In a recent Phase 2 study, REL-1017 showed rapid, robust, and sustained therapeutic effects in patients with MDD. We investigated whether REL-1017 may be more effective in MDD patients with a lower percentage of life-years from the start of MDD. Methods: We reviewed historical data on the start date of MDD from a Phase 2a study of REL-1017 as adjunctive treatment in patients with MDD who failed 1-3 adequate SATs. The percentage of life-years spent from the start of MDD was calculated by computing the number of years from the start date of MDD recorded in the REL-1017 database divided by age and multiplied by 100. Patients were then divided as below and above the median value. The MADRS change from baseline (CFB) was compared between REL-1017 and placebo groups by Student' t test for unpaired data. Results: The median percentage of life years from the start date of MDD for the 62 randomized patients was 23%. At 25 mg and 50 mg doses, patients below the median percentage of life-years were significantly more responsive to REL-1017 vs. placebo. In contrast, among patients above the median percentage of life-years, the response to REL-1017 vs. placebo was not statistically significant. Conclusion: In this of a Phase 2 trial, 25 and 50 mg doses of REL-1017 were significantly effective vs. placebo in reducing MADRS scores below the median (23%) for percentage of life-years from the start of MDD. When the same data were analyzed for patients above the median (23%) for percentage of life-years, results did not reach statistical significance at either REL-1017 dose. This differential therapeutic effect related to chronicity of MDD has not been previously reported for monoaminergic drugs, atypical antidepressants or ketamine. The differential therapeutic effects of REL-1017 when administered earlier compared to later in the course of MDD may signal potential disease modifying effects related to neural plasticity. If these preliminary findings are confirmed in a planned Phase 3 trial, REL-1017 could become first line treatment for patients with recent onset of MDD. In the context of MDD clinical trials, a careful analysis

of patients above or below the median for years of life from the start of MDD may signal treatments with potentially disease modifying effects.

No. 5

Effectiveness and Tolerability of Intranasal Esketamine in Treatment-Resistant Depression: A Spanish Nationwide Study of Its Compassionate Use

Poster Presenter: Alejandro Fuertes-Saiz
Co-Authors: Vicente Elvira Cruañes, Rafael Mora-Marín, Jon-Inaki Etxeandia-Pradera, Miguel Vega

SUMMARY:
INTRODUCTION Intranasal esketamine is an inhaled non-competitive NMDAR antagonist that has proven to be a fast-acting and effective approach for treatment resistant depression. Although it has yet to be cleared by the Spanish Medicines and Health Products Agency, its compassionate use across the country has been approved in depressed patients after failing to respond to two or more proper antidepressant trials, one potentiation strategy and a non-pharmacological therapy if accepted by the patient and not contraindicated. The aim of this study is to describe, in terms of efficacy and tolerability, the nationwide reported effects of intranasal esketamine in treatment resistant depression. **METHODS AND MATERIALS** Retrospective, multicentric study in 13 Spanish hospitals from December 2019 to December 2020. We included all treatment resistant depression patients were compassionate use of intranasal esketamine had been approved by the Spanish Medicines and Health Products Agency. During the treatment course, changes in different depression scales (HAMD-17, MADRS and VAS depression) were measured in different time-points (baseline, 3 and 6 months). To compare different depression rating scales, t-scores were calculated, and a General Linear Model for repeated measures was used for mean comparison in different time-points. Changes in dosage along the treatment, adverse effects, time for onset of action and clinical outcome by the end of the treatment were also analyzed. **RESULTS** A total of 30 participants were included, 70.0% (n=21) were females. A 57.1% (n=16) of the sample had not tried electroconvulsive therapy, 53.3% (n=8) due to patients refusal, 33.3% (n=5) had no access to the technique and 13.3% (n=2) due to partial contraindications. An statistically significant decrease in the mean depression t-scores ($F(1,4)=39.67$, $p=0.003$) was observed when comparing baseline (mean=62.17, SE=4.24) to 3 months score (mean=40.44, SE=2.81, $p<0.001$), and baseline to 6 months score (mean=36.52, SE=1.43, $p<0.001$). Mean dosage was 50.6mg in day 1, 57.0mg in day 2, 99.6mg/week after 3 months and 92.2mg/week after 6 months. Response and remission rates were 85.7% (n=12) and 42.9% (n=6) respectively. Regarding responders, 75.0%(n=9) responded during the first week and 25.0%(n=3) during the first month. For the remitters, 33.3%(n=2) remitted during the first month, 50%(n=3) during the second month and 16.7%(n=1) during the third month. Feelings of dizziness and nausea were reported by 12.0% (n=3), dissociative symptoms by 12.0%(n=3) and 76.0% (n=19) reported no adverse effects. **CONCLUSIONS** Intranasal esketamine may be a good alternative for patients who fail to respond, refuse, or have partial contraindications to electroconvulsive therapy. It is a fast-acting antidepressant as response was observed mostly during the first week of treatment. It has been an effective and well tolerated pharmacological approach in our sample of patients with treatment resistant depression.

No. 6

Efficacy and Safety of AXS-05, an Oral NMDA Receptor Antagonist With Multimodal Activity, in Major Depressive Disorder: Results From the ASCEND Trial

Poster Presenter: Cedric O'Gorman
Co-Authors: Amanda Jones, Ashley Anderson, Mark Jacobson, Dan Vlad Iosifescu, M.D., Herriot Tabuteau

SUMMARY:
Background: Major depressive disorder (MDD) is a debilitating, chronic, biologically-based condition. Limitations of current pharmacotherapies include high rates of inadequate response, and suboptimal time to response which can be up to 6-8 weeks with current agents. It has been over 50 years since the monoamine hypothesis of depression was first described. Current oral antidepressants act mainly via monoamine mechanisms. There is an urgent

need for faster-acting, more effective, and mechanistically novel treatments. AXS-05 (dextromethorphan-bupropion modulated delivery tablet) is a novel, oral, investigational NMDA receptor antagonist with multimodal activity. AXS-05 utilizes a proprietary formulation and doses of dextromethorphan and bupropion, and metabolic inhibition technology, to modulate delivery of the components. The dextromethorphan component of AXS-05 is an uncompetitive NMDA receptor antagonist and sigma-1 receptor agonist, and the bupropion component serves to increase the bioavailability of dextromethorphan. **Objective**: To evaluate the efficacy and safety of AXS-05 vs. bupropion in MDD. **Methods**: ASCEND was a Phase 2, randomized, double-blind, active-controlled, multi-center, US trial. Adult subjects (N=80) with a confirmed diagnosis of moderate-severe MDD were treated either with AXS-05 (dextromethorphan 45 mg-bupropion 105 mg) (n=43), or the active comparator bupropion (105 mg) (n=37), twice daily for 6 weeks. The primary endpoint was the change from baseline in the MADRS total score, calculated at each study timepoint and averaged (overall treatment effect). **Results**: On the primary endpoint, AXS-05 demonstrated a statistically significant mean reduction from baseline in the MADRS total score over the 6-week treatment period of 13.7 points versus 8.8 for bupropion (p<0.001). At Week 6, AXS-05 demonstrated a 17.2 point reduction in the MADRS total score compared to a 12.1 point reduction for bupropion (p=0.013). AXS-05 rapidly improved depressive symptoms, with a statistically significant improvement over bupropion on the CGI-I scale at Week 1 (p=0.045). Starting at Week 1, AXS-05 achieved superiority over bupropion on the MADRS total score, with statistical significance achieved at Week 2 and maintained thereafter. At Week 6, 47% of AXS-05 patients achieved remission compared with 16% of bupropion patients (p=0.004). The most common AEs in the AXS-05 group were nausea, dizziness, dry mouth, decreased appetite, and anxiety. AXS-05 was not associated with psychotomimetic effects, weight gain, or increased sexual dysfunction. **Conclusion**: AXS-05 treatment resulted in rapid, substantial and statistically significant improvement in depressive symptoms, as compared to the active comparator bupropion. AXS-05 was safe and well tolerated. Based on these rapid and substantial antidepressant effects vs. bupropion, AXS-05 has the potential to address the urgent need for rapidly-acting, more effective and mechanistically novel antidepressants.

No. 7

Efficacy and Safety of AXS-05, an Oral NMDA Receptor Antagonist With Multimodal Activity, in Major Depressive Disorder: Results From the GEMINI Trial

Poster Presenter: Cedric O'Gorman
Lead Author: Amanda Jones
Co-Authors: Caroline Streicher, Samantha Feliz, Dan Vlad Iosifescu, M.D., Herriot Tabuteau

SUMMARY:

Introduction MDD is a debilitating, chronic, biologically-based condition. Limitations of current therapy include high rates of inadequate response, and suboptimal time to response (up to 6-8 weeks). It has been >50 years since the monoamine hypothesis of depression was first described. Current oral antidepressants act mainly via monoamine mechanisms. There is an urgent need for faster-acting, more effective, and novel treatments. AXS-05 (dextromethorphan-bupropion modulated delivery tablet) is a novel, oral, investigational NMDA receptor antagonist with multimodal activity. AXS-05 utilizes a proprietary formulation and dose of dextromethorphan (DM) and bupropion, and metabolic inhibition technology, to modulate the delivery of the components. The DM component of AXS-05 is an uncompetitive NMDA receptor antagonist and sigma-1 receptor agonist, and the bupropion component serves to increase the bioavailability of DM. **Objective** To evaluate the efficacy and safety of AXS-05 vs. placebo in MDD. **Methods** GEMINI was a Phase 3, randomized, double-blind, placebo-controlled, multi-center, U.S. trial, which enrolled subjects with a confirmed diagnosis of moderate-severe MDD. Subjects (N=327) were randomized (1:1) to receive AXS-05 (dextromethorphan 45 mg-bupropion 105 mg) or placebo, twice daily for 6 weeks. The primary efficacy endpoint was the change in the MADRS total score from baseline to Week 6. **Results** On the primary endpoint, AXS-05 demonstrated a statistically significant mean reduction from baseline

in the MADRS total score of 16.6 points vs. 11.9 for placebo (p=0.002). AXS-05 demonstrated rapid, statistically significant improvement vs. placebo on the key secondary endpoint of change from baseline on MADRS total score at Week 1, the earliest time point measured (p=0.007), and all timepoints thereafter. Rates of response were statistically significantly greater for AXS-05 vs. placebo at Week 1 (p=0.035) and at all time points thereafter, being achieved by 54% of AXS-05 patients vs. 34% of placebo patients at Week 6 (p<0.001). Remission rates were statistically significantly greater for AXS-05 vs. placebo at Week 2 (p=0.013) and at all timepoints thereafter, being achieved by 40% of AXS-05 patients vs. 17% of placebo patients at Week 6 (p<0.001). Antidepressant effects translated into early and statistically significant improvements in daily functioning and quality of life. AXS-05 was safe and well tolerated, the most common adverse events being dizziness, nausea, headache, diarrhea, somnolence and dry mouth. AXS-05 was not associated with psychotomimetic effects, weight gain, or increased sexual dysfunction. **Conclusion** Treatment with AXS-05 resulted in rapid, substantial, durable, and statistically significant improvements in depressive symptoms across multiple efficacy endpoints vs. placebo in MDD patients. Symptomatic benefits translated into statistically significant improvements in functioning and quality of life. AXS-05 was safe and well tolerated.

No. 8

Efficacy and Safety of Esketamine Nasal Spray by Sex in Patients With Treatment-Resistant Depression: Findings From Randomized, Controlled Trials

Poster Presenter: Ella J. Daly, M.D.
Lead Author: Robyn R. Jones, M.D.
Co-Authors: Marlene P. Freeman, M.D., Susan G. Kornstein, M.D., Kimberly Cooper, M.P.H., M.Sc.

SUMMARY:

Background: Limited data are available on antidepressant efficacy and safety specific to women. The objective of this analysis was to determine if there are sex differences with esketamine for treatment-resistant depression (TRD). Methods: Post-hoc analyses of three randomized, controlled studies of esketamine in patients with TRD (TRANSFORM-1, TRANSFORM-2 [18-64 years], and TRANSFORM-3 [≥ 65 years]; NCT02417064, NCT02418585, NCT02497287) were performed. In each 4-week study, adults with TRD were randomized to esketamine or placebo nasal spray, each with a newly-initiated oral antidepressant (ESK + AD, AD + placebo). Change from baseline to day 28 in Montgomery åsberg Depression Rating Scale (MADRS) total score was assessed by sex in pooled data from TRANSFORM-1/TRANSFORM-2 and separately in data from TRANSFORM-3 using a mixed-effects model for repeated measures. Rate of response (defined as ≥50% decrease from baseline MADRS total score) at day 28 was determined by treatment group and sex in all 3 TRANSFORM studies, and by menopausal status among women in TRANSFORM-1/TRANSFORM-2. Results: Altogether, 702 adults (464 women) received ≥1 dose of intranasal study drug and antidepressant. Mean (SD) MADRS total score at baseline was 37.7 (5.73) for women and 36.8 (5.21) for men in TRANSFORM-1/TRANSFORM-2 and 35.2 (6.41) for women and 35.2 (5.78) for men in TRANSFORM-3. Mean MADRS total score (SD) decreased from baseline to day 28, more so among patients treated with ESK + AD vs. AD + placebo in both women and men: TRANSFORM-1/TRANSFORM-2 women – ESK + AD -20.3 (13.19) vs. AD + placebo -15.8 (14.67), men – ESK + AD -18.3 (14.08) vs. AD + placebo -16.0 (14.30); TRANSFORM-3 women – ESK + AD -9.9 (13.34) vs. AD + placebo -6.9 (9.65), men – ESK + AD -10.3 (11.96) vs. AD + placebo -5.5 (7.64). There was no significant sex effect or treatment-by-sex interaction (p>0.35). In the TRANSFORM trials, the proportions of patients who were responders at day 28 were numerically higher among both women and men treated with ESK + AD as compared to AD + placebo: TRANSFORM-1/TRANSFORM-2 women – 60.5% vs. 44.9%, respectively, men – 54.7% vs. vs. 45.7%, respectively; TRANSFORM-3 women – 25.6% vs. 19.4%, respectively, men – 29.2% vs. 4.2%, respectively. In TRANSFORM-1/TRANSFORM-2, pre-menopausal and post-menopausal women treated with ESK + AD achieved similar response rates (61.0% and 62.1%, respectively). The most common adverse events (incidence >20%) in esketamine-treated patients were nausea, dissociation, dizziness, and vertigo, each reported at a higher rate in women

than men. Conclusions: These post-hoc analyses support the antidepressant efficacy and safety of esketamine nasal spray for women with TRD, with no clinically significant differences observed compared to men. Efficacy results were similar for pre- and post-menopausal women.

No. 9

Efficacy and Safety of MIJ821 in Patients With Treatment-Resistant Depression: Results From a Randomized, Placebo-Controlled, Proof-of-Concept Study

Poster Presenter: Nassir Ghaemi, M.D.
Co-Authors: Oleksandr Sverdlov, Richard C. Shelton, M.D., Robert E. Litman, M.D.

SUMMARY:

Objective: Long-term efficacy is seldom achieved in patients with treatment-resistant depression (TRD) despite a range of treatment options. MIJ821 is a novel N-methyl-D-aspartate (NMDA) negative allosteric modulator selective for the NR2B subunit, with a potentially low rate of the psychotomimetic side effects that limit the therapeutic utility of ketamine in TRD. This Phase 2 placebo-controlled, active comparator study assessed the efficacy and safety of MIJ821 in patients with TRD. Methods: Adults with major depressive disorder and prior failure of ≥2 standard antidepressants of adequate dose and >8 weeks duration in a major depressive episode (per DSM-5 criteria) and Montgomery-åsberg Depression Rating Scale (MADRS) score ≥24 were enrolled. Patients were randomized to low versus high doses of MIJ821, with two dosing regimens of weekly or biweekly, versus ketamine versus placebo, with primary outcome at 24 hours and final follow up at 6 weeks. The primary endpoint, change in MADRS total score at 24 hours (h) from baseline, was analyzed using analysis of covariance. Secondary endpoints included change in MADRS score at 48 h and clinical global impression-improvement (CGI-I) score at 24 h and 48 h. Safety and tolerability were also assessed. Results: At 24 h, mean decreases in MADRS score were 15.51 points in the pooled MIJ821 low dose group, 12.98 in the pooled MIJ821 high dose group, 12.94 in the ketamine group and 7.27 in the placebo group. Adjusted mean differences (dAM) vs. placebo at 24 h were –8.25 (p=0.001), –5.71 (p=0.019) and –5.67 (p=0.046) and at 48 h were –7.06 (p=0.013), –7.37 (p=0.013), –11.02 (p=0.019) in the pooled MIJ821 low dose, pooled MIJ821 high dose, and ketamine groups, respectively. At 6 weeks, dAM vs placebo on MADRS were –6.46 vs placebo [–11.78, –1.15], p=0.059, dAM [80% CI]) for low dose MIJ821, –5.42 [–10.83, –0.02], p=0.099) for high dose MIJ821, and –5.24 [–10.42, –0.06], p=0.097 for ketamine vs placebo. Results for MIJ821 vs. placebo also suggested benefits for CGI-I scores at 24 h and 48 h. Adverse events (AEs) occurred in 29%, 63%, 50% and 10% of patients in the pooled MIJ821 low dose, MIJ821 high dose, ketamine and placebo groups, respectively. The most common AEs in all treatment groups were amnesia, dissociation, sedation, and vomiting. Dissociative AEs occurred in 24%, 26%, 50% and 10% patients in the pooled MIJ821 low dose, MIJ821 high dose, ketamine and placebo groups, respectively and the corresponding incidence of sedation was 14%, 21%, 10% and 0%. Time to both onset and resolution of dissociative AEs and sedation was, on average, longer for MIJ821 than for ketamine. Conclusions: In this proof-of-concept study, MIJ821 was associated with a significant improvement in MADRS score vs. placebo in patients with TRD. No new safety signals were identified. This study was funded by Novartis. Clinical trial.gov: NCT03756129

No. 10

Fremanezumab Treatment Reduced Monthly Migraine Days and Anxiety or Depression Symptoms for Migraine Patients With Comorbid MDD or GAD in the US

Poster Presenter: Joshua Cohen
Co-Authors: Stephen F. Thompson, Oscar Patterson-Lomba, Maurice Driessen, Michael J. Seminerio, Karen Carr, Todor I. Totev

SUMMARY:

Background: Psychiatric comorbidities, including major depressive disorder (MDD) and generalized anxiety disorder (GAD), are common in migraine.1 The odds of experiencing depression or anxiety are >3 times higher for people with migraine than for those without migraine.2 Fremanezumab, a fully-humanized monoclonal antibody (IgG2da) that

selectively targets the calcitonin gene-related peptide (CGRP), has been approved for migraine preventive treatment in adults.3 This study aimed to assess real-world effectiveness of fremanezumab in patients with migraine and MDD or GAD at baseline for reducing monthly migraine days (MMD) and severity of MDD or GAD symptoms up to 6 months after treatment initiation. Methods: This retrospective, online, panel-based physician chart review used electronic case report forms for patients in the United States. Patient inclusion criteria were a physician diagnosis of chronic migraine (CM) or episodic migraine (EM), ≥18 years of age at the time of fremanezumab treatment initiation (October 2, 2018–July 17, 2020); ≥1 dose of fremanezumab treatment; and a baseline MMD measurement (within 30 days of treatment initiation) and ≥1 MMD measurement during treatment. Changes in MMD and in the physician-assessed severity of MDD and GAD were evaluated in subgroups of patients with MDD or GAD (per the physician's notes) at baseline who were treated with fremanezumab over 6 months. Results: This study included data from 421 physicians and 1,003 patients (with MDD, n=134; with GAD, n=120). Mean baseline MMD were 14.5 for patients with MDD, and 14.3 for patients with GAD. Mean (percent) reductions from baseline in MMD at Month 1 were –5.4(37.2%) in patients with MDD and –5.7(39.9%) in those with GAD; at Month 3, –6.8(46.9%) in patients with MDD and –7.2(50.3%) in those with GAD; at Month 6, –9.9(68.3%) in patients with MDD and –9.5(66.4%) in those with GAD. For patients with MDD and those with GAD, the severity of MDD and GAD symptoms, respectively, at baseline was reported by physicians as no symptoms for 4.5% and 1.7%, mild for 37.3% and 35.8%, moderate for 45.5% and 45.8%, and severe for 10.4% and 15.8% (not assessed, 2.2% and 0.8%). After the index date, physicians reported that MDD and GAD symptom severity improved for 45.5% and 45.8% of patients, was not changed for 47.8% and 50.8%, and worsened for 1.5% and 0.8% (not assessed, 5.2% and 2.5%). Conclusions: In this US real-world study, fremanezumab treatment was associated with clinically meaningful reductions in MMD that increased over 6 months for patients with MDD or GAD at baseline. Almost half of all patients with these psychiatric comorbidities showed improved symptoms of MDD and GAD with fremanezumab treatment.

No. 11

Healthcare Resource Utilization and Costs Among Patients With Episodic or Chronic Migraine and Comorbid Depression and/or Anxiety

Poster Presenter: Dawn C. Buse
Co-Authors: Patricia Pozo-Rosich, Krishna Tangirala, Joshua Cohen, Guihua Zhang

SUMMARY:

Background: Depression and anxiety are common comorbidities for people with migraine; people with migraine are more than 3 times more likely to experience anxiety or depression than those without migraine.1 Comorbid depression has been associated with an increased risk of migraine chronification, more headache days and greater headache severity, and worse quality of life.2-4 This real-world retrospective cohort study evaluated healthcare resource utilization (HCRU) and costs for adult patients with episodic migraine (EM) or chronic migraine (CM) and medically-diagnosed depression and/or anxiety who were commercially or Medicare Advantage insured. Methods: Patients with EM or CM were identified from a large US employer administrative claims database from 2015-2018. Three cohorts of patients (medically-diagnosed anxiety only; depression only; both depression and anxiety) were compared to EM or CM patients without depression/anxiety for all-cause HCRU and associated costs over 1 year. Evaluated outcomes included all-cause inpatient, outpatient healthcare professional (HCP), and emergency department (ED) visits and associated costs over 1 year of follow-up. Results: Of EM patients (N=156,451) and CM patients (N=19,979), respectively, 7.2% and 7.4% had comorbid anxiety, 5.9% and 8.3% had comorbid depression, 6.7% and 8.8% had both depression and anxiety, and 80.2% and 75.6% had neither. For patients with EM, all-cause HCRU was significantly greater for patients with anxiety only, depression only, and depression and anxiety, respectively, versus no anxiety/depression for mean numbers of inpatient visits (0.38, 0.50, and 0.80 vs 0.25), ED visits (1.12, 0.99, and 1.83 vs 0.64), and outpatient HCP visits (18.69, 20.31, and 23.92 vs 13.15; all

P<0.0001). All-cause HCRU was also significantly greater for patients with CM with anxiety only, depression only, and depression and anxiety, respectively, versus no anxiety/depression for mean numbers of inpatient visits (0.23, 0.34, and 0.57 vs 0.17), ED visits (0.81, 0.65, and 1.25 vs 0.43), and outpatient HCP visits (22.20, 24.83, and 28.21 vs 16.18; all P<0.01). All-cause healthcare costs, including inpatient costs, outpatient HCP costs, ED costs, and total healthcare costs, were also significantly higher for patients with EM or CM with depression/anxiety versus those without depression/anxiety (all P<0.001). Patients with both anxiety and depression had greater HCRU and costs than those with either anxiety or depression alone. Conclusion: Patients with EM or CM who have medically-diagnosed depression and/or anxiety have significantly greater all-cause HCRU and costs than those without comorbid depression and/or anxiety in Commercial and Medicare Advantage populations.

No. 12

Impact of Depressive Symptoms on Functioning in MDD Patients With an Inadequate Response to Antidepressant Therapy: Findings From a Patient Survey

Poster Presenter: Pratap Chokka, M.D.
Co-Authors: Stine R. Meehan, Catherine Weiss

SUMMARY:

Background: About half of patients with major depressive disorder (MDD) display an inadequate response to their initial antidepressant treatment. This post-hoc analysis of a large patient survey aimed to explore relationships between the symptoms experienced and patient-reported emotional impact of MDD on functioning. Methods: An online survey was conducted with respondents diagnosed with MDD and experiencing an inadequate response to antidepressants. Current symptoms of depression were assessed using the Patient Health Questionnaire and a predefined checklist of clinical symptoms associated with depression, and functioning was measured using the Sheehan Disability Scale (SDS). Univariate and Shapley Value regression analyses were performed to examine which symptoms had the greatest influence on SDS scores. Results: Overall, 2096 respondents with MDD and inadequate response to antidepressant treatment (mean age 42.1y, time since first episode 10.5y) completed the survey. Most respondents reported presence of the core depressive symptoms: 'feeling down, depressed or hopeless' (98%), 'feeling tired or having little energy' (97%), 'having little interest or pleasure in doing things' (96%) and 'feeling bad about yourself' (94%). In addition, most patients also reported associated symptoms of lack of motivation (77%) and anxiety (67%). Overall, the mean ±SD SDS score was 6.9 ±2.0, indicating a moderate-severe impact on functioning. Univariate analyses found that the presence of nearly all current core and associated symptoms of depression (except irritability and excessive drinking/substance abuse) were related to a statistically significantly higher impact on functioning. This was true for overall functioning, as well as the domains of social functioning and family life. Shapley regression analyses indicated that social isolation/fear had the largest impact on overall functioning and was found to be a driver of poor functioning in the work, social/leisure and family domains. Poor family/home functionality was driven by several symptoms including social isolation/fear of social situations, inability to control and/or express emotions, anger/hostility/combative behavior, and ambivalence. Conclusion: These post-hoc analyses indicate that many of the core and associated symptoms of MDD are significantly related to the degree of functional impairment as measured by the SDS. In particular, fear and social isolation appear to be key drivers of impaired function in patients with MDD experiencing an inadequate response to treatment. Supported by funding from H. Lundbeck A/S and Otsuka Pharmaceutical Development and Commercialization Inc.

No. 13

Increased Suicidality and Worse Outcomes in MDD Patients With OSA: A Nationwide Inpatient Analysis of 11 Years From 2006–2017

Poster Presenter: Ramu Vadukapuram
Co-Authors: Mounica Reddy Thootkur, M.D., Fatima Motiwala, M.D., Chintan Trivedi, Abhishek Reddy, M.D.

SUMMARY:
Introduction: Several studies have shown a strong relationship between Obstructive Sleep Apnea (OSA) and Major depressive disorder (MDD) (1-3). Our goal was to assess the baseline characteristics in MDD with OSA (MDD+OSA) vs. without OSA (MDD-OSA) patients. Our secondary objective was to assess depression severity (moderate-severe vs. other), depression type (single vs. recurrent type), length of stay, and suicidal ideation/attempt between the groups. Methods: Data were obtained from the National (Nationwide) Inpatient Sample (NIS) (4) dataset from 2006 to 2017. For the data collection, we performed the query for all the adult patients (age ≥ 18), with Major Depressive Disorder (MDD) as a primary indication of admission. Further, we categorized MDD patients with and without a secondary diagnosis of obstructive sleep apnea (OSA). To reduce the imbalance in baseline characteristics between the groups, we performed one to one age- gender propensity score match between patients with and without OSA diagnosis. Results: In the original cohort, 4027709 patients were included; however, patients in the MDD+OSA group more patients were male (50% vs. 43%) and older (51 vs. 45, P<0.001). Conclusion: In MDD patients, there was an association of OSA with a higher rate of suicidal behavior. Also, MDD with OSA was associated with severe as well as the recurrent type of depression. As our study stresses on poorer outcomes in patients with MDD and OSA, clinicians should be vigilant for symptoms of OSA in patients with recurrent MDD or treatment-resistant MDD. We also recommend that a thorough suicide risk assessment should be conducted in MDD patients with OSA, and validated questionnaires should be a part of the evaluation.

No. 14
WITHDRAWN

No. 15
Intention to Lose Weight in Hispanics With and Without Depressive Symptoms: An Online Survey

Poster Presenter: Andrés Marcelo Treviño-Alvarez, M.D.
Co-Authors: Jose Guerrero, Dionicio Galarza, Sarai Gonzalez, Alfredo Bernardo Cuellar-Barboza, M.D.

SUMMARY:
Background: Major depression disorder and obesity have a high worldwide prevalence and confer considerable social and medical consequences, moreover, their occurrence has shown bilateral associations1–5. The aim of our study is to perform an online survey to compare the intention to lose weight (ITLW), and related behaviors, between subjects with and without depressive symptoms. **Methods**: This online survey gathers demographic and anthropomorphic information, health and obesity subjective perception, current weight-loss intention and a PHQ-9 survey to determine depressive symptoms. It is open to Mexican adults of both sexes. Participants were randomly invited (N=14) to be measured and weighted, to establish if the self-reported weight and height were reliable. We found a correlation of 0.99. The survey started in August 2019 and the following is a report and analysis up to March 2020. **Results**: 1103 subjects answered the online survey and 87 were excluded, with a remaining sample of 1016. Most subjects in our study showed no past history of diabetes, hypertension or dyslipidemia (93.2%). We found 235 participants (23.1%) with depressive symptoms (DS) scoring ≥10 PHQ-9, and 781 (76.9%) with a score <10 ("No depressive symptoms", NDS). The DS group had more women (69.7% vs 63.2%, P=0.07) and a younger age (25.4 ± 7.1 vs 27.5 ± 9.6, P=0.01) compared with the NDS group. The DS group reported a statistically significant higher ITLW than NDS (80.4% vs 67.3%, P=0.001). However, DS reported worse subjective perception of the results of previously employed diet, exercise and natural supplements; and, higher indications to lose weight by professionals. Moreover, regarding previous trials of weight-loss techniques, the DS group showed a significantly higher use of drugs (32.8% vs 19.8%, P<0.001) and natural supplements (31.1% vs 22%, P=0.005) compared with the NDS group. The DS group rated their health control worse than controls (P<0.001), however there were no significant differences in comorbidities, except for greater BMI in DS (26.09 ± 5.02 vs 24.84 ± 4.63, P<0.001) **Conclusion**: Our preliminary report indicates that subjects with DS present more ITLW and have received more indications to lose weight by professionals, however, they perceive less success

with dieting, exercise and using natural supplements. Moreover, they show a higher tendency to use medication and supplements to lose weight. Our observations call for mental health attention in the implementation of weight-loss strategies for subjects with DS.

No. 16

Is Depression Adaptive? Patterns of Natural and Sexual Selection on Depressive Symptoms in Women

Poster Presenter: Christopher Gurguis, M.D., M.S.
Co-Authors: Hallie Malone, Nicole M. Bucaro, M.D., Samantha Anderson, M.S., Consuelo Walss-Bass, Ph.D.

SUMMARY:
Introduction: Major depression (MDD) is common, heritable, and deleterious to fitness.1 Under these conditions, selection should remove genetic variance in depression, yet prevalence of MDD has increased.2 One explanation is that MDD as a syndrome may be deleterious to fitness, but depressive symptoms may be beneficial.3 If so, we would expect stabilizing selection on depressive symptoms. Alternatively, fluctuating selection could maintain variance in depressive symptoms. In this case, the strength or direction of selection would vary across generations. To test these hypotheses, we measured the strength and direction of natural and sexual selection on depressive symptoms in two generations. Methods: Data was gathered from the National Health and Nutrition Examination Survey 2005-2016. Women age > 51 without evidence of substance use disorder or intellectual or developmental disability were included. Patient Health Questionnaire-9 scores (PHQ-9) greater than 10 are considered a positive screen for MDD. We compared PHQ-9 between generations with a t-test. Natural selection on depression was measured as the covariance between number of pregnancies and PHQ-9.4 The regression of relative mating success on relative reproductive success measures sexual selection4 and is compared between individuals with vs. without a positive screen for MDD in a general linear model. Analyses were performed in SAS Studio v3.8. Results: 3543 individuals met criteria from the Silent Generation (SG, born 1929-1945, N=725) and Baby Boomers (BB, born 1946-1964, N=2818). PHQ-9 increased between generations (mean diff.=0.69, t-value=3.80, p<0.01). For SG, cov(number of pregnancies, PHQ-9)=1.00 (r=0.11, p<0.01); for BB, cov(number of pregnancies, PHQ-9)=1.17 (r=0.13, p<0.01). The regression of relative mating success on relative reproductive success was significant (R^2=0.12, F=30.6, p<0.01). Relative mating success (F=39.24, p<0.01), PHQ-9>10 (F=5.13, p=0.0236), generation (F=21.82, p<0.01), relative mating success x generation (β_{SG}=0.15, β_{BB}=-0.02, F=24.98, p<0.01), education level (F=29.17, p<0.01), and ethnicity (F=20.52, p<0.01) predicted relative reproductive success. Conclusions: Depressive symptoms showed phenotypic evolution with increased PHQ-9. Contrary to prior reports, we detected directional selection favoring increased PHQ-9. Strength of selection varied by generation. We revealed an interaction between sexual selection and generation—relative reproductive success was positively correlated with relative mating success in SG, but not in BB. The result was striking because, despite high variance in number of partners, sexual selection was strong in one generation and absent in the next. These results suggest fluctuating selection contributes to maintenance of variance in depression. The signature of sexual selection detected here highlights the importance of exploring mechanisms other than natural selection in the evolution of depression and other mental illness.

No. 17

Long-Term Efficacy of Fremanezumab in Migraine Patients With Comorbid Depression and Inadequate Response to 2-4 Migraine Preventive Medication Classes

Poster Presenter: Joshua Cohen
Co-Authors: Dawn C. Buse, Verena Ramirez-Campos, Evelyn Du, Richard B. Lipton

SUMMARY:
Background: Up to 30% of people with episodic migraine (EM) and up to 57% with chronic migraine (CM) in the population have depression, and the odds of experiencing depression or anxiety are more than 3 times higher for people with migraine vs those without. The FOCUS study evaluated the efficacy of fremanezumab, a fully-humanized

monoclonal antibody (IgG2Δ a) that selectively targets the calcitonin gene-related peptide (CGRP), as a migraine preventive treatment in patients (pts) with CM and EM and documented inadequate response to 2-4 migraine preventive medication classes. A post hoc subgroup analysis evaluated the efficacy of fremanezumab in pts with moderate to severe depression (Patient Health Questionnaire-9 [PHQ-9] score ≥10 at pretreatment baseline [BL]). **Methods**: Pts were initially randomized (1:1:1) to quarterly (qtly) fremanezumab (Month 1/2/3: 675mg/placebo[PBO]/PBO), monthly (mtly) fremanezumab (Month 1/2/3: 675mg[CM],225mg[EM]/225mg/225mg), or matched mtly PBO for a 12-week, double-blind (DB), PBO-controlled treatment period (DBP). All pts completing the DBP entered a 12-week, open-label treatment period (OLE) and received 3 mtly doses of fremanezumab (225mg). Changes from BL in mtly average migraine days (MMD) and headache days of at least moderate severity (MHD) and in PHQ-9 scores were evaluated in pts with moderate to severe depression. Pts with significant psychiatric issues that, in the investigator's opinion, would compromise the pt's ability to participate were excluded. Results are summarized by DB randomization group; no between-group statistical testing was performed for the OLE. **Results**: Of 838 pts randomized, 807 (96.3%) completed the DBP and entered the OLE. In the DBP and OLE, respectively, 154 (18.4%) and 147 (18.2%) pts had moderate to severe depression. In the PBO, qtly fremanezumab, and mtly fremanezumab DB randomization groups, respectively, least-squares mean (LSM [SE]) changes from BL in MMDs were 0.2 (1.05), −3.2 (0.93), and −3.9 (0.97; both P<0.01 vs PBO) during the DBP, and mean (SD) changes were −3.9 (6.77), −4.4 (5.69), and −5.2 (6.02) during the OLE. In the PBO, qtly fremanezumab, and mtly fremanezumab DB randomization groups, respectively, LSM (SE) changes from BL in MHDs were −0.8 (1.15), − 4.3 (1.01), and −4.7 (1.06; both P<0.01 vs PBO) during the DBP, and mean (SD) changes were −4.5 (6.30), −4.7 (5.53), and −5.3 (5.84) during the OLE. In the PBO, qtly fremanezumab, and mtly fremanezumab DB randomization groups, respectively, LSM (SE) changes from BL in PHQ-9 scores were −4.9 (1.60), −6.7 (1.66), and −7.8 (1.46) during the DBP, and mean (SD) changes were −9.2 (6.30), −9.1 (6.50), and −10.4 (6.65) at the end of OLE treatment. **Conclusions**: Fremanezumab demonstrated sustained effectiveness, based on reductions in MMDs and MHDs, as well as improvements in depressive symptom levels, in pts with migraine, moderate to severe depression, and inadequate response to 2-4 migraine preventive medication classes.

No. 18

Long-Term Therapeutic and Safety Outcomes of Intravenous Ketamine for Treatment-Refractory Depression in a Veteran Population: A Case Series

Poster Presenter: Grace E. Vitek, B.S.
Co-Authors: Ryan Walters, Ph.D., Robert Langenfeld, M.D., Sriram Ramaswamy, M.D.

SUMMARY:
Background: Major depressive disorder is a serious, recurrent, and disabling psychiatric illness. Despite many proven treatments, approximately 30% of patients fail to achieve remission despite treatment with multiple medications or therapies and are considered to have treatment-resistant depression (TRD). Recently, there has been growing interest in the use of intravenous ketamine for treatment of TRD. There is limited yet increasing evidence to support the use of ketamine, a glutamate receptor antagonist, in the management of depression; however, lack of data regarding its long-term safety and tolerability have limited its clinical use. The main safety concerns relate to its property as a hallucinogenic and its potential to be habit-forming. By analyzing a cohort of veterans with TRD and comorbid psychiatric conditions treated with IV ketamine infusions for a prolonged period, we aim to provide critical information about ketamine's long-term clinical effectiveness and safety in order to further the data on long-term outcomes. **Methods:** Based on retrospective chart review, we identified nine patients with TRD receiving treatment with repeated-dose IV ketamine from 2018-2020. Magnitude of clinical response was based on the Beck Depression Inventory (BDI) self-report scale and the Patient Health Questionnaire-9 (PHQ-9), both measured at initial patient consultation and prior to beginning of each ketamine infusion treatment. Safety analysis included changes to pre-

and post-ketamine infusion on vital signs, effects on alertness and sedation, and potential psychosis-like effects. For all outcomes, we estimated a linear mixed-effects model that allowed heterogeneous residual variances for each veteran. The effect of continuous predictor variables was estimated using restricted cubic splines with knot points specified at the 5th, 35th, 65th, and 95th percentiles. All analyses were conducted using SAS v.9.4 with p<.05 indicating statistical significance. **Results:** For both BDI and PHQ-9 scores, there was statistically significant reduction across infusions (both p < .001), but the strongest reduction occurred before day 40. Change was statistically significant for heart rate (p = .019), but not for systolic blood pressure (p = .612), diastolic blood pressure (p = .942), respiratory rate (p = .822), oxygen saturation (p = .070), and temperature (p = .943). Side effects were reported in 6 patients (75%); however, the only side effect reported was excessive sedation or dizziness immediately after infusion. **Conclusion:** In this study, repeated-dose IV ketamine infusions over a prolonged period resulted in significant reduction in depression scores in a group of veterans with TRD. The rapid onset of significant response, absence of psychosis-like effects or dissociative symptoms despite psychiatric comorbidities, and minimal effects on vital signs support the clinical efficacy and safety of this exciting new treatment option for patients with TRD.

No. 19

Measuring Response to Adjunctive Therapy Among Patients With MDD on an Antidepressant

Poster Presenter: Joshua Liberman
Co-Authors: Felicia Forma, Anna Rui, Charles Ruetsch

SUMMARY:

Background Among patients with major depressive disorder (MDD) on antidepressant (ADT) monotherapy, many have inadequate response.1 In these situations, adjunctive pharmacotherapy or psychotherapy is often recommended.2 Little is known about the drivers of real-world response to adjunctive therapy as measured by validated depressive symptom severity instruments.3 Objective To estimate response to adjunctive pharmacotherapy or psychotherapy among MDD patients on ADT. Methods This was a retrospective cohort analysis of patients with MDD on ADT monotherapy and adjunctive pharmacotherapy and/or psychotherapy between 1/1/2014 and 12/31/2018. Patients were on ADT monotherapy for ≥8 weeks preceding and following initiation of adjunctive therapy (index); had at least one PHQ-9 score during the study period (6-months pre- and 12-months post-index); were stratified by insurance type (Medicaid vs. commercial) and by adjunctive therapy: pharmacotherapy, psychotherapy, or both ("dual adjunctive"). The lowest PHQ-9 score reported in the 11-month post-index (follow-up) period was selected to represent response to adjunctive therapy. PHQ-9 scores were categorized into depression severity groups: none/mild (0-4); minimal (5-9); moderate (10-14); moderately severe (15-19); severe (≥20). Scores of ≥10 were deemed "elevated." Results Eligible participants included 1,701 patients with commercial and 688 with Medicaid insurance. Among the commercially-insured, 708 (41.6%) patients had a valid PHQ-9 score within 3 months of index (2 months prior to 1 month following) and of these, 404 (57.0%) had a valid follow-up PHQ-9 score. At index, 71.1% of the dual adjunctive group had an elevated PHQ-9 score (moderate or more severe depressive symptoms), followed by the adjunctive pharmacotherapy group (53.6%) and the adjunctive psychotherapy group (48.9%). Among the adjunctive pharmacotherapy patients with an elevated baseline PHQ-9 score, 23.6% did not improve and overall, 25.2% remained at moderate or higher level of symptom severity. Among the Medicaid-insured, 287 (41.7%) had a valid PHQ-9 score within 3 months of index and of these, 159 (55.4%) had a valid follow-up PHQ-9 score. At index, 66.2% of adjunctive pharmacotherapy group had an elevated PHQ-9, followed by the dual adjunctive group (65.4%) and adjunctive psychotherapy group (62.7%). Among the adjunctive pharmacotherapy patients with an elevated baseline PHQ-9 score, 25 (32.1%) did not improve and overall, 53 (44.5%) remained at moderate or higher level of symptom severity. Discussion The PHQ-9 is underutilized for diagnosis and monitoring MDD. Compared to commercially-insured, the Medicaid population had significantly higher PHQ-9 scores at baseline and at follow up. On average, depressive symptom severity improved

after adjunctive therapy, but many individuals noted no improvement or a worsening of symptoms. Nevertheless, MDD symptoms persisted among many patients analyzed, regardless of treatment type.

No. 20

Neurocognitive Effects of Intravenous Ketamine Treatment in Treatment Resistant Depression

Poster Presenter: Cortney E. Sera, M.A.
Co-Authors: Sagar V. Parikh, M.D., Eric Achtyes, M.D., M.S., John Francis Greden, M.D.

SUMMARY:

Background: Ketamine is an NMDA receptor antagonist associated with learning and memory. In pre-clinical research, limited evidence suggests neurotoxicity, but there is disagreement over how ketamine treatment for treatment resistant depression (TRD) impacts cognitive function1,2,3,4,. We investigated the possible effects of intra-venous ketamine on cognition using the Repeatable Battery for the Assessment of Neuropsychological Status Update®, (RBANS-Update) a brief, individually administered battery5. Methods: We conducted a clinical trial to examine biomarkers of remission to ketamine for resistant unipolar or bipolar depression, involving administering 3 IV ketamine infusions over an 11-day period. At baseline and 24 hours after the last infusion, the RBANS-Update was administered. RBANS-Update is a validated and reliable cognitive battery of 12 subtests focused on 5 indexes of cognition: immediate memory, visuospatial/constructional, language, attention, and delayed memory. Subtest raw scores are converted to standardized index scores by same-age peer groups. Results: Twenty-seven subjects completed the acute phase of infusions and RBANS-Update at the University of Michigan and satellite Michigan State University – Pine Rest site. Preliminary analysis of the 27 participants show, regardless of clinical outcome, there was a significant improvement in all five cognitive indexes and by percentile rank. Overall, there was significant improvement from percentile rank by age group at baseline (M=49.67, SD=27.19) to 24 hours post infusion 3 (M=72.14, SD=30.48) conditions; $t(26)=-4.898$, $p = .000$. A one-way between subjects ANOVA was conducted to compare the effect of remission on percentile rank. Remission was defined as a score of ≤ 9 on the Montgomery–åsberg Depression Rating Scale MADRS. There was no significant difference in remitter group at baseline testing on percentile rank ($F(1, 25) = .228$, $p = .638$). Because there was no difference between participants that experienced remission and did not experience remission at baseline, baseline differences between groups cannot account for the overall improvement. Conclusion: These preliminary data provide evidence of cognitive improvement, not decline, following administration of 3 IV ketamine infusions for depression. While cognitive improvement may be mediated by improvement in depression, even individuals not achieving remission demonstrated cognitive improvement. These data are clinically reassuring that low doses of ketamine do not cause neuro-cognitive deficits. Further analysis will be done to explore how depression improvement mediates improved cognition as well as how cognitive performance may be linked to suicidal ideation1. This study was supported by a magnanimous gift from Jeanne Robertson to the University of Michigan Depression Center, with enrollment augmented via sharing with the National Network of Depression Centers.

No. 21

Novel Application of Sequence Analysis in Treatment Pattern Identification of Major Depressive Disorder Based on Electronic Health Records

Poster Presenter: Sijia Dong, M.P.H.
Co-Authors: Tao Wu, M.Sc., Jun Chen, Ph.D., Yifeng Xu, Ph.D., Yiru Fang, Ph.D.

SUMMARY:

Background: The treatment patterns of major depressive disorder (MDD) in China has not been well-understood due to its complexity and diversity. We applied multi-channel sequence analysis (MCSA) to identify and describe patterns from the often-complex treatment pathways based on Electronic Health Records (EHR) from a major psychiatric hospital in China. Methods: MDD patients (18-65 years, ICD-10: F32.x, F33.x) newly initiated single antidepressant (AD) in 2015 were included. Three

channels of sequence data of length 365 days in the 1-year follow-up from treatment initiation was built from patient's daily usage of AD (classes), cumulative treatment step, and the polypharmacy usage, unsupervised hierarchical clustering was applied to the pairwise 3 channel dissimilarities matrix to identify homogeneous groups sharing similar patterns in terms of the 3 channels. Clustering homogeneity was assessed by Average Silhouette Width (ASW) index. Results: A total of 5003 MDD patients were included and 4 clusters (ASW: 0.65) correspond to 4 distinguishable treatment patterns were identified, accounting for 73.6% (3686), 9.5% (474), 11.1% (557) and 5.7% (286) of all patients respectively. Cluster 1 and 2 had relatively short treatment duration of 35.0 (sd: 27.62) and 180.8 (sd: 46.25) days, while prolonged duration of 333.0 (sd: 49.64) and 357.3 (sd: 18.66) days were observed in cluster 3 and 4, respectively. In all clusters, Selective Serotonin Reuptake Inhibitors (SSRIs) was the dominated AD class, with 64.4%, 62.4%, 75.7% and 72.4% patients had ever used SSRI, respectively. Noticeably, relatively more AD classes were observed in cluster 4. On the other hand, cluster 4 had the highest cumulative treatment step of 3.3 (sd: 1.27) whereas patients in cluster 1-3 mostly stayed in the initial treatment without changing further. In addition, single-drug usage dominated in first three clusters (97.1%, 83.6%, 98.0% of treatment duration, respectively) while 36.5% of duration was spent on multi-drug in cluster 4. Conclusion: In this study, four MDD treatment patterns were identified and visualized with multi-channel sequence analysis. The identified treatment patterns provided additional knowledge of and insights into MDD treatment in a real-world setting, which may benefit MDD patient treatment management in practice.

No. 22

Profile, Acceptability and Potential Efficacy of Vortioxetine (Brintellix) Use in Indian Patients With Major Depressive Disorder: A Preliminary Report

Poster Presenter: Parmod Kumar, M.D.
Co-Authors: Nitin Gupta, Shubham Kamal

SUMMARY:

Profile, Acceptability and Potential Efficacy of Vortioxetine (Brintellix) Use in Indian Patients with Major Depressive Disorder: A Preliminary Report: Parmod Kumar, Shubham Kamal, Nitin Gupta. Introduction/Background: Vortioxetine has been approved by the FDA since 2013 for treatment of adults with Major Depressive Disorder (MDD); but only recently (October 2018) by the Drug Controller General of India (DCGI) in India. There is no available literature on its use in India. Methodology: 30 patients were identified as per ICD-10 diagnostic criteria of Depression (F32/F33) in a private out-patient practice. Any patient with comorbid medical, neurological or psychiatric illness were excluded. They were offered Vortioxetine as the first line antidepressant after explaining about it in detail, and were assessed on socio-clinical variables, Patient Health Questionnaire (PHQ-9), Neuropsych Questionnaire - Short Form (NPQ-SF), and Central Nervous System - Vitals Signs (CNS-VS) at baseline. Naturalistic follow-up was planned after minimum 4 weeks of intervention. Results: Predominantly sample aged under 30 years (50%), male (60%), educated till graduation (80%), earning at least INR 100,000/month (80%), of nuclear family (80%). As per ICD-10, 13.3% suffered with mild, 60% moderate, and 26.7% severe degree of depression. Mean PHQ-9 score was 15.5+5.36; 20% being minimal-mild, 56.7 being moderate- moderately severe, and 23.3% severe. NPQ-SF was assessed on 12 domains with scores ranging from 0-300 (mood stability) to 83-283 (anxiety). The mean CNS-VS Neurocognition Index score was 80.83+19.44. All patients accepted Vortioxetine; none shifted medication or dropped out during initial clinical follow-up. Good tolerability was reported. 20% (6/30) sample was reassessed at time of abstract submission; mean interval of 9.6+4.89 (range=4-19) weeks. There was significant reduction in PHQ scores (3.66+4.26), but no change on various domains of NPQ-SF and CNS-VS. Conclusions: Vortioxetine has good acceptability, clinical efficacy and tolerability. Effect on cognitive aspects is equivocal. It seems to be a useful addition to the antidepressant armamentarium in the Indian scenario.

No. 23

Psychiatric Comorbidities in Adults With Di-George Syndrome: A Nationwide/National Inpatient Sample (NIS) Analysis

Poster Presenter: Ramu Vadukapuram
Co-Authors: Hiren Patel, M.D., Kanwarjeet Singh Brar, M.D., Venkata Siva Sudhakar Reddy Lokireddy, Muhammad Khalid Zafar, M.D.

SUMMARY:

Introduction: DiGeorge Syndrome (DGS) is a common multisystem disorder associated with deletions on chromosome 22q11.2 (1). Our objective is to evaluate the psychiatric comorbidities and demographics of patients suffering from DGS in a nationally representative dataset on inpatient hospitalizations. To the best of our knowledge, this is the first study assessing the psychiatric comorbidities and demographics of patients suffering from DGS in a nationally representative dataset on inpatient hospitalizations. Methods: The Nationwide Inpatient Sample (NIS) for the year 2005-2017 was used for this study. The NIS database has a 20% stratified random sample of all hospital discharges in the United States, and it includes all patients irrespective of the insurance status (2). Data on patients with DiGeorge syndrome were collected from January 2005 to December 2017 by using (ICD-9-CM) and (ICD-10-CM/PCS). Univariate and multivariate logistic regression analysis was performed to evaluate the variables associated with psychiatric comorbidities. Statistical analysis was performed using SPSS version 26.0. Results: In our study, the average age was 30.4 years (n=6563), with 59.9% male, and 61.8% of patients were white. There was a high prevalence of mood disorders (24.7%) and anxiety disorders (16.4%), followed by schizophrenia and other psychotic condition (14.0%). In patients with mood disorders, 8% had Major Depressive Disorder, and 7% had bipolar depression. Overall composite of psychiatric comorbidities was present in 2959 (45.1%) of patients. The mean length of stay was 6.58 days, and 77% of patients had routine discharge to home. In the adjusted analysis, the average length of stay was 8.6 days vs. 6.7 days (P<0.001). Conclusion: Patients with DGS have worse outcomes with a higher rate of discharge to other healthcare facilities and a higher rate of being discharged against medical advice. Further large scale randomizer studies are indicated to understand these outcome

No. 24

Rapid and Sustained Improvements in Quality of Life and Functioning With AXS-05, Oral NMDA Receptor Antagonist, in Patients With Major Depressive Disorder

Poster Presenter: Cedric O'Gorman
Co-Authors: Amanda Jones, Zachariah Thomas, Herriot Tabuteau

SUMMARY:

Introduction Major depressive disorder is a leading cause of disability. Depression significantly impairs functioning and quality of life (QoL). Studies with current therapies show functional improvement trails symptomatic benefit. Treatments which rapidly improve QoL and functioning, as well as depressive symptoms, are urgently needed. AXS-05 (dextromethorphan-bupropion modulated delivery tablet) is a novel, oral NMDA receptor antagonist with multimodal activity. The dextromethorphan (DM) component of AXS-05 is an uncompetitive NMDA receptor antagonist and sigma-1 agonist. AXS-05 utilizes a proprietary formulation and dose of DM and bupropion, and metabolic inhibition technology, to modulate delivery of the components. Objective To assess the effect of AXS-05 versus placebo on QoL and functioning in MDD patients. Methods GEMINI was a randomized, double-blind, placebo-controlled, trial, in which 327 adults with moderate or severe MDD were randomized 1:1 to AXS-05 (dextromethorphan 45 mg-bupropion 105 mg) or placebo treatment twice daily for 6 weeks. The primary endpoint was change from baseline in MADRS total score at Week 6. Key secondary endpoints assessed rapidity, at Weeks 1 and 2. QoL and functioning assessments included the Quality of Life Enjoyment and Satisfaction Questionnaire (Q-LES-Q-SF) and the Sheehan Disability Scale (SDS), respectively. The Q-LES-Q-SF is a self-reported, 16-item scale. The raw score is converted to a % of maximum possible score, with higher %''s reflecting better QoL. The SDS is a 3-item questionnaire evaluating impairments in work, social life/leisure, and family life/home responsibility. Results AXS-05 rapidly, substantially, and durably

improved depressive symptoms on the MADRS total score versus placebo, with statistical significance as early as Week 1, and at all timepoints thereafter including the primary timepoint of Week 6. Baseline Q-LES-Q-SF scores were 34% for AXS-05 and 36% for placebo. Improvements from baseline were statistically significant for AXS-05 versus placebo beginning at Week 1 (9.04% and 5.79%, respectively, p=0.031) and at Week 2 (13.21% and 8.88%, respectively, p=0.017), Week 3 (16.63% and 11.50%, respectively, p=0.009), Week 4 (19.01% and 12.48%, respectively, p=0.002), and Week 6 (19.84% and 14.37%, respectively, p=0.011). Baseline SDS total scores were 20.3 for AXS-05 and 19.3 for placebo. Improvements from baseline were statistically significant for AXS-05 versus placebo beginning at Week 2 (6.82 and 4.47, respectively, p=0.003) and at Week 3 (6.98 and 5.21, respectively, p=0.027), Week 4 (8.68 and 6.13, respectively, p=0.003), and Week 6 (8.87 and 6.25, p=0.002). Conclusions AXS-05 treatment resulted in rapid and substantial improvements in QoL and functioning in tandem with rapid antidepressant effects, starting at Week 1 and sustained through Week 6. These findings suggest that AXS-05, as a mechanistically novel medicine, rapidly improves depressive symptoms, quality of life, and functioning.

No. 25

Rapid and Sustained Antidepressant Effects of REL-1017 (Dextromethadone) as an Adjunctive Treatment for Major Depressive Disorder: A Phase 2 Trial

Poster Presenter: Marco Pappagallo
Lead Author: Maurizio Fava, M.D.
Co-Authors: Stephen Stahl, Charles Inturrisi, Paolo Manfredi

SUMMARY:

Background: N-methyl-D-aspartate receptor (NMDAR) channel blockers are a new drug class with potentially rapid and effective antidepressant activity. REL-1017 (dextromethadone HCl) blocks the NMDAR with no typical opioid or psychotomimetic effects. This trial investigated the effects of REL-1017 as adjunctive treatment in patients with major depressive disorder (MDD) who failed 1 to 3 courses of standard antidepressant treatments (SAT) in the current major depressive episode (MDE). Methods: This Phase 2, multicenter, randomized, double-blind, placebo-controlled 3-arm trial assessed the safety, tolerability, pharmacokinetics (PK) and efficacy of oral REL-1017 once daily as adjunctive therapy in patients with MDD. Patients were 18-65 year old adults with inadequate responses to 1-3 SATs in the current MDE. Patients were randomized in a 1:1:1 ratio to either placebo (n=22), or REL-1017 25 mg QD (n=19) or REL-1017 50 mg QD (n=21). Patients in the REL-1017 groups received a single oral loading dose of 75 mg (25 mg group) or 100 mg (50 mg group) on Day 1. On Days 2-7, inpatient treatment continued with placebo, 25 mg or 50 mg and patients then discharged on Day 9 with follow up visits on Days 14 and 21. Efficacy was assessed with the Montgomery-Asberg Depression Rating Scale (MADRS), Symptoms of Depression Questionnaire (SDQ) and Clinical Global Impression (CGI) scales at Days 2, 4, 7, and 14. Safety scales included the 4-Item Positive Symptom Rating Scale (4-PSRS) for psychotomimetic symptoms, Clinician-Administered Dissociative States Scale (CADSS) for dissociative symptoms, Clinical Opiate Withdrawal Scale (COWS) for withdrawal signs and symptoms and Columbia Suicide Severity Rating Scale (C-SSRS) for suicidality. The PK samples were collected on Days 1-9 and 14. Results: All 62 randomized patients [$\bar{x}$ age = 49.2 years, $\bar{x}$ baseline Hamilton Depression Rating Scale-17 (HAM-D-17) score = 25.3, $\bar{x}$ baseline MADRS score = 34.0] were evaluated. Significant improvements with REL 1017 25 and 50 mg vs. placebo were observed on the MADRS, CGI-S, CGI-I, and SDQ. Significant improvement on the MADRS appeared on Day 4 in both REL-1017 dose groups and was sustained through Day 7 (last dose) and Day 14 (7 days after the last dose) with p≤0.0308 and effect sizes from 0.7 to 1.0. Similar findings emerged from the CGI scales. Adverse event (AE) profiles were similar with placebo and REL-1017 groups, AEs were transient and mild or moderate, and no serious AEs occurred. No evidence was observed of dissociative or psychotomimetic effects, opioid effects or withdrawal signs and symptoms. Conclusion: Oral REL-1017 showed robust, rapid, and sustained antidepressant effects and favorable safety, tolerability, and PK profiles in patients with MDD. The study confirmed the favorable safety, tolerability, and PK profile with REL-1017 in Phase 1

studies. REL-1017 has the potential to be an effective, rapid-onset, safe, and well-tolerated NMDAR channel blocker antidepressant.

No. 26

Response to Esketamine Nasal Spray in Patients With Major Depressive Disorder and Acute Suicidal Ideation/Behavior Without Evidence of Early Response

Poster Presenter: Dongjing Fu
Co-Authors: Giacomo Salvadore, Ibrahim Turkoz, Gerard Sanacora, M.D., Ph.D., Richard C. Shelton, M.D.

SUMMARY:

Introduction: ASPIRE I and ASPIRE II were two global phase 3 studies that evaluated the efficacy and safety of esketamine nasal spray (ESK) versus placebo nasal spray (PBO), in addition to comprehensive standard of care (SoC; defined as initial hospitalization and initiation or optimization of antidepressant [AD] therapy), in adults with major depressive disorder (MDD) and active suicidal ideation with intent.1,2 In this post hoc analysis, we assessed the likelihood of achieving response to ESK+SoC vs PBO+SoC at 4 weeks in patients who did not meet response criteria within the first week of treatment. **Methods**: This is a pooled, post hoc analysis of two identically designed, randomized, double-blind, placebo-controlled studies (ASPIRE I [NCT03039192], ASPIRE II [NCT03097133]). Adult patients with MDD (Montgomery-Åsberg Depression Rating Scale [MADRS]3 total score >28) and active suicidal ideation with intent were randomized 1:1 to twice-weekly treatment with ESK (84 mg)+SoC or PBO+SoC for 4 weeks. Response was defined as ≥50% improvement from baseline in MADRS total score. Response rates at day 25 pre-dose were determined for patients who did not meet response criteria by (a) 24 hrs (day 1 [4 hrs and 24 hrs post-dose]), and (b) week 1 (day 1 [4 hrs and 24 hrs post-dose] and day 8 [ie, after 2 doses]). Observed response rates at day 25 were compared between ESK+SoC and PBO+SoC using Cochran–Mantel–Haenszel tests. Multiple logistic regression models were performed to estimate the probability of response at day 25 pre-dose when early response criteria were not met; odds ratios (ORs) and 95% CIs were computed. **Results**: Of 451 patients in the full efficacy analysis set, 362 had MADRS total score data at day 25 pre-dose (ESK+SoC, N=182; PBO+SoC, N=180). Overall, response was attained by 74.6% (135/181) of patients in the ESK+SoC group and 58.3% (105/180) in the PBO+SoC group (P<.001) at day 25 pre-dose. In patients without a response by 24 hrs, 69.9% (100/143) who received ESK+SoC and 54.5% (85/156) who received PBO+SoC achieved response at day 25 pre-dose (OR, 2.11; 95% CI, 1.33-3.36; P=.002). In patients without a response by week 1, 69.4% (102/147) and 54.7% (87/159) in the ESK+SoC and PBO+SoC groups, respectively, achieved response at day 25 pre-dose (OR, 2.07; 95% CI, 1.29-3.31; P=.003). Similar results favoring ESK+SoC were observed for rates of remission (defined as MADRS score ≤12) at day 25. **Conclusion**: Among patients with MDD and active suicidal ideation with intent who did not meet response criteria within the first week of treatment, those receiving ESK+SoC had a significantly higher likelihood of achieving response at day 25 pre-dose compared with those receiving PBO+SoC. These findings support the benefit of continuing ESK+SoC for the full 4-week treatment in this particularly ill patient population. **Funding**: Editorial and medical writing services were provided by ApotheCom and funded by Janssen Scientific Affairs, LLC, USA.

No. 27

Saudi Arabia Mental Health Surveillance System (MHSS): Mental Health Trends During Covid-19 and Comparison With Pre-Covid-19

Poster Presenter: Nora Althumiri

SUMMARY:

Abstract Background The potential impact of the COVID-19 pandemic on population mental health started to emerge. This study describes the mental health trends (major depressive disorders (MDD) and generalized anxiety disorders (GAD)) between (May 2020 to August 2020). It also compares the results with pre-COVID-19 results and identifies risk factors associated with an increased likelihood of being at risk of MDD and GAD. Methods This study utilizes continuous cross-sectional national level mental health screening via computer-assisted phone-interviews conducted on four waves on a

monthly basis (Between May to August 2020). Arabic speaking adults aged 18 and above from Saudi Arabia were recruited via a random phone list. This surveillance system will use the proportional quota sampling technique to get an equal distribution of participants, stratified by age and gender, and region within and across the 13 administrative regions of Saudi Arabia. A sample size of 4,056 participants per wave was calculated to achieve enough power to detect changes in mental health status. The questionnaire includes the Arabic version of the patient health questionnaire (PHQ-9) to measure MDD and the General Anxiety Disorder-7 (GAD-7) to measure GAD. Reliability and internal consistency were conducted in a pilot phase to validate the data collection process. Pre-COVID-19 comparison was done using PHQ-2 score to allow for comparison with similar previous national study in 2018. Findings Across the 4 waves, 16513 participants completed the interviews, with an overall response rate of 81.3%. The weighted national prevalence of people at risk of MDD was 14.9% overall and 13.8%, 13.6%, 16.8%, and 15.3% in waves 1, 2, 3, and 4 respectively. In terms of the weighted national prevalence of people at risk of GAD the overall was 11.4% and 10.9%, 10.7%, 12.4%, and 11.7% in waves 1, 2, 3, and 4 respectively. The weighted national proportion of individuals who is at risk of both MDD and GAD at the sometimes was 7.4% overall. The risk of MDD on PHQ-2 increased by 71.2% from 12.5% in 2018 to 21.4% in 2020. Having chronic health conditions, working completely from home, obesity, cigarette smoking, worries about getting COVID-19, and living with the elderly were significantly associated with being at risk of MDD and GAD. Interpretation The results showed that the risk of MDD and GAD is relatively high and increasing. These results will help decision-makers to understand the impact of COVID-19 pandemic on the population''s mental health and to customize the support to the most impacted sub-groups.

No. 28

Sustained Efficacy and Long-Term Safety of AXS-05, an Oral NMDA Receptor Antagonist in Major Depressive Disorder: COMET Study Results

Poster Presenter: Amanda Jones
Co-Authors: Cedric O'Gorman, Herriot Tabuteau

SUMMARY:
Introduction AXS-05 (dextromethorphan-bupropion modulated delivery tablet) is a novel, oral, investigational NMDA receptor antagonist with multimodal activity being developed for major depressive disorder (MDD). AXS-05 utilizes a proprietary formulation and doses of dextromethorphan and bupropion, and metabolic inhibition technology, to modulate the delivery of the components. The dextromethorphan component of AXS-05 is an uncompetitive N-NMDA receptor antagonist and sigma-1 agonist, and the bupropion component serves to increase the bioavailability of dextromethorphan. The efficacy of AXS-05 in MDD has previously been demonstrated in two positive controlled (1 vs. placebo and 1 vs. bupropion) clinical trials. Objective To evaluate the long-term efficacy and safety of AXS-05 in MDD. Methods A total of 609 patients who did not participate in a prior AXS-05 study were enrolled into the COMET Phase 3 trial. Patients were treated with open-label AXS-05 (dextromethorphan 45 mg-bupropion 105 mg modulated delivery tablet) twice daily for up to 12 months and evaluated for efficacy and safety. Efficacy measures included the Montgomery-åsberg Depression Rating Scale (MADRS), Clinical Global Impression of Improvement (CGI-I), the Sheehan Disability Scale (SDS). Results AXS-05 treatment resulted in rapid, substantial, and durable improvement in depression and functioning sustained over up to 12 months. Mean reductions on the MADRS total score were 14.0, 21.1, 23.9 and 23.0 at Week 2, Week 6, Month 6 and 12, respectively. Clinical response (≥ 50% improvement on MADRS) was achieved by 39.7%, 73.2%, 84.6% and 82.8% of patients at Week 2, Week 6, Month 6 and 12, respectively. Remission (≤ 10 on MADRS) was achieved by 21.5%, 52.5%, 68.7% and 69.0% of patients at Week 2, Week 6, Month 6 and 12, respectively. Marked or moderate improvement on the CGI-I was observed for 50.4%, 83.1%, 86.7% and 93.1% of patients at Week 2, Week 6, Month 6 and 12, respectively. Patients experienced rapid, substantial, and durable improvement in functional impairment. Functional response (≤12 on SDS total score) was achieved by 55.1%, 70.7%, 80.6% and 75.9% of patients at Week 2, Week 6, Month 6 and 12, respectively. AXS-05 treatment was well tolerated. The safety profile observed was consistent

with prior controlled trials. The most commonly reported adverse events in the COMET trial were dizziness (12.7%), nausea (11.9%), headache (8.8%), dry mouth (7.1%), and decreased appetite (6.1%). AXS-05 was not associated with psychotomimetic effects, cognitive impairment, weight gain, or increased sexual dysfunction. Conclusions Over up to 12 months of open-label treatment, AXS-05 was well tolerated, and demonstrated rapid, substantial and durable improvements in depression and functional impairment. These results build on those observed in prior controlled trials of AXS-05 as a potential novel, oral, rapidly-acting and durable treatment for MDD.

No. 29

The Utility of Using Self-Reports for Assessing Cognitive Impairment in Depression

Poster Presenter: Rebecca Tzalazidis, M.A.
Co-Authors: Josephine Tan, Ph.D., Konstantine Zakzanis, Ph.D., Martin A. Katzman, M.D.

SUMMARY:

Background: Depression is associated with a number of cognitive deficits that are associated with increased functional impairment1. Cognitive functioning can be examined by way of objective performance-based neuropsychological tests grounded in psychometrics and/or subjective self-report measures. Depression is associated with cognitive impairment on objective psychometric neuropsychological tests in the domains of attention, memory, executive functioning, and visuospatial functioning2,3,4,5. Using subjective self-report of cognitive functioning, depression has also been found to be associated with greater self-reported impairments in attention, memory, and executive functioning6. Previous research on the concordance between these types of measures has however produced mixed findings and none have made domain-specific comparisons. The purpose of the present study was to investigate the concordance between objective psychometric neuropsychological tests and subjective self-report of cognitive functioning. Methods: Participants included individuals (N = 31, 16 women, 15 men, M(age) = 42.35 years, SD = 13.45) who had a history of a major depressive episode. Diagnoses were obtained using a semi-structured clinical interview. Participants were given psychometric measures of attention, memory, language, visuospatial functioning, and executive functioning using a neuropsychological test battery and completed subjective self-reports of cognitive functioning in the same domains using two self-report measures. Participants also completed questionnaires that examined severity of depression and anxiety symptoms, as well as medical and sociodemographic questionnaires. Findings: Results showed that objective psychometric neuropsychological tests and subjective self-report of cognitive functioning were correlated only in the domain of attention. Also, depression severity was more strongly correlated with self-reported cognitive impairment. This suggests that self-reported cognitive impairment reflects the influences of mood. Implications for the use of psychometric neuropsychological tests and self-reports to assess cognitive impairment in depression in research and in practice will be discussed.

No. 30

Treatment Resistant Depression Treated With Repetitive Transcranial Magnetic Stimulation (rTMS) in a Patient With Adult Onset Tourette's Disorder

Poster Presenter: Maria A. Rueda-Lara, M.D.
Co-Authors: Edmi Cortes Torres, M.D., Rakesh Sharma, M.D., Nelson Milhet, Ivana Espinosa

SUMMARY:

Mrs. S is a 72 year-old female with a history of Tourette's disorder of adult onset with symptoms since the age of 40. She reported first noticing motor tics that were characterized by flexion extension of the neck, rotation, and at times involuntary tilting. These ticks became severe and spread to her upper extremities and her trunk. Additionally, she developed vocal tics that were characterized by words preceded by a sensory urge as well as sneezing. Her Tourette's disorder remained untreated until 2014. In 2012 she was diagnosed with breast cancer and received treatment with lumpectomy, chemotherapy, and radiation. After her cancer diagnosis, she developed severe symptoms of depression including anhedonia, hypersomnia, lack

of interest, decrease energy and passive suicidal ideations. She was treated with multiple antidepressants with only a partial response (Fluoxetine, Amitriptyline, Citalopram, Sertraline, Bupropion, and Venlafaxine). Risperidone was initiated to treat her tic disorder and she also had a partial response. She was later switched to Aripiprazole for treatment of her tic disorder as well as augmentation strategy to target residual depressive symptoms. During treatment with Aripiprazole she achieved almost complete remission of her tic disorder. However, she continued to suffer from residual depressive symptoms including ongoing depressed mood and severe hypersomnia. She saw a neurologist who prescribed Modafinil to treat hypersomnia which was beneficial. She underwent a sleep study which results suggested hypersomnia due to depression and medications. Brain MRI showed scattered areas of hyperintense FLAIR signal in the periventricular and subcortical white matter without mass effect, likely chronic microangiopathic ischemic changes; otherwise it was unremarkable. Since she had a partial response from her pharmacological treatment for depression, Mrs. S was referred for treatment with rTMS. She was evaluated and deemed a good candidate for rTMS. During her first session, motor threshold was assessed by mapping at 63% Left dorso lateral prefrontal cortex. She received 30 sessions with standard 3000 brief pulses delivered with a repetition rate of 10 pulses per second in 4-second bursts with 26 second pauses in between. Total duration of 37 minutes per session. Patient tolerated well rTMS treatment with no reported side effects or adverse reaction. Patient's depressed mood and hypersomnia significantly improved with rTMS treatment and Mrs. S achieved remission of her symptoms. In this poster, we present a case of a patient with treatment resistant depression and Tourette's disorder. We will describe and discuss the challenges associated with her diagnostic co morbidities and different therapeutic approaches to treat her conditions with focus on how rTMS was significantly beneficial to achieve remission.

No. 31

UNITE Randomized, Placebo-Controlled Phase 4 Study Protocol: Fremanezumab for Preventive Migraine Treatment in Patients With Major Depressive Disorder

Poster Presenter: Richard B. Lipton
Co-Authors: Verena Ramirez-Campos, Maja Galic, Evelyn Du, Joshua Cohen

SUMMARY:
Background: Migraine is a common, highly disabling disease, and depression is a common comorbidity in patients with migraine.1 A lifetime prevalence of major depressive disorder (MDD) of approximately 19% has been reported in patients with migraine versus 10% in individuals without migraine.2 Fremanezumab is a fully-humanized monoclonal antibody (IgG2da) that selectively targets calcitonin gene-related peptide (CGRP) and has been approved in the US and EU for the preventive treatment of migraine in adults.3,4 The UNITE study aims to evaluate the efficacy of fremanezumab in adult patients with migraine and MDD. Methods: UNITE is a 28-week study, including a 4-week baseline period, 12-week randomized, double-blind, placebo-controlled period, and 12-week open-label extension (OLE) period. The study includes adult patients (18-70 years of age) with a diagnosis of migraine with onset at ≤50 years of age, a 12-month history of migraine or headache consistent with migraine, a history of MDD for ≥12 months, and a Patient Health Questionnaire-9 score of ≥10 at screening. For the initial 12-week treatment period, patients will be randomized to treatment with subcutaneous (SC) monthly fremanezumab (225 mg) or matched monthly placebo. During the subsequent OLE period, all patients will receive active treatment with quarterly fremanezumab (675 mg). The primary endpoint is the change in the monthly average number of migraine days from baseline to week 12. Secondary efficacy endpoints include the changes in depression symptoms (on the 17-item Hamilton Depression Rating Scale), quality of life (on the Migraine-specific Quality of Life questionnaire), disability score (Headache Impact Test) and disease severity score (Clinical Global Impression-Severity), as well as the proportion of patients with ≥50% reduction in monthly average migraine days. Safety and tolerability endpoints include proportions of

patients reporting adverse events, use of concomitant medication for adverse events, and discontinuation due to adverse events, as well as the change in electronic Columbia-Suicide Severity Rating Scale scores. Results: The study is planned to be conducted in approximately 65 centers in 13 countries, with an estimated sample size of 340 patients. Conclusion: By assessing a range of efficacy outcomes, patient-reported outcomes, and tolerability in patients with MDD, UNITE will provide valuable evidence for the efficacy and tolerability of fremanezumab in patients with migraine and comorbid MDD.

No. 32

A Systematic Review of Loneliness and Social Isolation Scales Used in Epidemics and Pandemics

Poster Presenter: Aparna Das, M.D.
Co-Author: Prasad K. Padala, M.D.

SUMMARY:

Background: It is said “no man is an island”. People are by nature social animals who like to socialize, intermingle, and share experiences with each other. The recent pandemic has led concerns about increased social isolation and loneliness both due to the infectious nature of the virus and the public health safety measures used to limit the spread of infection. Loneliness and social isolation could have far reaching consequences as they may be a trigger for various psychiatric and physical illnesses. There has been no loneliness or social isolation scale developed specifically for epidemic/pandemic. **Objectives**: The present study was undertaken with the aim to identify well validated loneliness and social isolation scales that can be used in the context of epidemics and pandemics. **Methods**: We searched PubMed/MEDLINE, CINAHL, Web of Science, and APA Psych INFO databases which revealed 7229 articles. Using the inclusion and exclusion criteria, and expert panel adjudication, 41 articles were ultimately included. **Results**: The study identified a total of fourteen scales. Among these scales, UCLA 3 item loneliness scale has been the most popularly used scale in the recent past and most suitable for use during the current pandemic. We also discuss the trends in the use of top three scales. **Conclusions**: The current pandemic, though an adverse public health situation, is an opportune time for further research into loneliness and social isolation and which can potentially help in the development of new scales. UCLA 3 item loneliness scale may be suitable for use during the current pandemic.

No. 33
WITHDRAWN

No. 34

Internet Gaming Disorder Scale–Short Form: Psycchometrics Aspects of Brazilian Study

Poster Presenter: Flávia L. Osório
Co-Authors: Eduardo Bombonatti, Ana Carolina Rossini Darwin

SUMMARY:

Introduction: Internet gambling disorder (IGD) consists of a pattern of persistent use of the Internet to participate in online games, leading to significant impairment / suffering. The negative impacts associated with the IGD are multiple, involving social, labor and / or educational activities, as well as the usual and expected interpersonal and family relationships. Considering the severity and the lack of instruments with adequate psychometric qualities to assess the dependence of online games, especially in the Brazilian context, the study of validity and reliability of the Internet Gaming Disorder Scale - Short-Form (IGDS9-SF) was carried out in a Brazilian sample of adult amateur players. Methods: Internal consistency (Cronbach's Alpha), convergent validity and test-retest reliability were analyzed using statistical techniques with Statistical Package for the Social Sciences software. A total of 888 subjects (82% men; mean age 26.2 years (± 7.0) completed the data collection that was carried out through the Google Form Platform. Results: 53.6% of the participants reported playing every day, about 3.7 hours on average (minimum 1 hour, maximum 20 hours per day). The internal consistency of the scale, assessed using Cronbach's alpha, was 0.87 and the item-total correlation ranged from 0.48 to 0.67. Convergent validity was found through the predominantly moderate correlation with related constructs, namely: self-esteem (r = -0.44), prosocial behavior (r = -0.23) and life satisfaction (r = - 0.40).

Test-retest reliability was confirmed within 7 to 15 days (ICC = 0.84; CI = 0.78 to 0.90). Conclusions: the data point to the adequacy of the IGDS9-SF to the Brazilian context. Its use in the clinical context can favor the wide screening and referral / management of possible cases of IGD. In the research context, it will add value, since this instrument has been cross-culturally adapted to several languages, which favors methodological adequacy for clinical studies.

No. 35
Moral Injury Is Frequently Unrecognized in Psychiatric Patients
Poster Presenter: James E. Black, M.D., Ph.D., M.P.H.

SUMMARY:
Moral injury (MI) was initially described by Shay in Vietnam veterans whose experience of moral conflicts resulted in prolonged demoralization, self-harming, and self-handicapping behaviors. MI has recently been described in police, child welfare workers, and medical staff. People with MI have broken their moral code or were treated unjustly, and the transgression was severe enough that it could not be forgiven or forgotten. The transgression betrays their sense of self, their trust in others, and their view of the world. Studies of veterans show that MI is linked to high rates of substance use, isolation, and suicide. They are often misdiagnosed as having PTSD, depression, burnout, or just the sad consequences of substance abuse. Moral injury has not previously been described in psychiatric patients, although they too will often break their moral code or suffer from severe injustice. In mania or psychosis, people do things they deeply regret when they recover, and lasting guilt interferes with their recovery. Patients with depression or psychosis may feel great guilt about their actions, with lasting impact even if their crime was imaginary. Psychiatric patients often experience injustice when they are restrained or committed for safety. Our study of such cases may inform the broader study of moral injury. CASE DESCRIPTIONS We present a series of 12 cases describing moral injury among psychiatric patients with a variety of responses to moral transgressions. Some have done terrible things while ill, and their experiences afterward are undistinguishable from military MI. Some have delusional guilt but seem to suffer from authentic MI. Persistent guilt is often followed by more bad actions, often worsening the illness and obstructing recovery. Some patients with addiction were in denial and did not suffer from MI. Others only understood what they had done many years later, and then they suffered MI. The experience of commitment, restraints, or even diagnostic labels have sometimes caused lasting resentments that resemble military MI. The cases illustrate some protective factors (self-esteem, professional role, forgiving supports, world view). Risk factors include isolation, spiritual crisis, and psychosis - all common among psychiatric patients. CONCLUSIONS Moral injury causes lasting harm, with its deep spiritual crisis and challenges to self-worth. Patients with MI are often misdiagnosed as having PTSD, depression, or SUD, and they are likely not getting good treatment. MI treatment has been studied almost exclusively in veterans, and has not been described in psychiatric patients. Further research is needed on moral injury among psychiatric patients to determine psychopathology and treatment. We think that moral injury in this unstudied population could also help expand our understanding of moral injury and improve general psychiatric care.

No. 36
Personality Inventory for DSM-5 (PID-5): Evidence of Validity and Reliability for Brazil
Poster Presenter: Flávia L. Osório
Co-Author: Ana Maria Barchi-Ferreira

SUMMARY:
Introduction: The fifth edition of the Diagnostic and Statistical Manual of Mental Disorders (DSM-5) presents an Alternative Model for Personality Disorders, which addresses personality functioning through traits. To test the new dimensional model of understanding the personality in its domains and facets, the Personality Inventory for DSM-5 (PID-5) was proposed. The objective of this study is to present evidence of validity and reliability of the PID-5 for a Brazilian community sample. Method: data collection was done in person, after signing the informed consent form. The sample consisted of 675 participants (68.9% female, mean age 33.1 (±15.4) years, 71.7% > 12 years of education). Internal

consistency, concurrent and divergent validity (based on the Revised NEO Personality Inventory (NEO PI-R) were studied. The data were analyzed using the Statistical Package for the Social Sciences software. Results: the internal consistency was excellent (α total scale = 0.97; α domains = >0.88). Concurrent validity was found, since the correlations between the different correlated domains of PID-5 and NEO-PI-R were moderate (Negative Affectivity vs. Neuroticism= -0.65; Disinhibition vs. Conscientiousness = -0.56; Antagonism vs. Agreeableness= -0.51, Disinhibition vs. Extroversion= -0.63 and Psychoticism vs Neuroticism= 0.40; vs Conscientiousness= 0.38). Correlations with non-specific domains were weak, signaling the divergent validity of PID-5 (0.01 to 0.47). Conclusions: the psychometric study of the Brazilian version of PID-5, as well as that of the other cross-cultural adaptations of this instrument, showed its suitability for the assessment of personality disorders according to the alternative model of the DSM-5, which highlights it as a reference tool in the area.

No. 37

Posttraumatic Stress Disorder at Birth: Prevalence Indicators and Psychometric Aspects of a Self-Report Instrument for the Brazilian Context

Poster Presenter: Flávia L. Osório
Co-Authors: Eduardo Bombonatti, Ana Carolina Rossini Darwin

SUMMARY:

Introduction: Posttraumatic Stress Disorder (PTSD) consists of a set of symptoms that occur in response to one or more traumatic events and can occur in the puerperium (trauma related to the moment of birth or the baby's health in the first days of life)). The associated impacts are multiple, and can cause feelings of anxiety and intense helplessness to the mother, impairment of the mother-child bond, in addition to several comorbidities. Objectives: a) to present psychometric indicators of reliability of a self-report scale for assessment of PTSD at birth ("City University London Birth Trauma Scale" - BiTS); b) estimate the prevalence of this disorder in a sample of Brazilian mothers. Method: the Brazilian version of BiTS was applied (online - Google Forms platform) in a sample of 60 mothers over the age of 18, who had children in the last year. Subsequently, the Structured Clinical Interview for DSM-5 (SCID-5-CV) was applied by telephone to assess the presence of the diagnosis of PTSD. For data analysis, the Statistical Package for the Social Sciences software was used. Results: BiTS showed adequate internal consistency (α = 0.93, total item correlation: 0.19 to 0.74). 30.0% of the sample met the PTSD criteria according to DSM-5. The average BiTS score in this group was 36.4 (± 12.2), while in the group without PTSD out of 18.3 (± 11.8) The statistical comparison of the means was statistically significant (t = -5.39; p <0.001), signaling the discriminative capacity of the scale. Conclusions: the prevalence of PTSD associated with birth was high in the Brazilian sample, with a higher percentage than the international indexes. BiTS presented good psychometric indicators, which associated with the brevity and ease of application, encourages its use on a large scale. Thus, it stands out as a valuable screening tool that can assist in directing possible cases for treatment.

No. 38
WITHDRAWN

No. 39

The Effect of Stimulant Use on the Internal State Scale (ISS) for Inpatients With Bipolar I Disorder in an Acute Psychiatric Hospital

Poster Presenter: Sarah K. Hernandez, B.S.
Co-Authors: Ana Ruiz, B.S., Michael Nadeem Kandalaft, M.D., M.S., Gina Caitlin Jamal, M.D., Amanda Leigh Helminiak, M.D.

SUMMARY:

Background: Studies have indicated high comorbidity between Bipolar I Disorder (BD) and substance use with prevalence rates ranging from 20% to 70%. The Internal States Scale (ISS) is a self-report measure used to discriminate mood states between patients with Bipolar Disorder by utilizing four subscales: Activation (ACT), Depression Index (DI), Well-Being (WB), and Perceived Conflict (PC). There is a limited understanding of the impact of substance use on ISS subscales for inpatients. The present study sought to identify ISS subscale differences between patients with and without

stimulant use. **Methods**: This retrospective study analyzed 451 inpatient medical records from May 2011 to December 2018. Upon admission, patients completed the ISS and demographic data was obtained from clinical records. Ninety-five cases were randomly selected from the non-user group to match the 95 patients who indicated stimulant use. All 190 patients presented with BD, the majority were manic with psychotic features (n=136). Independent samples t-tests and bivariate analyses were used to examine differences in ISS subscale scores between those who did and did not indicate use of stimulant drugs (i.e., cocaine, methamphetamine, amphetamines). **Results**: Of the 190 inpatient sample, the majority were female (n=104) and Caucasian (55.8%) or African American (33.7%). Stimulant users (n=95) compared to non-users were 33.43 ± 9.3 vs 31.52 ± 10.3 years of age and had Length of Stay (LOS) of 7.78 ± 5.0 vs 9.93 ± 5.8. For the ISS, stimulant users retained higher than average scores in comparison to non-stimulant users on subscales ACT (192.17 ± 115.33 vs 156.28 ± 116.25), DI (81.35 ± 57.8 vs 60.13 ± 62.47), and PC (198.51 ± 140.22 vs 137.94 ± 133.83). An independent-samples t-test was conducted and found significant differences between stimulant users and non-users in scores for ACT: t(188)=2.136, p=.034, DI: t(188)=2.430, p=.016, and PC: t(188)=3.046, p=.003. Pearson's r bivariate analysis identified significant correlations between stimulant use and ISS subscale ACT (r=.154, p=.034), DI (r=.175, p=.016), and PC (r=.217, p=.003). **Conclusion**: The preliminary data suggest that inpatients with stimulant use tend to experience higher levels of activation, depression, and perceived conflict as measured on the ISS in comparison to those who did not use stimulants. Our study indicated that stimulant users experience lower LOS in comparison to non-users (7.78 ± 5.0 vs 9.93 ± 5.8) which aligns with trends identified for substance use in other studies. Further research is needed to replicate the results and establish potential covariates between stimulant use, ISS subscales, and resulting LOS. **Limitations**: As these results are established from an acute inpatient population, outcomes may not be generalizable. Covariates not included in this preliminary analysis include axis II diagnoses, medication adherence, and frequency and amount of substance use.

No. 40

The Relationship Between Dissociative Symptoms and the Medications Used in the Treatment of Opioid Use Disorder

Poster Presenter: Danielle M. Gainer, M.D.
Co-Authors: Timothy Crawford, Ph.D., M.P.H., Karley Fischer, B.S.

SUMMARY:
Opioid use disorder has long been associated with psychiatric symptoms, including dissociative experiences. Medications used to treat opioid use disorder can potentially impact dissociative symptoms, but the existing literature has not explored this. We examined the relationship between dissociative symptoms and opioid use disorder using the Dissociative Experiences Scale (DES). We studied subjects who were taking prescribed methadone, buprenorphine, or naltrexone for opioid use disorder. We gave the DES, the Patient Health Questionairre-9 (PHQ-9), and the PTSD Checklist for DSM-5 (PCL-5) with Criterion A to subjects in three substance use treatment facilities in Ohio. We conducted Analysis of Variance (ANOVA) and Spearman's Rank Correlations to examine associations between the variables and outcomes. We developed three separate multiple linear regression models. We included 116 participants in our exploratory and naturalistic study. The majority of participants were female (51.7%), white (89.5%), ≤ 40 years of age (64.7%), and taking buprenorphine (55%). The average DES score was 16.1 (standard deviation = 14.9) and we considered 80.9% to have low dissociation (score < 30). Approximately 55% (n = 64) of participants were taking prescribed buprenorphine. Approximately 27% (n = 32) were taking prescribed methadone and approximately 18% (n = 21) were taking prescribed naltrexone (oral or extended-release). There was a significant association between opioid medication type and log dissociative symptoms (p = .01). Participants taking prescribed buprenorphine had higher mean log dissociation symptom scores (2.7) compared to those taking prescribed methadone (2.2) and prescribed naltrexone (2.1). Log dissociation symptom scores were significantly associated with last use of any opiates (rs = − 0.21; p = .02) and time

on medication ($r_s = -0.228$; $p = .01$). Compared to those taking buprenorphine, those taking both methadone ($\beta = -0.26$; $p = .01$) and naltrexone ($\beta = -0.27$; $p = .006$) had significantly lower dissociation scores, controlling for the other variables in the model. Dissociation scores were positively correlated with depression scores ($r = 0.45$; $p < .0001$) and with PCL-5 scores ($r = 0.51$; $p < .0001$). Our study highlights the importance of diagnosing and monitoring dissociative symptoms in individuals who are taking prescribed medications for opioid use disorder, especially since dissociative symptoms can interfere with substance use treatment.

No. 41

Assessing Gender and Socioeconomic Correlation to COVID-19 Related Struggles Among Healthcare Providers Before and During the Pandemic

Poster Presenter: Anastasia A. Ruiz, M.D.

SUMMARY:

During the covid pandemic, women are giving up their jobs and sacrificing career advancement to stay home to care for their families at a higher rate than their male counterparts. Furthermore, it has also been noted that covid has impacted minorities with higher rates of mortality and morbidity, suggesting complicated and multifaceted generational systemic inequality. Our research poster includes a literature review of current research that addresses gender and socioeconomic equality amongst the general population, and correlate this to findings amongst healthcare providers. Our research also will perform a survey to local healthcare providers, including physicians, physicians in training, medical students, and other allied health professionals and trainees, collecting demographic information to burnout and jon/training disadvantages. Our study will focus on the impact of gender and
socioeconomic disadvantages to burnout and job/training disadvantages prior to, and during the pandemic. We will compare the findings to studies that are based on the general population. We will review current policies and literature on current systemic and institutional policies that addresses inequality based on gender and socialeconomic status, and hope that the identified variables in our study will help systems implement policies to promote equality if applicable.

No. 42

Assessing the LGBT Cultural Competency of Dementia Care Providers

Poster Presenter: Dustin Zachary Nowaskie, M.D.
Co-Author: Daniel Sewell, M.D.

SUMMARY:

Background: Compared to the general public, risk factors for dementia, including social stigma, experience with discrimination and chronic medical conditions, are elevated in older members of the lesbian, gay, bisexual, and transgender (LGBT) community. These disparities may be perpetuated, or even exacerbated, by a lack of cultural humility among healthcare providers. No known studies, however, have attempted to quantify dementia care providers' LGBT cultural humility. Methods Dementia care providers (N = 105) across the United States completed a survey consisting of demographics, experiential variables, and the 7-point Likert LGBT-Clinical Skills Scale (LGBT-DOCSS). Differences in LGBT-DOCSS scores across demographic and experiential variables were analyzed. LGBT-DOCSS scores were also compared to previously published LGBT-DOCSS scores of medical students and psychiatry residents. **Results**: Dementia care providers reported very high affirming attitudes (M = 6.67, SD = 0.71), moderate knowledge (M = 5.32, SD = 1.25), and moderate clinical preparedness (M = 4.93, SD = 1.23). They reported significantly less adequate clinical training and supervision, experience, and competence to assess transgender patients compared to lesbian, gay, and bisexual patients. Compared to heterosexual dementia care providers, lesbian, gay, bisexual, and queer dementia care providers reported significantly higher overall cultural humility and knowledge and marginally higher clinical preparedness. Compared to medical students, dementia care providers reported significantly higher overall cultural humility and clinical preparedness however significantly lower knowledge. There were no differences in LGBT-DOCSS scores between dementia care providers and psychiatry residents. **Conclusion**: While dementia care providers endorse only

moderate clinical preparedness and knowledge about LGBT healthcare, especially with transgender-specific care, they do endorse strong positive attitudes about the LGBT population, which may facilitate the recognition of need for improved education and training. The current state of dementia care providers' LGBT cultural humility has, nonetheless, significant, yet modifiable, gaps. For those engaged as dementia care providers, better education and more LGBT patient exposure (e.g., through patient panels and cultural humility trainings) are necessary in order to improve the care being provided to members of the LGBT community impacted by dementia illness.

No. 43

Barriers and Facilitators Affecting Mental Health Service Utilization Among Asian American and Pacific Islander Youths in Riverside County

Poster Presenter: Catherine AnhThy Ha
Co-Author: Richard Lee, M.D.

SUMMARY:

In Riverside County, the tenth most populous county in the United States with over 2.4 million residents, Asian American and Pacific Islanders (AAPI) comprise 6.6% of the population, while a mere 1.59% of AAPI adults and 0.74% of AAPI youths utilized county--wide behavioral health services. There remains limited data on the barriers to the utilization of mental health services by AAPI communities in the Inland Southern California, especially in the child and adolescent population. A mixed methods approach was used that combined a demographic questionnaire and semi-structured interviews. Eighteen adult individuals participated in semi-structured interviews that examined their perception of mental illness and mental health care utilization by the child and adolescent subpopulation. Analysis followed a deductive approach in which data were qualitatively categorized into themes. Numerous themes were identified from the interviews that reflect intergenerational stigma, shame culture, cultural perceptions, understanding of psychiatric diagnoses, stigma within professional spaces, and the immigrant experience. This study demonstrates the continual need for county-wide and culture-specific interventions for mental health service outreach to AAPI families. These results will contribute to the framework through which county-wide mental health services can further support the unmet mental health needs of Riverside County's AAPI population and encourage the use of professional behavioral health services.

No. 44

Covid-19 Anxiety and Perceived Healthcare Discrimination Among US Blacks and Hispanics

Poster Presenter: Katherine Kricorian

SUMMARY:

BACKGROUND US Blacks and Hispanics are more likely to contract COVID-19 than other racial and ethnic groups. As a result, anxiety about catching COVID-19 is a significant issue in the Black and Hispanic communities. Past discriminatory experiences with healthcare may be associated with higher COVID-19 anxiety, also affecting willingness to receive the eventual COVID-19 vaccine. **METHODS** We analyzed a survey dataset collected by The COVID Collaborative, an group of experts and institutions developed to address the COVID-19 pandemic. Data were collected through a US online survey in August 2020 among Hispanic (N=250) and Black (N=1000) respondents. Comparisons were assessed using chi-squared tests. **RESULTS** A majority of Black and Hispanic survey respondents felt that racism interfered with the ability of their racial/ethnic group to receive good healthcare (76% and 56%, respectively). In addition, many respondents had personal experience with racism preventing them from receiving good healthcare. Among Black respondents, 20% reported that racial discrimination had a high impact on their own ability to get good healthcare, 20% reported a moderate impact and 60% reported a low impact. Among Hispanics, 16% reported high healthcare racism experience (HRE), 16% reported moderate HRE and 68% reported low HRE. Nearly half (46%) of high-HRE Hispanic respondents reported anxiety about catching COVID-19, compared to 26% of low-HRE Hispanics ($p<.05$). More than a third (37%) of high-HRE Black respondents reported anxiety about catching COVID-19 vs. 15% of low-HRE Blacks ($p<.05$). In addition, 64% of high-HRE Hispanic

respondents reported anxiety about friends or family catching COVID-19 vs. 39% of low-HRE Hispanics ($p<.05$). Similarly, high-HRE Black respondents were more likely to report anxiety about their friends or family catching COVID-19 than those with low-HRE (43% vs. 28%, $p<.05$). Only 11% of high-HRE Blacks trusted that a COVID-19 vaccine would be safe vs. 19% of low-HRE Blacks ($p<.05$). High-HRE Black respondents also were more likely to state they would definitely not get an eventual COVID-19 vaccine, even if it were free of charge, than low-HRE Blacks (30% vs. 21%, $p<.05$). **CONCLUSIONS** Anxiety about COVID-19 is a significant mental health issue among Blacks and Hispanics, especially among those who have personally experienced healthcare discrimination. High-HRE Black and Hispanic respondents reported higher anxiety about themselves or their friends and families contracting COVID-19 than those with low-HRE. High-HRE Blacks were also less likely to believe a COVID-19 vaccine will be safe, indicating that they would be less willing to receive a vaccine when it becomes available, despite greater fear of contracting COVID-19. These findings have implications for attempts to reduce racial discrimination in healthcare and develop more culturally-tailored healthcare messages to increase vaccine acceptance and reduce health anxiety among minority groups.

No. 45

Covid-19's Paradoxical Mental Health Effects on Black Young Adults

Poster Presenter: Derick Cutinha
Lead Author: Brianna Rochebrun, B.S.
Co-Authors: Rita Kigoonya, Katherine Kricorian, Ozlem Equils, M.D.

SUMMARY:

Background: Black Americans have higher morbidity and mortality from COVID-19 than Whites. This differential impact raises concerns about ways the pandemic may affect Black communities, especially impacts on mental health. Black young adults may be less likely to contract or die from COVID-19 than older Black adults, but may experience greater disruption in other areas of their lives, including social impacts and job loss. The life stage of Black young adults may make them especially vulnerable to possible psychological effects of the pandemic, especially compared to Whites of the same age cohort. **Methods:** An online survey was conducted among N=480 18-29 year-olds in the United States. Among these young adult survey respondents, N=72 were Black, N=156 were Hispanic (of any race), N=201 were non-Hispanic White, and N=41 classified themselves as another race. **Results:** were analyzed using chi-square tests. Results Despite Black young adults' greater likelihood of contracting and dying from COVID-19 than Whites in the same age group, we found that healthy Black young adult respondents were more likely to expect to remain well during the COVID-19 pandemic than Whites or Hispanics. In addition, Black young adult respondents were less likely than Whites or Hispanics to report anxiety or depression resulting from COVID-19 and more likely to state that the pandemic did not make them feel trapped or socially restricted. **Conclusions:** Although Black young adults are at objectively higher risk of COVID-19 than White young adults, they reported significantly less fear of contracting the virus and lower self-perceived mental health issues like anxiety and depression. This paradoxical result may be due to social or cultural experiences that shape Black young adults, including the greater stigma of mental illness in Black American culture and Black Americans' greater emotional resilience resulting from ongoing exposure to systemic racism.

No. 46

LGBTQ Cultural Competency and the Intersectionalities of Gender Identity, Sexual Orientation, and Race Among Healthcare Professionals

Poster Presenter: Sidrah Najam, D.O.
Lead Author: Dustin Zachary Nowaskie, M.D.

SUMMARY:

Background: There is a plethora of data regarding lesbian, gay, bisexual, transgender, and queer (LGBTQ) cultural competency among healthcare professional populations. While some studies have indicated differences in competency between heterosexual people and sexual minorities, no known studies have assessed LGBTQ cultural competency among diverse, intersecting groups

based on gender identity, sexual orientation, and race. As there is growing support to increase LGBTQ health education, understanding the unique perspectives of minority healthcare professionals may assist in identifying gaps and competence. Methods: Deidentified data was aggregated from three recent independent studies of healthcare professional populations (i.e., healthcare professional students, psychiatry residents, and dementia care providers). Demographics, experiential variables (i.e., total hours of LGBT education received), and the LGBT-Development of Clinical Skills Scale (LGBT-DOCSS) were collected. A series of multivariate analyses of covariance were conducted with groups (based on gender identity, sexual orientation, and race) and other demographic variables as independent variables and LGBT-DOCSS scores (Overall LGBT-DOCSS, Clinical Preparedness, Attitudinal Awareness, and Basic Knowledge) as dependent variables. Results: A total of 2254 healthcare professionals were analyzed. They were diverse in terms of age (18-69 years old), gender identity (29.0% cisgender men, 68.5% cisgender women, 2.5% gender minorities), sexual orientation (82.4% exclusively heterosexual), races (71.6% exclusively Caucasian), ethnicity (92.9% not Hispanic or Latino), discipline (81.9% healthcare professional students, 18.1% providers), and region (3.2% Northeast, 72.1% Midwest, 5.6% South, 18.8% West). Compared to men counterparts, women reported significantly higher LGBT-DOCSS scores, except significantly lower Clinical Preparedness. Compared to cisgender, heterosexual counterparts, sexual minorities and gender minorities reported significantly higher LGBT-DOCSS scores. There were no differences between sexual minorities; gender minorities reported significantly higher Clinical Preparedness than sexual minorities. There were also several differences among intersecting groups, such as heterosexual, cisgender, Caucasian men reporting lower LGBT-DOCSS scores but higher Clinical Preparedness; heterosexual, cisgender, Caucasian women with higher LGBT-DOCSS scores except Clinical Preparedness; heterosexual, racial minorities with lower LGBT-DOCSS scores; and gender, sexual, and racial minorities with the highest LGBT-DOCSS scores. Conclusion: There are subtle, yet important, differences in LGBTQ cultural competency among minority healthcare professionals. More diversity and intersectionality appears to lead to higher competency. Appreciating these gender, sexual, and racial minorities' unique perspectives may promote the development of better, more culturally sensitive LGBTQ health education.

No. 47

Managing Cross-Cultural Conflict in the Prescription of Psychotropic Medications

Poster Presenter: Geoffrey Z. Liu, M.D.
Co-Author: Margaret C. Tuttle, M.D.

SUMMARY:
We review the case of a patient with first episode psychosis who abruptly stopped medications for cultural reasons which were not detected by the provider, leading to an undesirable outcome including side effects and delays in treatment. The patient is a 31- year-old Cambodian-American woman with new diagnosis of schizophrenia associated with catatonia. She was discharged from the inpatient unit on lorazepam for catatonia and risperidone for psychosis. She transitioned to a rapid-access clinic for psychiatric care and then to regular outpatient psychiatric clinic. During her outpatient treatment, her care was complicated by medication non-adherence. Specifically, the patient's father, who carried an alternative illness model, encouraged the patient to stop medications. Medications were eventually restarted, but due to miscommunication, the medications were restarted at a dose which precipitated a dystonic reaction. Later, the patient developed depressive symptoms and the provider recommended initiation of antidepressants. However, due to an overall reluctance to take medications, this decision was deferred. She eventually developed suicidal ideation, resulting in rehospitalization and eventual initiation of antidepressant medication. In this poster, we posit that several early interventions could have led to an improved outcome. Specifically, we review 1) the use of the cultural formulation interview (CFI) and 2) using the information garnered by this interview to broker between different models of illness.

No. 48
Mental Health Literacy as Equity
Poster Presenter: Anita Rao, M.D.
Co-Author: W. James Miletello

SUMMARY:
Nonprofit organizations are often the primary facilitators of mental health for marginalized patients and population. While there are many potential collaboration and co-creation opportunities between psychiatrists and nonprofit organizations (particularly with respect to mental health literacy initiatives which are therapeutic, informative, educational, etc.), psychiatrists are less likely to work with nonprofit organizations compared to other mental health professionals. This contributes to the general public (especially members of marginalized socioeconomic populations) remaining uninformed and uneducated about mental health as a whole. This poster provides considerations for psychiatrists who are interested in learning more about or pursuing mental health literacy collaborations or co-creation opportunities with nonprofits pursuant to their time, interest, and/or availability.

No. 49
WITHDRAWN

No. 50
Social Disparity in Transcranial Magnetic Stimulation Services in the United States
Poster Presenter: Yezhe Lin, M.D.
Lead Author: Salih Selek, M.D.
Co-Authors: Sanjeev Rode, M.D., M.S., Jack Tsai, Ph.D.

SUMMARY:
Background: Transcranial Magnetic Stimulation (TMS) is one of the most effective neuromodulation treatments for varieties of psychiatric disorders such as major depressive disorders (MDD) and obsessive-compulsive disorders (OCD). To date, no studies were done to assess the equity of TMS treatment delivery. We aim to visualize the facilities offering TMS in the US by per capita (median) household income, by the population and determinants for the Health Impact Assessment (HIA). Methods: TMS center locations were plotted by the zip code using Tableau Professional software (Version 2019.2). Data layers for the demographics (population and household income) were generated from the 2019 Mapbox © OpenStreetMap resources, using latitude and longitude coordinates. Map-based on longitude and latitude were generated to show details of TMS Center counts for a Zip Code. Results: The majority of the TMS centers were located in densely populated areas, especially urban areas (about 40% in areas of population 8,970,000; 22% in areas of population 5,670,000–8,970,000; 7% in areas of population of 1,340,000-3,130,000; and 15% in areas of population 587,000-1,340,000). Almost half of the facilities offering the TMS therapy were located in the economically affluent areas, with a median per-capita household income above $69,700 (48% with median household income over $69,700; 3% with median household income $61,500-$69,700; 11% with median household income $56,200-61,500; 26% with median household income $51,800-$56,200; 12% with median household income $42,700-$51,800). Conclusion: TMS centers are more available and accessible in areas with higher income households. The results indicate a distinct geographical disparity in the delivery of TMS treatment and serve as evidence for awareness and improvement of health disparity.

No. 51
WITHDRAWN

No. 52
Anorexia in a Young Female With Primary Globus Pharyngeus
Poster Presenter: Seth Noorbakhsh
Lead Author: Nathan Pearson, M.D.
Co-Authors: Richard Cadenas, Mason Winkie

SUMMARY:
Globus pharyngeus, also known as globus sensation, is the sensation of a lump or bulge in the throat, usually without dysphagia or odynophagia. It is a poorly understood yet common phenomenon, with a lifetime prevalence of up to 22% in the general population. In fact, globus sensation accounts for about 4% of all visits to otolaryngologists. The underlying pathophysiology of globus pharyngeus is

not clear, but may be associated with visceral hypersensitivity, acid reflux, and/or depression and anxiety. Importantly, globus pharyngeus is almost always benign, and the natural course of the disease is to improve with time in most patients. Here, we present a case of malignant globus pharyngeus associated with dysphagia and severe anorexia. A 26-year-old female presented to the hospital with a three-year history of progressive weight loss in the context of inability to swallow due to a "lump in her throat". She recalls the exact day her globus sensation started, and her symptoms became progressively worse over time. The patient underwent a trial of pantoprazole early in the course of her globus sensation for suspected GERD, which was not helpful. Past psychiatric history is remarkable for anxiety and panic disorder as a teenager, responsive to a brief trial of fluoxetine. The patient has no current or past history of other psychiatric comorbidities, including no binging or purging behaviors. On admission, the patient was cachectic with a BMI of around 12 and could not swallow solid foods, yet she retained her appetite. Upper endoscopy was remarkable for mild esophagitis with no evidence of strictures, and barium swallow appeared to transit normally but was limited by patients' inability to swallow. SSA and ANA antibodies were negative and serum iron level was within normal limits. The patient did not have electrolyte abnormalities and was monitored closely for refeeding syndrome during her admission. Before discharge, the patient required PEG tube placement for supplemental nutrition due to a dangerously low BMI and continued inability to swallow despite intervention by speech therapy. The Glasgow-Edinburgh Throat Scale (GETS), an objective assessment of globus sensation, was administered prior to discharge. The patient's score on the GETS was consistent with extreme perseveration and distress regarding her globus sensation symptoms. The patient was started on amitriptyline nightly and was discharged after appropriate education regarding home PEG tube feeds. The patient will be monitored via telemedicine to assess response to amitriptyline therapy using the GETS and BMI as objective measures of her clinical response. To our knowledge, this is the first reported case of severe anorexia secondary to primary globus sensation in the literature.

No. 53

Eating Disorder Symptomatology in Transgender Patients: Differences Across Gender Identity and Gender Affirmation

Poster Presenter: Yena Choi, M.D.
Lead Author: Dustin Zachary Nowaskie, M.D.
Co-Author: Andrew T. Filipowicz, M.D.

SUMMARY:

Background: Previous understanding of eating disorder (ED) psychopathology in transgender populations has primarily relied on many case reports and few cross-sectional studies, which suggest a higher prevalence of ED compared to cisgender populations. No known studies have assessed ED symptomatology as a function of gender affirmation (i.e., hormone treatments and/or gender affirmation surgeries) and health determinants (such as anxiety, depression, and weight). Methods: Between June 2017 to July 2018, transgender patients completed a survey which consisted of the general anxiety disorder-7 (GAD-7), patient health questionnaire-9 (PHQ-9), and eating disorder examination questionnaire (EDE-Q). Body mass index (BMI), hormone treatments, surgeries, and past ED diagnoses were also obtained. Multivariate analyses of covariance were conducted with groups (based on gender identity and gender affirmation) and demographic variables (i.e., ethnicity/race and past ED diagnosis) as independent variables, other variables (i.e., age, BMI, GAD-7, and PHQ-9) as covariates, and EDE-Q scales (i.e., Global Score, Restraint, Eating Concern, Shape Concern, and Weight Concern) as dependent variables. Results: Of 166 patients, respondents were transgender women (52.4%) or transgender men (47.6%), middle-aged (M=31.11, SD=13.05), Caucasian/White (71.1%), overweight (BMI=30.05), and had mild anxiety (GAD-7: M=5.61, SD=4.93), mild depression (PHQ-9: M=5.92, SD=5.59), and a past ED diagnosis (13.9%). Many were hormone-experienced (68.7%); some were surgery-experienced (18.1%). EDE-Q scores were similar to previous cisgender community sample norms and lower than transgender community sample norms. Similar to many community sample norms, shape concern was the highest subscale score (M=2.42, SD=1.60). Compared

to transgender men, transgender women reported higher EDE-Q scores, with significantly higher Eating Concern (p=0.039). Compared to hormone-experienced/surgery-naïve patients, hormone-/surgery-experienced patients reported lower EDE-Q scores, with significantly lower Shape Concern (p=0.029) and marginally lower Global Score (p=0.051) and Weight Concern (p=0.057). Conclusion: Despite a high prevalence of past ED diagnoses, transgender patients have similar EDE-Q scores to previous cisgender community sample norms. In particular, transgender women report higher EDE-Q scores. Additionally, transgender patients who undergo gender affirmation surgery have lower EDE-Q scores. Coupled together, ED psychopathology may be over-diagnosed within the transgender patient population. Future studies are required to determine the longitudinal effects of hormone treatment and gender affirmation surgery on ED psychopathology.

No. 54

A Multidisciplinary Team Approach to Restraint Reduction in a Psychiatric Emergency Room

Poster Presenter: Jaskanwar S. Batra, M.D.
Co-Authors: Gita Narayan, Poonamdeep Gill, Katherine Niedt

SUMMARY:

Background: Restraints in psychiatric settings are associated with a high rate of injury to both staff and patients (Wale 2011). Improvement in restraint duration and frequency can be challenging to implement and even harder to sustain (Terell 2018). We reduced restraint rates during the COVID-19 pandemic despite a lower patient census. Methods: We used the PDSA (Plan-Do-Study-Act) method to address this problem. Primary goals were to reduce restraints to less than 1 hour per 100 CPEP patient visits, less than 2 restraint episodes per 100 CPEP patient visits, less than 1 patient injury per 100 CPEP patient visits, and less than 1 staff injury per 100 CPEP patient visits. We considered each restraint episode as thea psychiatric emergency requiring the whole team's full attention. The following steps were taken to achieve our goals: A. Utilize CPEP Board to note all restraints, they start and end time to raise attention B. Improve use of RN and MD check list to verify task completion. C. Additional Documentation for any use of IM PRN medication D. Review of the six core strategies with all staff members (Hukshorn 2004) E. Improving debriefing process included initial debriefing and sec ond leadership debriefing d G. Weekly leadership meeting to review data and ongoing assessment for any other changes Results: Improvements were observed in all 4 primary measures. There was a decrease in the rates of restraint ranging from 25-52%. During the month of April, the hours of restraint per 100 patient visits increased to 2.85, despite the census being lower than usual (422 patients total). However, once the multidisciplinary approach was implemented, our goal was met as there was a decrease in the hours of restraint per 100 patient visits decreased to below 1 and remained below 1 throughout the months of May to August, despite a larger patient volume (census > 500 each month). The hours of restraint per 100 visits decreased from 1.15 (Jan – April) to 0.55 (May – August), indicating a 52% reduction in time spent in restraints. Physical holds per 100 visits decreased by 25%, from 0.20 (Jan – April) to 0.15 (May – August), and the number of patients in restraints per 100 visits decreased by 32% (0.25 Jan – April, 0.17 May-August). The total number of restraints per 100 visits decreased from 2.94 (Jan – April) to 1.69 (May – August), and decreased by 42% reduction in restraints overall. Goals of Conclusions: A methodical and multidisciplinary approach led to a significant reduction in patient restraint frequency and duration, with reduction in both frequency and duration of restraint episodes. Continued staff education and weekly multidisciplinary meetings to monitor trends in patient restraints and ensure adherence to the protocol are necessary (Terrell 2018).

No. 55

Bridge Over Troubled Waters From ED Shoreline to Outpatient Care: Paved by Buprenorphine, Peers, Rapid Access to Office-Based Opioid Treatment

Poster Presenter: David William Hartman, M.D.
Co-Author: Cheryl Hartman, Ph.D.

SUMMARY:
Background and Objectives The fatal impact of the opioid use disorder (OUD) compels the medical field to identify touchpoints for screening and treatment at every opportune setting. An Emergency Department Chair realized the potential role the ED could assume by identifying OUD patients appropriate for buprenorphine initiation and providing a medical bridge to treatment. Teaming included the ED Chair, peer recovery specialists, case managers, lead waivered physician in the office-based opioid treatment (OBOT) program, a clinic pharmacist, and senior administration. Study aims were to identify rate of successful bridging from ED to outpatient treatment for OUD patients identified in the ED and referred into care, following initiation on buprenorphine. Factors studied were linkage with peer specialists, bridging with medication prescriptions, and rapidity of access to the OBOT intake. Methods This IRB-reviewed prospective study was conducted in a Level-One trauma center.ED physicians were encouraged to obtain a DATA 2000 waiver to allow for addiction prescribing of buprenorphine. All ED physicians were educated to screen for OUD; during the eighteen-month study period 41 ED attendings became waivered. Protocols facilitated identifying OUD using the DSM-5 criteria, withdrawal symptoms using the COWS or patient history, initiating a buprenorphine+naloxone product (following protocols of promising model programs), providing a prescription not exceeding ten days, linking patients with peers, and triggering a rapid access referral to an OBOT intake (offered within 24 hours of ED visit, except weekends). Results Among 401 patients screened for OUD, 202 were assessed as appropriate for buprenorphine outpatient care. Buprenorphine was initiated in the ED for 158/202 (78.2%) patients based on history and/or COWS scores. Initiation on this medication for opioid use disorder (MOUD), predicted successful appearance for care in the OBOT (OR: 2.22, p= .036). Of the 158 started on buprenorphine in the ED, 115 (72.9%) successfully crossed the bridge; among the 44 not started on MOUD; 24 (54.5%) entered into OBOT care. Overall, 139 patients (69%) of the 202 patients considered appropriate for outpatient MOUD successfully arrived at the OBOT intake (either in person or virtually). Patients least likely to remain in the ED sufficiently long to receive MOUD were overdose survivors: 20/202 patients. Five of these entered care in the OBOT (25%). During OBOT intake seven patients were referred to higher levels of care. Among132 patients admitted into the OBOT, retention for one month or more was 109/139 or a percent of 81.8%. Median number of days between ED visit and intake was four; mean was 7.9. MOUD prescribing impact approaches significance:119/179 (66.5%) crossed bridge (p=.09). Peers and longer retention still being studied. Conclusion EDs can become pathways to recovery starting OUD patients on buprenorphine, prescribing this MOUD, and creating rapid access to outpatient care.

No. 56

Comparable Validity of Telepsychiatry and Face-to-Face Psychiatric Assessments in the Emergency Room Setting

Poster Presenter: Moises Bistre
Co-Authors: Renana Eitan, Omer Linkovski, Yoav Kohn

SUMMARY:
Background: Telepsychiatry can provide an alternative to traditional face-to-face assessments in the emergency room setting, but validity concerns have slowed its approval and dissemination. Methods: In this observational crossover study, we compared traditional face-to-face and telepsychiatry modalities in the emergency room setting. Psychiatric patients (n=38) presented to emergency rooms between April and June 2020, went through face-to-face and videoconference telepsychiatry interviews in varying order. Both interviewers and a senior psychiatry resident who observed both evaluations determined diagnosis, recommended disposition and indication for involuntary admission. Patients and psychiatrists completed acceptability surveys post-assessment. Results: Agreement between raters on recommended disposition and indication for involuntary admission as measured by Cohen's kappa was strong to almost perfect (0.84/0.81, 0.95/0.87 and 0.89/0.94 for face-to-face vs. telepsychiatry, observer vs. face-to-face and observer vs. telepsychiatry, respectively). Partial agreement between the raters on diagnosis was strong (Cohen's kappa of 0.81, 0.85 and 0.85 for

face-to-face vs. telepsychiatry, observer vs. face-to-face and observer vs. telepsychiatry, respectively). Psychiatrists' and patients' satisfaction rates, and psychiatrists' perceived certainty rates, were high in both face-to-face and telepsychiatry groups with no significant difference (9.53±0.73 / 8.82±1.37; 9.84±0.68 / 9.13±1.36 and 9.42±1.25 / 8.58±1.98 for face-to-face and telepsychiatry, respectively). Conclusions: Telepsychiatry has comparable validity and acceptability to face-to-face psychiatric assessments in the emergency room setting. Implementing telepsychiatry might improve the quality and accessibility of mental health services, especially for remote populations. Telepsychiatry holds unique advantages during the COVID-19 pandemic in enabling treatment for isolated patients while protecting medical personnel.

No. 57

Covid-19 Psychosis: A Potential New Neuropsychiatric Condition Triggered by Novel Coronavirus Infection and the Inflammatory Response?

Poster Presenter: Sean T. Lynch
Lead Author: Stephen John Ferrando, M.D.
Co-Authors: Lidia Klepacz, M.D., Mohammad Tavakkoli, M.D., M.P.H., M.Sc.

SUMMARY:

Background: A growing literature documents psychological distress related to the novel coronavirus (COVID-19 or SARS-CoV2) pandemic. Method: We describe new-onset psychotic symptoms in three patients with no prior history of psychosis who tested positive in the Emergency Department for COVID-19 and who were otherwise asymptomatic. Results: Patients had similar presentations of agitation, disorganization, paranoid ideation and auditory hallucinations, with concurrent evidence of systemic inflammation as indicated by elevated C-reactive protein and other inflammatory markers. Conclusion: In addition to the possibility of a stress-related trigger, based on evidence of immune activation, we postulate a potential immune-mediated neuropsychiatric trigger to these new-onset psychotic symptoms that warrants further investigation.

No. 58

Effect of Emergency Department Mental Health Nurse Implementation on Patient Length of Stay and Agitation

Poster Presenter: Yassmin Atefi, D.O., M.S.
Co-Author: James Phelps, M.D.

SUMMARY:

Background: The rate of mental health and substance abuse-related emergency department (ED) visits in the US increased by 44.1% from 2006 to 2014. With an increased need for services and decreased capacity to manage patients with mental illness, these patients often have long length of stays (LOS) while waiting to be connected with proper resources. They may also demonstrate agitation, leading to an unsafe environment for the patient and employees. Various models of care have been developed in EDs for delivering mental health services, but few have been assessed for effectiveness. This study aims to explore whether the introduction of a mental health nurse (MHN) into a community-based hospital ED reduces mental health patient ED LOS and patient agitation. Methods: MHNs were implemented in the ED during specific shifts seven days a week beginning in January 2020. Data was pulled from the electronic medical record for ED visits between January and August 2020 where patients required psychiatric evaluation. Patient and encounter characteristics, ED LOS, and need for de-escalation medications or restraints were compared across encounters with vs without documented support from a MHN. T-tests or nonparametric alternatives were employed for numerical variables and chi-squared tests were employed for categorical variables. Results: 384 ED encounters were included, of which 152 (40%) had documented support from a MHN. There was no significant difference between encounters with vs without MHN support in age, sex, ethnicity, or primary diagnosis. There was a significant difference in race, with more non-White patients helped by the MHN (8% vs 6%, $p=0.046$). Patients helped by a mental health nurse were discharged home from the ED more frequently (53% vs 28%, $p=0.04$). Patients with MHN support had significantly longer ED LOS (median 38 hours vs median 18 hours, $p<0.001$) and required de-escalation medications and/or restraints more frequently (74% vs 52%, $p<0.001$). Conclusion:

In patients who visited the ED for a psychiatric evaluation or required a psychiatric consult, having MHN support was associated with longer ED LOS and increased use of de-escalation methods. The increase in the use of de-escalation methods may be due to MHN experience, as they have more training in assessing patients' needs and utilizing de-escalation interventions to improve patient quality of care. Also, the documentation of de-escalation interventions in the medical record may have become more consistent with MHN support. Further investigation is warranted to determine whether the implementation of a MHN in the ED impacted workplace violence. This study may also be expanded to explore trends in ED LOS through 2020 and into 2021, as the current study timeframe includes the COVID-19 pandemic, which likely impacts this outcome.

No. 59

Integrating Psychiatric Services in the Emergency Room to Reduce Length of Stay and Improve Patient Care by Creating Standardized Procedures

Poster Presenter: Jaskanwar S. Batra, M.D.
Lead Author: Poonamdeep Gill
Co-Author: Samuel Reinfeld, D.O.

SUMMARY:

Background: Lengths of stay for patients presenting with psychiatric problems are known to be much longer than patients presenting with other problems (Hefflefinger, 2014 & Weiss et al., 2012). Furthermore the Emergency department is often ill-equipped to care for acutely ill psychiatric patients. Not only is the environment of care not conducive to optimal care, physicians and nurses are often not comfortable treating patients who may display suicidal or aggressive behaviors (Dombagolla & Kant, 2019). These factors lead to delay in care, poorer outcomes for patients including over-sedation, excessive use of restraints as well as higher utilization of staff to manage patients safely (Manton, 2010). Methods: In order to improve patient care outcomes we met with emergency room department staff to outline areas of concern. Additionally, we surveyed nurses, attending physicians as well as residents. The two most common concerns identified in the survey were timeliness of consults and the communication between the Medical Emergency Department and the Psychiatric Emergency department. We identified several action steps and used the Plan-Do-Study-Act methodology to achieve results and will continue to use this methodology to sustain improvements. Interventions include: Bi-weekly leadership meetings between the two departments to track progress Developed protocols to minimize the delays as a result of COVID testing Improving triage process so that patients are evaluated in the most optimal setting. Developed procedures for direct physician to physician communication Developed procedures for management of agitated behaviors prior to transfer Developing a process for managing intoxicated patients who are otherwise medically stable. Embedding psychiatrists in the Emergency Department Results: We implemented the agreed upon procedures and demonstrated a reduction in time taken to consultation and improvement in communication among the two departments. These results helped reduce overall length of stay for the patients by just over 27% (median wait time was 8.25 before intervention and 6 hours after intervention) and an improvement in attitude towards psychiatric services. Conclusions: Using quality improvement methodology, developing agreed upon care pathways and creating shared goals by understanding each departments priorities we have been able to improve patient care, staff satisfaction by reducing wait time and improve professional relationships between departments.

No. 60

Management of Agitation: A Standardized Patient Scenario for Interdisciplinary Training

Poster Presenter: Bradley Zastrow, M.D.
Lead Author: Peter J. DeVries, M.D.
Co-Author: Sarah Elizabeth Slocum, M.D.

SUMMARY:

Introduction: Agitation is a common occurrence in a variety of healthcare settings including general medicine floors. Improper management of agitated patients can lead to injuries to patients and hospital staff. Many physician residents are tasked with caring for such patients without proper knowledge and experience. Methods: A simulation using

standardized patients was developed and implemented for internal medicine residents to improve their level of comfort and knowledge in the overall management of agitated patients. Prior to the scenario, the residents were given a formal didactic lecture on verbal de-escalation, pharmacologic management of agitation, and proper use of restraints. Subsequently, residents were tasked with applying these skills in a real-world scenario by de-escalating an agitated standardized patient. Debriefing was then performed through a standardized protocol with the help of an observing senior psychiatry resident, who had received specific instruction prior to this training. Pre- and post-tests were completed to gauge the level of improvement in the medicine trainee's understanding of agitated patient management. Results: This was the fourth year of conducting simulated agitated patient scenarios at our medical institution. In total, we have taught approximately 120 medicine residents to date. Our results have shown only 33% of internal medicine residents had prior training in agitation management and 97% expressed interest in gaining further education in this area. Through cumulative pre- and post-surveys, this standardized simulated teaching event has resulted in significant improvement in both comfort level and overall knowledge in proper management of agitation. Discussion: Agitation is a common presentation found on the general medical floors. Internal medicine residents at our institution have minimal prior knowledge and experience in management of these patients, though they are frequently tasked with caring for them, even during overnight hours with minimal assistance. Through our formal didactic and agitated patient scenarios using standardized patients and protocolized feedback, internal medicine residents felt more comfortable and showed improved knowledge in treating the agitated patient.

No. 61

Policy Versus Practice: Police Compliance With Maryland State Policy When Transporting Patients for Emergent Psychiatric Evaluation

Poster Presenter: Mariel Cataldi, M.D.
Co-Author: Vinay Parekh, M.D.

SUMMARY:

Background: Relative to most patients in the emergency setting,individuals referred for urgent psychiatric evaluation tend to be more aggressive, more often require seclusion or restraints, have longer lengths of stay, and are more likely to be hospitalized. In Maryland, the emergency petition statute allows any party to petition for a psychiatric evaluation of an individual who has a mental disorder and presents an imminent threat of danger to self or others. Police officers who transport these individuals are required to bring them to the nearest designated emergency facility relative to the pickup address. In this retrospective cohort study we evaluated police compliance with this state policy, and explored how policy noncompliance affects healthcare resource utilization. Methods: Patient-level data were collected by retrospective chart review of individuals transported by police under emergency petition to a single-site adult psychiatric emergency facility at a large tertiary care hospital from October 2017-June 2018. Geographic data were calculated using the Google Maps platform and included 1) distance traveled by police from the pickup address to the study site and 2) number of other designated emergency facilities passed en route to the study site. Compliant encounters occurred when the study-site was the nearest designated emergency facility relative to the pickup address. Noncompliant encounters occurred when one or more designated emergency facilities were passed en route to the study site. Chi-squared analyses were used to compare descriptive characteristics between compliant versus noncompliant encounters. Results: 506 emergency petition encounters occurred from October 2017 through June 2018. Of these, 215 (42.7%) were noncompliant, 171 (33.6%) were compliant, and 120 (23.7%) were unknown (i.e. no pickup address was documented on the emergency petition form). Of the noncompliant encounters, two or more other emergency facilities were passed on route to the study site 67.4% of the time, five or more were passed 9.3% of the time, and seven or more were passed 20% of the time. There was no significant difference between gender composition, age, race, length of stay, admission status, or use of seclusion and restraints for compliant versus noncompliant encounters. Conclusion: Despite Maryland state

policy requiring police officers to bring individuals to the nearest designated emergency facility when transporting patients for emergent psychiatric evaluation, most encounters in this study passed multiple other emergency facilities en route to the study-site. These data suggest that police choose certain hospitals over others when transporting individuals for emergent psychiatric evaluation. The reasons for this should be furhter explored.
Police noncompliance with state policy may have detrimental downstream effects including longer patient time in police custody, delayed medical evaluation, and overcrowding of emergency departments.

No. 62
Psychiatric Emergencies During the Height of the Covid-19 Pandemic in the Suburban New York City Area
Poster Presenter: Sean T. Lynch
Lead Author: Stephen John Ferrando, M.D.
Co-Authors: Sivan Shahar, Lidia Klepacz, M.D.

SUMMARY:
Background: This report characterizes patients presenting for psychiatric emergencies during the COVID-19 pandemic and describes COVID-19-related stressors. Methods: Medical records of 556 patients that received emergency psychiatric evaluation January 1-April 30, 2020 were reviewed. Patient seen during COVID-19 (N=201) were compared with those prior (N=355), on sociodemographic characteristics, psychiatric diagnoses, symptoms, and disposition. Patients tested positive for COVID-19 were compared with those that tested negative. Prevalence and nature of COVID-19-stressors that influenced the emergency presentation were rated. Outcome: A significant decline in emergency psychiatric volume was observed in children and adolescents (C/A), but not adults. COVID-19 period C/A patients had more new onset disorders and were more likely to be admitted to inpatient care, but were less likely to present with suicide attempts, impulse control disorders and agitation/aggression. Adults were more likely to have no access to outpatient care, present with anxiety disorders, and were also more likely to be admitted for inpatient care. COVID-19 directly affected the psychiatric emergency in 25% of patients, with the more severe stressors triggered by fear of COVID infection (including psychosis), actual COVID infection in self or family members, including death of a loved one. COVID-positive patients were more likely to have psychosis, including new-onset, and were less likely to be depressed/ suicidal compared to their COVID-negative counterparts. Conclusion: This report demonstrates the need for emergency psychiatric services throughout the COVID-19 pandemic. New and severe pathology underscore the need for enhanced outpatient access and inpatient services with capacity to care for COVID-19 patients.

No. 63
Intimate Partner Violence During Covid-19: An Epidemic Within the Pandemic?
Poster Presenter: Fatimah Albrekkan, M.D.
Co-Author: Ronald Schouten, M.D.

SUMMARY:
The World Health Organization (WHO) estimates that 35% of women globally experienced physical or sexual violence from an intimate partner throughout their lives. Intimate Partner Violence (IPV) is the most common cause of nonfatal injury to women worldwide. According to the CDC, approximately 1 in 10 men in the U.S. experienced some form of IPV during their lifetime, such as contact sexual violence, physical violence, and/or stalking by an intimate partner. Studies have found a relationship between natural disasters and increased rates of IPV. Disasters tend to increase both the frequency and intensity of IPV, especially in those who experienced IPV prior to the disaster. During the COVID-19 pandemic, many cities in the U.S. have experienced a spike in IPV incidents. The uptick of IPV incidents during COVID-19 has been seen not only in the U.S., but also worldwide. Italy and Spain reported a substantial increase in calls to IPV emergency support lines. The United Kingdom and France have also seen an increase in police reports regarding IPV by 20% and 30%, respectively. Reports from Wuhan, China show that domestic violence rates for February 2020 were three times higher than they were during the same period in 2019. Measures to minimize the spread of COVID-19 like lockdowns, stay-at-home orders, social isolation, and social

distancing appear to have had a tremendous impact on families experiencing IPV. These measures are extending the amount of time that victims have to spend with their abusive partners at home, which increases their risk of abuse and injury. Life stressors such as unemployment and housing instability, caused by COVID-19, also increase the risks for relational conflict and abuse. In some instances, victims are afraid to report IPV incidents because of shame and fear of retaliation from their abusive partners. Victims are also afraid to leave their homes and expose themselves and their children to COVID-19. There is no place for victims to escape the abuse as interventions by social services agencies are no longer available and shelters are closed during the pandemic. Police are being encouraged not to make arrests for anything other than felonies, which leaves victims alone with their abusive partners. Also, court closures have made it more difficult to obtain protection orders for IPV victims, which leave them constrained with their abusers. Health care providers must be well equipped to address the increase in IPV cases during and after the COVID-19 pandemic. In this poster, we discuss the impact of COVID-19 on IPV incidents and some barriers to reporting IPV during natural disasters. We examine the effectiveness of the current reporting system in detecting IPV and explore possible IPV identification and support strategies to provide avenues of safe communication during this time of confinement.

No. 64

Social Media, Anti-Semitism and Violence: Is Your Patient at Risk?

Poster Presenter: Luis Bautista
Co-Author: Kayla Fisher, M.D., J.D.

SUMMARY:

Year 2019 holds the record for being the worst year for anti-Semitic incidents in the U.S., having 2100 more incidents than the previous year. Vandalism increased by 19% and assaults increased by 56%. In total, the U.S. saw 95 victims of anti-Semitic acts and five deaths. Certain areas were particularly affected, such as New York City, which experienced an 82% increase in incidents and a 22% increase in violent incidents. Other parts of the world also experienced a surge in anti-Semitic violence. According to 2018 data, Germany''s anti-Semitic violence increased by 70% and the United Kingdom saw a 16% increase. This poster reviews a recent study by the World Jewish Congress that points to the role social media plays in this surge of anti-Semitic violence. In 2016, over 29 million internet surfers were exposed to anti-Semitic content. In total, there were >382,000 posts with >43.6/hour and 1 every 83 seconds. The most anti-Semitic posts occurred on Twitter with Twitter having 63% of the total with Blogs and Facebook next, and the other social media accounts accounting for the remainder. When these postings were examined and categorized as to their substance, 158,000 expressed hatred, 154,000 were symbols, 14,000 expressed Holocaust denial, 31,000 were calls to do harm and 25,000 expressed dehumanization. When researchers checked back after one year, they found most posts still visible, even when they were in violation of the social media platforms anti-hate policies. The online disinhibition effect which can lead to a lack of civility and aggression coupled with the explosion of anti-Semitic content on social media platforms has left many to question protections provided by 42 U.S.C. 230(c)(1) which "bars civil liability claims that treat a provider or user of an interactive computer service as a publisher or speaker of any information provided by another information content provider." While the landmark case of Brandenberg v. Ohio held that government cannot punish inflammatory speech unless that speech is "directed to inciting or producing imminent lawless action and is likely to incite or produce such action", social media platforms are currently protected from postings that incite or produce imminent lawless action. Online platforms that support anti-Semitic content can also encourage performance crimes and a "pseudocommando" stance among those who consume such content regularly. The case of the Pittsburgh syagogue shooter, Robert Bowers, may reflect such effects of anti-Semit material on social media platforms. In the nineteen days prior to his act of mass murder, Mr. Bowers posted or reposted memes and comments at least 68 times, many reflecting anti-Semitic content. Given the proliferation of violent anti-Semitic content on social media platforms, it is imperative that psychiatrist inquire about social media use as a regular part of

their practice and provide guidance to their patients regarding its potential effects.

No. 65
Association Between Sex Reassignment Therapy and Self-Injurious or Suicidal Behaviors in Patients With Gender Dysphoria
Poster Presenter: Lalita Thitiseranee, M.D.

SUMMARY:
Background: Research has shown mental health disparities among the transgender population including Non-Suicidal Self-Injury (NSSI) and suicide. **Objectives**: To explore the prevalence of NSSI and suicidal ideation, to investigate NSSI-associating variables, and to discover the effect of parental support on NSSI prevalence in transgender with gender dysphoria. **Methods**: Data collection of 105 transgender participants from Gender Variation Clinic, Ramathibodi Hospital, Mahidol University, Thailand. All participants were diagnosed with gender dysphoria according to the DSM-5 by psychiatrists and were over 18 years old. Informed consent was obtained and participants answered self-reported Online questionnaires composing of 92- items including Demographic data, Impulse, Self-harm, and Suicide Ideation Questionnaire for Adolescents(ISSIQ-A), and Inventory of peer and parental attachment- Revised (IPPA-R; parental part only). All four subscales of ISSIQ (impulse, self-harm, self-harm motives, and suicide ideation) and IPPA indicated good reliability (α = .79, .71, .96, .81 and .88, respectively). The frequency for ISSIQ-A ranges from never happen (0) to happen all the time (3) while IPPA uses a three-point scale ranging from 'never true' (1) to 'always true' (2). SPSS V.26.0 was used to calculate descriptive statistics, Chi-square, and Logistic regression. **Results**: 86.7%(N= 91) were female gender at birth. The mean age was 29.23(SD = 0.7). 79% of participants (N=83) were using the sex reassignment hormone, while 39% (N=41) underwent sex reassignment surgery (see Figure 1). 36.2% (N=38) reported having engaged in NSSI in their lifetime. The three most commonly reported NSSI methods were hurting (24.9%), hitting (21.9%), and scratching themselves on purpose (12.5%). 78.1% (N=82) reported other self-harm behaviors; driving recklessly, alcohol abuse, and engaging in promiscuous sex behaviors (61.9%, 35.2%, and 16.2%, respectively). The three most frequently reported motives for cutting and other self-harm behaviors were to 'control anger' (20.1% of participants), to 'calm myself' (17.2%), and to 'stop feeling sad/ depressed. Lastly, 52.4% (N=55) reported having suicide ideation with 42.9% (N=45) reported feeling hopeless and helpless, 38.1% reported having had a passive death wish, and 24.8% (N=26) reported having had suicidal ideation in their lifetime. Logistic regression predicts that participants who undergo sex reassignment surgery will have less NSSI compared to those who did not receive surgery. In addition, higher alienation with parents results in higher suicide ideation. **Conclusion**: There is a significant rate of NSSI and suicide ideation among transgender with gender dysphoria. Moreover, our study indicates that sex reassignment surgery and less alienation with parents are protective against NSSI and suicidal ideation, respectively. We encourage caretakers to be aware of NSSI and suicide among transgender and to seek help from professionals.

No. 66
LGBTQ Mental Health Outcome Differences: Comparisons Between Sexual Minorities and Gender Minorities
Poster Presenter: Stephanie Ann Kerswill, M.D.
Lead Author: Dustin Zachary Nowaskie, M.D.

SUMMARY:
Background: It is well documented in past literature that the lesbian, gay, bisexual, transgender, and queer (LGBTQ) community faces higher mental health disparities compared to the cisgender, heterosexual population. Throughout this abundance of data, LGBTQ people are often studied as a uniform group despite being a heterogeneous population with similar but unique subgroup minority stressors. Further, the few past studies comparing health outcomes between sexual and gender minorities (i.e., binary transgender and nonbinary and genderqueer (NBGQ) minorities) have come from locations with many LGBTQ legal protections and present conflicting results. Methods: A self-reporting, cross-sectional survey was distributed by community organizations to the

LGBTQ population of a Midwest state with very limited LGBTQ legal protections. Survey items consisted of demographics (i.e., age, gender identity, education, income, race/ethnicity, relationship status, and sexual orientation), experiences with victimization within social and occupational services, and health outcomes (i.e., having an anxiety diagnosis, feeling anxious most days, having a depression diagnosis, feeling depressed most days, having a disability, overall health, attempting suicide ever, and having considered attempting suicide in the past year). Logistic regressions, adjusting for dichotomized demographic variables, were analyzed to identify significant differences in health outcomes by gender identity. Results: A total of 631 LGBTQ people completed the survey. Majority were middle-aged (M=39.37, SD=13.83), cisgender sexual minorities (82.4%), monosexual (60.0%), White/Caucasian (86.8%), had a college degree or above (76.4%), earned more than $10,000 per year (94.4%), and were in a relationship (75.3%). When comparing cisgender sexual minorities and gender minorities, regression models were significant for all health outcomes. Gender identity was a significant predictor in most models, except having an anxiety diagnosis (p=0.396) and anxiety symptoms (p=0.052). Compared to cisgender sexual minorities, gender minorities were a multitude (range 1.7 to 4.1) more likely to report health outcomes. When comparing transgender minorities and NBGQ minorities, gender identity was no longer a significant predictor for any health outcome. Conclusion: In the absence of LGBTQ legal protections, sexual and gender minorities face high rates of mental health conditions. Furthermore, gender minorities experience substantially higher rates of stigma and discrimination than their sexual minority counterparts, which likely contributes to higher mental health disparities. Gender minorities are a particularly vulnerable population with unique minority stress, which is critical to consider when providing proper care to these individuals. Mental health providers should be aware of these disparities and engage in LGBTQ cultural competency training to better understand these unique associations and their treatments.

No. 67

Relationship Between Parental Acceptance of Lesbian and Gay Children Over Time and Mental Health or Substance Abuse in Later Life

Poster Presenter: Matthew Verdun, M.S.

SUMMARY:

The lesbian and gay community experiences higher rates of mental health and substance use disorders than the general population while also dealing with varying parental responses to disclosure of sexual orientation. Previous research has shown a negative relationship between current levels of parental support and mental health or substance use disorder. This quantitative research study sought to determine if there was an effect of parental support on depression, anxiety, or substance abuse over time. Adult cis-gender gay and lesbian participants were recruited via social media to participate in the study. A total of (N=179) people completed demographic surveys, questions about their parents' initial and current level of parental support regarding participant sexual orientation, a PHQ-9m GAD-7, and DAST-20. Participants were placed into one of three groups (Consistently Positive, Negative to Positive, and Consistently Negative) based on their responses to initial and current level of parental support. A fourth parental support group (Negative to Positive) was excluded as it was too small to analyze (n=2). This left a sample of 177 (N=177) of which 100 were male, 77 were female. Scores for each group were analyzed via ANOVA. ANOVA was chosen because the equivalency of covariances assumption necessary to conduct MANOVA was violated. Results on the DAST-20 violated the assumption of homogeneity of variances so were not analyzed, but the results showed a similar pattern to those of the GAD-7 and PHQ-9. The ANOVA for PHQ yielded F(2,172) = 8.90, p<.001. The ANOVA for GAD7 yielded F(2,172) = 9.653, p<.001. The Tukey HSD for the PHQ-9 found no significant difference between Consistently Positive (m=7.38) and Consistently Negative (m=8.20) parenting but did find a significant difference (p<.05) between those groups and the Negative to Positive (m=12.88) group. Similarly, Tukey HSD for the GAD-7 found no significant difference between Consistently Positive (m=5.79) and Consistently Negative (m=6.22) parenting but did find a significant

difference (p<.05) between those groups and the Negative to Positive (m=10.37) group. In all three assessments participants whose parents were consistently negative had the lowest symptom scores, followed by those whose parents were consistently positive. Consistency of support appears to be more important than positivity toward their child's sexual orientation. These findings could inform future researchers seeking to identify how the protective factor of parental consistency and mental health or substance abuse treatment interact. The findings are also relevant to mental health providers working with lesbian and gay individuals who have or desire a strong family connection or whose families are inconsistent in their support.

No. 68

Art Therapy as a Cognitive Stimulating Activity for Older Adults With a Mild Neurocognitive Disorder

Poster Presenter: Rathi Mahendran

SUMMARY:

Introduction: In Mild Neurocognitive Disorder (NCD), cognitive deficits occur with preserved activities of daily living. However almost half will progress to a Major NCD in about 3 years. As pharmacotherapy is not indicated in Mild NCD, cognitive stimulation interventions have been explored. We present findings from a randomized control trial with objective cognitive measures and defined therapeutic goals, which examined cognitive effects from Art Therapy (AT) delivered over 9 months. **Methodology**: 250 community-living older persons were screened (Petersen's criteria); 68 (mean age 71.1 years, 57 females, 5.4 years of schooling) were randomized. AT interventions involved sessions of structured art viewing held at the National Art Gallery and the National University Art Museum and were alternated with the creation of artworks in sessions with identified themes, at a community research centre. All sessions were led by trained therapists weekly for 3 months, then fortnightly for 6 months in small group sessions. In art viewing, pre-selected artworks, were used to engage participants in meaningful conversations involving the sharing of perspectives and feelings about the artwork. In the creation of art works, various techniques (drawing, scribbling, collage work, symbol work, pictorial imagery and clay work) and materials (paint, pencils, crayons, stickers, coloured paper) were used in planned theme sessions (example: my family, my home). Participants shared their artwork in pairs and with the group, engaged in image appreciation, and were guided in assigning emotional and cognitive significance to their artworks. Neurocognitive domains were assessed at baseline, 3 and 9 months. **Results**: AT showed improvements in neurocognitive domains compared to a Control Group (CG) at 3 months (d=0.40, 90% CI 0.126, 0.679) for List Learning (d=0.542; 90% CI 0.105, 0.810; p=0.042), and Digit Span Forward (d=0.991; 90% CI 0.251, 1.730; p=0.028). Beneficial effects (although not statistically significant, p>0.05), were observed for Delayed Recall, Recognition Trials, Block Design, and Color Trails 2. Mean number of domains with Z-score < -1.5 at 3-months was lower with AT compared to CG (d=-0.314; 90% CI -0.629, 0.000; p=0.100). Effects were sustained at 9 months (d=0.31, 90% CI 0.068, 0.548, p=0.035). **Conclusions**: This pilot RCT supports the effectiveness of AT, delivered as 'art as therapy' and 'art psychotherapy', in older persons with Mild NCD. Both short-term gains and sustained improvements at nine months of the intervention were found. While the study sample was small and was not statistically strong to determine effectiveness or generalizability, this study indicates scope for a substantive study on AT and also to explore other variables such as socialization.

No. 69

Differential Predictors of Self and Informant-Assessed Subjective Cognition in Late Life Depression

Poster Presenter: Emily Burns
Co-Authors: Emma Rhodes, Philip Insel, Craig Nelson, Scott Mackin

SUMMARY:

Background: An estimated 25-60% of individuals with late life depression (LLD) present with significant cognitive impairment. However, subjective cognitive complaints are shown to be a function of depression and anxiety rather than objective cognition in older adults [1, 2], but is under-researched in LLD. Study partner ratings of

participant cognition are associated with objective cognition in non-depressed samples [3], but the impact of participant clinical status, stress, social support, gender and race are not clarified in LLD. We hypothesize anxiety and depression rather than objective cognition will predict self-reported cognitive complaints but that there will be poor agreement between self and study partner ratings. Methods: Participants included 64 community dwelling older adults with LLD and their study partners. Diagnosis of depression was determined via Structured Clinical Interview for Diagnosis (SCID) of DSM-IV Axis I Disorders and depression severity (17-item Hamilton Depression Rating Scale; HDRS-17 >= 15). Subjective cognition was measured with Everyday Cognition Scale Self (Self-ECog) and Informant (SP-ECog) versions. Measures of anxiety (Generalized Anxiety Disorder Assessment-7; GAD), stress (Perceived Stress Scale; PSS), and social support (Duke Social Support Index; DSSI), and a comprehensive neurocognitive battery assessing executive functioning, visual perception, verbal and visual learning and memory, language, working memory, and information processing speed were completed. Scores one standard deviation below published normative data for each cognitive test represented cognitive impairment. The sum of impaired tests across all domains represented overall cognition. Results: Forty-four percent of participants showed impairment across one or more cognitive test. Subjective cognitive impairment (ECog >= 1.81) was reported by 41% of participants and 23% of study partners. Linear regression analyses found higher GAD (ß = .39, t = 4.03, p = 0.00) and higher HDRS-17 (ß = .24, t = 2.40, p = 0.02) were significantly associated with higher Self-ECog scores. Male gender (ß = -0.54, t = -2.31, p = 0.03), white race (ß = -1.11, t = -3.46, p < 0.01), higher PSS (ß = 0.48, t = 4.41, p < 0.01) and higher DSSI (ß = 0.35, t = 3.00, p < 0.01) were significantly associated with higher SP-ECog scores. Objective cognition was not a significant predictor in either Self or SP-ECog regression model (p>.05). Conclusion: Anxiety and depression predicted subjective cognitive concerns in participants with LLD. Participant race, gender, stress and social support predicted study partner ratings of participant cognition. Objective cognition was not a significant determinant for participant or study partner ratings. The divergence between Self and SP-ECog predictors underscore LLD's impact on accurately interpreting cognitive concerns and the need for further research. Supported by NIMH (Grant R01 MH098062) and UCSF Department of Psychiatry.

No. 70

Oxidative Stress in Late-Life Depression With Anxiety Symptoms: A Stressfull Comorbidity

Poster Presenter: Caroline Tisott
Co-Authors: Breno Diniz, Ana Silva, Érica Vieira

SUMMARY:

Background: Almost half of patients with late life depression (LLD) suffer from significant anxiety symptoms. However, the impact of this comorbidity associated with aging is not clear about the role of inflammation and oxidative stress imbalance. This study aimed to evaluate the levels of oxidative stress markers in older with LLD and high anxiety symptoms. **Methods**: This analysis included a sample of 115 individuals (27 only with LLD, 44 with LLD plus high anxiety symptoms and 44 controls) from Psychogeriatric Clinic at the Federal University of Minas Gerais, Belo Horizonte, Brazil. The protocol was structured with questionnaires about socio-demographic data, clinical health status, Structure Clinical Interview for DSM-5, anxiety and depression scales. After clinical evaluation, blood samples were collected and the free 8-isoprostane levels on plasma, oxidative stress biomarker, were measured using a commercial enzyme-linked immunosorbent assay (ELISA) kit. **Results**: ANOVA analysis was used to evaluate the association between the groups and 8-isoprostane levels and showed significant difference (F= 8.647 p<0.001). LLD plus anxiety symptoms group had higher levels of 8-isoprostane compared with other groups. Post-hoc test indicated that the educational level was significantly different between the control and LLD groups (p=0.001) and control and LLD with anxiety symptoms groups (p=0.001) but not between the LLD and LLD with anxiety symptoms groups (p=0.973). Similarly, there was significant difference in age only between the control and LLD groups (p=0.021). However, number of medications used, blood pressure, number of comorbidities and BMI (Body Mass Index) was no significantly different between the groups. There is

no difference in male and female proportions between the groups (x2 (2) = 0.623; p= 0.732). Pearson's rho correletion analysis indicated that higher levels of 8-isoprostane was positively correlated with HDRS-21 score (Hamilton Depression Rating Scale - 21 items) (r = 0.25, p = 0.007) and GAD-7 score (Generalized Anxiety Disorder 7-item) (r = 0.34, p = 0.001) and negatively correlated with MDRS score (Mattis Dementia Rating Scale) (r= -0,23, p=0,024). There were no significant correlations between levels of 8-isoprostane and age, education, blood pressure levels and BMI. **Conclusion**: These findings suggest a positive association between higher depression/anxiety symptoms and free 8-isoprostane in older patients, which may be an indicator of higher oxidative stress in these population. Further studies are needed to clarify the relationship and the impact between higher depression/anxiety symptoms, aging and oxidative stress. The authors have no conflict of interest to disclose.

No. 71

An Overview of the Mental Health Care System for Syrian Refugees in Jordan – Barriers, Challenges, and Opportunities

Poster Presenter: Majd Al-Soleiti, M.D.
Lead Author: Eric Rafla-Yuan, M.D.
Co-Authors: Ayat Nashwan, Ph.D., Mahmoud Abu Adi, B.Sc.

SUMMARY:
Introduction: Since its inception, the Hashemite Kingdom of Jordan has hosted refugees in times of unrest. The most recent flow of refugees began in 2011 from the humanitarian crisis in Syria, with more than 600,000 registered Syrians seeking safety in Jordan. Currently, 1 in 15 individuals in Jordan are Syrian refugees, and almost 30% of the total population of Jordan is non-native Jordanian. Numerous reports have documented the high amount of medical need of the refugee population in Jordan and studies have identified an even higher burden of psychiatric symptoms in refugee populations. However, little academic work has been done identifying the organization of the existing system of mental health care in Jordan or what gaps, disparities, barriers and advantages exist. Scarce literature can be found on the experience of mental health professionals themselves and the challenges they face in their daily practice with the population of refugees in Jordan. **Aim**: Our study expands the description of the mental healthcare system for Syrian refugees in Jordan. We further identify and examine strengths, weaknesses, and barriers to care inherent in this system. **Methods**: Methods included review of the existing literature, mixed-method interviews of mental health professionals who work with refugees in Jordan, and thematic analysis of interview transcripts. **Results**: Results from twenty interviews support many barriers and challenges already identified in previous studies including economic pressure, stigma of psychiatric treatment, shortage of trained professionals, and initial distrust of institutions. Notably, our results also present novel findings for this setting, including organizational challenges, lack of screening protocols, and evolving symptomatic presentations with the evolution of the crisis, now in its tenth year. The Jordanian response also was found to have advantages including a remarkable lack of conflict between refugees and local population, highlighting the importance of shared culture, positive governmental responses, and the historic and religious values of Jordanian society. **Conclusion**: This study investigates the infrastructure of mental health services for Syrian refugees in Jordan, with a focus on the professionals' experience in the field to elucidate challenges, barriers, and advantages inherent in the present system. Results corroborate previous data but also elucidate novel barriers and advantages to the system of care. These findings have many implications to inform effective policies, provide better clinical care, and integrate refugees within receiving countries worldwide.

No. 72

Application of Routinely Collected Administrative Data to Track Demographic and Mental Health Characteristics of People Experiencing Homelessness

Poster Presenter: Jia Hong Dai
Co-Authors: Rahat Hossain, M.D., Zechen Ma, B.H.Sc., Ivana Burcul, Wenna Deng, B.Sc.

SUMMARY:
Background: People experiencing homelessness have complex psychiatric and medical presentations, and have poor access to primary care. Thus, emergency departments (EDs) often become their main point of healthcare contact. Using routinely collected administrative data from EDs, we aim to examine demographic and mental health characteristics of people experiencing homelessness over time and geographically, and explore possible targets for intervention. Methods: All routinely collected administrative health data from EDs located within Ontario, Canada from 2010-2017 were analyzed to examine patient characteristics. Individuals experiencing homelessness were identified via a specific postal code designation, and compared to the general population. Outcomes included number of unique patients, number of visits, type of ICD-10 presentation, mental health diagnoses (ICD-10 F category), and specific substance use diagnoses. Results: 604,170 visits to the ED over 10 years were made by 39,408 unique individuals experiencing homelessness. Patients experiencing homelessness are mostly located in urban centres within Ontario. Number of ED visits has steadily increased over 10 years in all of Ontario, despite decline in shelter use. In people experiencing homelessness, the most prevalent category of presentations were primary mental health diagnoses, accounting for 34.9% of visits (n=210,609). Under mental health conditions, psychoactive substance use presentations made up more than 54% of the presentations (n=114,198). Presentations related to psychotic disorders and neurotic, stress-related, and somatoform disorders were the second and third most common causes at 17% (n=36,507) and 15% (n=31,493), respectively. Alcohol was by far the most common cause of substance use/induced disorders. Finally, a visit to an ED by a patient experiencing homelessness resulted in repeat presentation on the same day 5% of the time. The median time to repeat presentation was 14 days.

No. 73
Child Maltreatment Reports in San Francisco Before and During the Covid-19 Pandemic

Poster Presenter: Michael John Politis, D.O.
Co-Authors: Andrea Nicolei Ponce, B.A., Matthew L. Goldman, M.D., M.S., Rachel Loewy, Ph.D., James Baird, M.P.P.

SUMMARY:
Background In the US, educational personnel are the number one source of alleged child abuse or neglect referrals, comprising 20.5% of reports in 2018 (1). School closures and social distancing during the COVID-19 pandemic has incurred a heavy loss of in-person interaction between potential victims and these mandated reporters (2). Simultaneously, multiple risk factors for child maltreatment have increased, including individual parental factors (substance abuse, depression), family factors (social isolation, parenting stress), and community factors (unemployment rates) (3, 4, 5, 6). This creates a perfect storm that may lead to unreported cases despite increased child maltreatment. Several San Francisco Bay Area counties reported initial data of a decline in referrals within the first full month of the stay-at-home order (7). A detailed understanding of possible changes in child maltreatment referrals because of the COVID-19 pandemic is critical to 1) adapt detection strategies for the current environment and 2) prepare child protective services and the behavioral health system to meet the current and future needs of alleged child abuse victims. This study will examine the rates, characteristics and outcomes of suspected child maltreatment reports, reporters and suspected victims. Methods This study will compare suspected child maltreatment referrals submitted to San Francisco's Family and Children''s Services (FCS) from April 1, 2020 to December 31, 2020 with the same months of the three prior years (2017, 2018, 2019) averaged as a historical control. Records stored by the FCS Data Unit will include information about the referring party, suspected victim, incident, and referral outcomes. We hypothesize that there will be fewer overall reports in 2020 compared to prior years, with the largest proportional decrease in school-based reports. We will compare the following between the active period (2020) and historical period (2017-2019), by month, to control for typical seasonal variation in reporting: 1) number and proportion of referrals by type of abuse and reporter; 2) demographic characteristics of the alleged victim (e.g. age, gender, race/ethnicity); and

3) outcome of referral (investigated/opened cases, emergency responses, disposition). We will also examine whether reporter type relates to outcomes in each time period. Results Data collection is ongoing, and analysis will be completed by the 2021 Annual Meeting of the American Psychiatric Association. Conclusion Our research will provide preliminary evidence regarding changes in child abuse referrals during the COVID-19 pandemic that may help to identify gaps in reporting. Findings will then inform practices within FCS and strategies within the San Francisco Department of Public Health to better meet the behavioral health needs of these children.

No. 74
Cultural Challenges of Matrix Model in Arabic Countries
Poster Presenter: Chia Hsu
Co-Authors: Arham Siddiqui, M.B.A., Sara Abdelgawad, Yasin Taha Ibrahim, M.D.

SUMMARY:
Background: The Matrix Model (MM) is a multi-component framework for treating substance use and addiction that has been in use for many decades in the USA. Currently, the MM is being utilized in many Arabic Countries. Here we aim to explore providers' perspectives on the MM's impact as well as the challenges faced. Methods: Eight addiction treatment centers from different cities in Egypt, KSA, Iraq, and UAE were contacted via email. They were asked to fill in a 21-item questionnaire that pertains to the application, outcome, and challenges of Matrix Model. Follow-up questions were obtained via email or personal contact. Results: The Matrix Model continues to be utilized in 6 out of the 8 contacted programs. One center in Egypt has discontinued the MM as it was perceived to be designed primarily for stimulant related substance use disorders, which are not common in Egypt. An Iraqi Center switched to Colombo Program as the government has received training scholarships on it. Data showed wide variability in regards to the average number of clients treated with the MM (from 100 to 2500). The Arabic version of the MM was utilized for provider training in 6 out of the 8 centers while the providers at two centers were trained in the United States. Most providers reported that the MM made their job significantly easier and believed that the relapse rate was reduced. In all of the seven centers, MM is being utilized for all substance use disorders including stimulant use disorders. Reported challenges included difficulty understanding some concepts, variable degrees of acceptance of several structural components of the program by the patients and their families, and high drop-out rates. Conclusion: The Matrix Model seems to be a valuable modality for treatment of substance use disorders in Arabic countries. It has its own challenges and limitations that call for a more culturally adapted version.

No. 75
Domestic Mass Shooters and Terrorists: The Association of Untreated Psychiatric Illness
Poster Presenter: Nina Cerfolio, M.D.
Co-Author: Ira David Glick, M.D.

SUMMARY:
OBJECTIVE Utilizing a standardized interview process of psychiatrists applying the DSM-5, we determined the prevalence of psychiatric diagnosis and whether they had been adequately treated with medication among mass killers and terrorists in the United States. METHODS We used a database compilation of 115 mass shootings with firearms between 1982 and 2019 to study retrospectively 55 shooters in the United States. After developing a psychiatric-assessment questionnaire, psychiatric-interviewers determined diagnosis and existence of medication, by evaluating the clinical evidence obtained by (1) interviewing forensic psychiatrists, who had assessed the assailant and/or (2) reviewing psychiatric court evaluations conducted during the judicial proceedings. We selected all the cases where the assailants survived, which was 35 cases. Then 20 additional cases where the assailant died were randomly selected from the remaining 80, to determine differences in psychiatric diagnosis between such assailants and those who survived. RESULTS Of 32 of 35 cases where the assailant survived 87.5 % had the following psychiatric diagnosis: 18 schizophrenia, 4 bipolar I disorders, 2 delusional disorders-persecutory types, 2 personality disorders (1 paranoid and 1

borderline), and 2 substance use disorders. 4 assailants had no psychiatric diagnosis. Of 15 of 20 cases in which the assailant died: 8 had schizophrenia. Combining these two samples, schizophrenia was present in 26 (55 %). None of those diagnosed with psychiatric illness were treated with medication. CONCLUSION A significant proportion of mass shooters and terrorists suffered from untreated severe psychiatric illness, which included: schizophrenia, mood disorder, delusional disorder, personality disorders, and substance abuse disorder.

No. 76

Healthcare Disparities in the Era of Pandemic: Is Racial Bias Impacting the Covid-19 Care?

Poster Presenter: Afifa Adiba, M.D.

SUMMARY:

While the nation embarks on new efforts to reform the healthcare system, we still face a critical unfinished agenda from the mid-1960s: persistent racial, ethnic, and socioeconomic disparities in health and healthcare system.1As painful as it may be to acknowledge, we must begin with the recognition that discrimination is routine and commonplace in society and likely to be similarly prevalent in medicine. So, understanding racial disparities in healthcare requires an appreciation of the ways in which racism has operated and continues to operate in the society. Unfortunately, these disparities continue to intensify during the Pandemic. Across the United States, we are seeing alarming statistics about the disproportionate toll of COVID-19 on African American and brown population specially both in terms of infection and death. Nationally, age-adjusted hospitalization rates for COVID-19 are approximately 5-times higher for American Indians, Alaska natives, and Blacks, and 4 times higher for LatinX persons, compared with non-Hispanic white persons.2 But that is only one aspect of the disparities. In a country where race and ethnicity often intersect with wealth and class, there are a cascade of other impacts, particularly economic.3 African Americans are overrepresented in service-sector jobs reflects a history of racially segmented labor markets that kept them at the bottom of the economic ladder. If black Americans are more likely to suffer the comorbidities that make coronavirus more deadly, it's because those ailments are tied to the segregation and concentrated poverty that still mark their communities. So, in this presentation, I will illustrate the impact of racial bias in healthcare disparities, understanding the reasons of greater morbidity and mortality among minorities from various chronic diseases, racial impact on covid treatment and testing, and most importantly how this is impacting minority families and children's mental health. Also exploring ideas of identifying and implementing effective strategies to eliminate racial inequities in health care system.

No. 77

Impact of the COVID-19 Pandemic on the Mental Health of Health Care Workers

Poster Presenter: Samantha Hayes, M.D.
Co-Authors: Zijie Su, M.D., M.P.H., Maria Mirabela Bodic, M.D., Theresa Jacob, Ph.D., M.P.H.

SUMMARY:

Introduction: Health care workers (HCWs) are facing unprecedented levels of COVID-19-related psychological stress across professional and personal domains.1 Death by suicide has been reported in frontline providers taking care of patients with COVID-19 in NYC.2 3 However, there is little objective data on the degree and severity of symptomatology based on levels of exposure, between clinical and non-clinical as well as between frontline and second line HCWs. We hypothesized that HCWs would experience new onset psychological distress including depression, anxiety, and PSTD symptoms, and that the levels of psychological distress will be directly proportional to the degree of exposure. Objective: To measure the impact COVID-19 has had on the psychological wellbeing of HCWs. Methods: This IRB-approved cross-sectional study was conducted at a community hospital located in the 'epicenter' of the outbreak. All HCWs who were working at the medical center at least since March 2020 were invited to participate in an anonymous self-administered web-based survey, via standardized recruitment emails link to the survey on Qualtrics software platform. The survey included demographic data, validated scales for depression (9-item Patient Health Questionnaire),

anxiety (7-item Generalized Anxiety Disorder scale), and post-traumatic stress (PC-PTSD-5 scale). Results: Preliminary data from 1033 respondents (16% response rate; 45% clinical, 55% non-clinical HCWs), reflect that although 43% employees felt they needed MH support, only 31% sought this. Overall, 53% respondents had worked in COVID units, 41% treated positive cases and 32% worked with them for >30 hours/week during the height of the pandemic. COVID-19 symptoms were reported by 27% with 12% being COVID PCR+ and 21% antibody positive. Majority of the respondents (60%), rated access to PPE as equaled or exceeded expectations. Responses to PHQ-9 scale show that between 10-30% HCWs had a variety of depression symptoms every day or nearly every day. Positive screens for anxiety symptoms were observed, with up to 40% HCWs reporting several symptoms every day or nearly every day. PTSD symptoms were reported by 30-38% of the respondents. Data analysis and interpretation after stratifying the data into categories, frontline vs second line HCWs, clinical vs non-clinical and in terms of exposure, is ongoing. Conclusion: HCWs impacted by this pandemic have experienced clinically significant psychological distress, thus generating an evidence-based importance to the development of clinical and policy strategies to support healthcare workers during outbreaks. The results of this study could serve as a basis to guide disaster-preparedness initiatives that take the mental health of the hospital workforce into consideration. Furthermore, we expect our outcomes can make better support and planning possible, for mental health services even during the present crisis and future disease outbreaks.

No. 78

Implementation of Embedded Psychiatric Services in a Student-Run Free Clinic for Refugees

Poster Presenter: Morgan Hardy, M.D., M.P.H.

SUMMARY:

Introduction: Refugees often experience a high burden of mental illness due to trauma, displacement, and isolation. However, they also often have extreme difficulty accessing mental health services due to cultural and language barriers, lack of financial resources, and stigma. We discuss the implementation of an innovative model for increasing access to mental health care for refugees. Methods: The San Antonio Refugee Health Clinic (SARHC) is a student-run free primary care clinic sponsored by the Long School of Medicine, University of Texas San Antonio. The clinic is held one night per week and sees 7-15 patients per night. Starting in April 2019, the clinic implemented mental health screening for all patients using the Refugee Health Screener 15 (RHS-15), a validated instrument that has been shown to be sensitive for depressive, anxiety, and trauma-related disorders in various refugee populations. Patients who screen positive are invited to return to the clinic on a different night for a psychiatric consultation. The embedded mental health clinic is staffed by psychiatric residents and a supervising psychiatry faculty member. It is held one night per month. Two to three residents see a total of 1-2 new intakes and 4-5 follow-ups per month. Residents are able to provide pharmacotherapy and brief psychotherapy. If interpretation is required, the residents have access to either in-person interpretation (for Arabic) or phone interpretation (for all other languages). A team of medical students help coordinate scheduling of patients and make phone calls for appointment reminders. The clinic also coordinates with liaisons from a local center for refugee services to address patients'' social and economic needs. Starting in April 2020, the clinic transitioned to telehealth due to the COVID pandemic, but services have otherwise continued uninterrupted. Results: Thus far, the clinic has treated a total of 21 patients. The ethnic diversity across patients has been significant; patients are from Jordan, Iraq, Iran, Afghanistan, Ethiopia, Cameroon, Morocco, Myanmar, and Sri Lanka. The most common mental health diagnoses are adjustment disorders, major depressive disorder, generalized anxiety disorder, and posttraumatic stress disorder. Most patients have been open to starting antidepressant medications. The biggest challenge has been patient attrition, with 33% of patients never returning after the first visit. Efforts are underway to improve the follow-up process and increase retention. Conclusion: Though still in its early stages of implementation, our model of embedded psychiatric services in a student-run free clinic has shown promise for improving access to mental health care for refugees. This model could be

easily replicated at other refugee clinics around the globe.

No. 79

Implementing an Outpatient Referral Process From a Psychiatric Emergency Room and Assessing Factors Related to Adherence

Poster Presenter: Amy Waters, M.D.
Co-Authors: Stephon Terrell Martin, M.D., Jessica Mikolowsky, M.D., Jacob T. Kannarkat, M.D., Stephen A. McLeod-Bryant, M.D.

SUMMARY:
Adherence with outpatient care is a strong, positive predictor of interval time between psychiatric emergency room visits.1 Furthermore, the earlier a patient receives outpatient follow-up after discharge from a psychiatric emergency room, the longer they spend in the community before re-presentation.2 These findings suggest that a lack of timely outpatient follow-up care in the post-crisis setting significantly contributes to recidivism, suboptimal quality of care, and resultant cost inefficiency. In light of this, an outpatient referral process was developed to provide appointments within Jackson Health System in Miami, Florida for all qualifying patients discharged from the institution''s primary psychiatric emergency room. Our quality improvement team assessed this intervention over a three-month span in regards to its effectiveness in bridging care and recommended areas for improvement. Certain demographic and clinical characteristics emerged as predictive factors in the likelihood of outpatient adherence. These referrals, though well-intended, reach few individuals, particularly those from disadvantaged groups, and highlight well-known, longstanding disparities in mental health treatment across the United States.3 As it stands, there remains a substantive opportunity to better serve the mentally ill in our communities, particularly those for whom the psychiatric emergency room may be their most likely, or often only, point of contact with psychiatric services.

No. 80
WITHDRAWN

No. 81

Providing Improved Equity Through Voting Support Activities for Hospitalized Psychiatric Patients

Poster Presenter: Julie Graziane
Co-Authors: Katharine B. Dalke, M.D., Elisabeth J. Shakin Kunkel, M.D., Cezary Mikoluk

SUMMARY:
In democratic countries, previous research has shown that psychiatric inpatients have lower rates of voting than that of the general population (Melamed). Not being registered to vote is a common reason that psychiatric patients do not vote (Kelly). Both voting and civic engagement have been associated with life satisfaction and improved mental health and health behaviors (Bazargan; Ballard). The authors aimed to reduce barriers to voting and improve civic engagement among hospitalized adult inpatients. Methods: Adult psychiatric inpatients were asked to complete a survey about their voter registration status, voting history, attitudes about voting, past barriers to voting, and their desire to register to vote. Patients who were Pennsylvania residents were given the option of completing voter support activities, including checking voter registration status, checking polling place, completing a voter registration application, and/or requesting a mail in ballot. Results: 120 adult inpatients completed the survey. 36.6% of participating patients checked their voter registration, and 35.8% checked their polling place. 15.8% completed either electronic or paper voter registration applications, and 1.6% were provided with paper voter registration forms. 20.8% requested a mail in ballot. Conclusion: In those inpatients who completed the survey, the top three barriers to voting included not having enough information to make an informed choice, not knowing where to vote, and not applying to vote. Our voter support activities helped to reduce two of these top three barriers by allowing inpatients to check their registration status, to check their polling place, and to help them apply to register to vote while in the hospital.

No. 82
Psychiatry on a Shoestring: Developing Crisis Standards of Care for a Severe, Prolonged, and Widespread Emergency
Poster Presenter: James E. Black, M.D., Ph.D., M.P.H.

SUMMARY:
The COVID19 crisis has severely stressed our healthcare system and pushed our economy to the brink of collapse. This "long emergency" will cause years of suffering worldwide: health expenses greatly increased, supply chains disrupted, and government revenues cut. In planning for all possibilities, we need to consider that this disaster may eventually force staff layoffs, close hospitals and clinics, or restrict formularies; we may need to practice psychiatry on a shoestring budget. This goes far beyond previous work on healthcare rationing or crisis standards of care because this emergency is uniquely severe, prolonged, and widespread. If we had to spend much less on psychotropics, which ones stay on the formulary? If we have to close hospitals, which patients get a bed? If we have to lay off staff, how do we provide the best care for our patients? Very little is known about how to make severe, permanent cuts to psychiatry. Our previous systematic review found no scholarship on the ethics of severe and prolonged healthcare rationing. We should hope for the best, but the bad outcomes require attention. The present study starts the project by surveying clinicans who have rationing experience that can help psychiatry with harsh funding cuts. Methods: We used purposive sampling to find 20 physicians with experience in healthcare rationing in underserved and indigenous communities, homeless programs, and African nations. We also interviewed ethicists, pharmacists, administrators, NGO staff, and military. Interviews were transcribed and coded using basic inductive techniques. Because so little is known about this topic, we used grounded theory, an iterative approach that guides further sampling, refines interview questions, and makes some preliminary conclusions. Results: All agreed that planning for a prolonged, widespread, and severe crisis is extremely important and very complex. There was no consensus on any best ethical approach to crisis standards of care. Some had confidence in top-down government policy; others recommended a grassroots approach. Native American leaders had confidence in a holistic, preventive approach. Minority participants had much less confidence in government. All believed that clinicians will ultimately "do the right thing." All agreed that social justice is central in planning cuts. We collected suggestions for innovative approaches to rationing, such as restricting formularies, cutting provider pay, or reinventing state hospitals. Conclusions: Our research illuminates the difficult ethical questions about adapting psychiatry to a prolonged, widespread, and severe emergency. Interviews identified areas where severe but ethical cuts can be made in medications, hospitals, clinical staff, and administration. Next steps include addressing specific cuts in pharmacy or pay, closing beds or clinics, or changing scope of practice. Underserved and diverse communities already have rationing experience, and they must have a voice here.

No. 83
Psychosis Management in Low and Middle Income Countries: A Systematic Review and Reflections From Behavioral Health Integration in Kosrae State, FSM
Poster Presenter: Shelley Wong
Co-Authors: Caitlin Engelhard, M.D., Ph.D., Sara Haack, M.D., M.P.H.

SUMMARY:
Background: Schizophrenia is a severe mental illness associated with increased mortality, significant disability, high rates of comorbid illness, stigma, and vulnerability to humans rights abuse. Globally, an estimated 21 million people live with schizophrenia with a majority living in low and middle-income countries (LMIC) where treatment gaps have been estimated to be 69%. Global mental health initiatives have focused on expanding services in these resource-limited areas to address psychosis and other priority mental health concerns. The purpose of this systematic review was to identify current strategies for management of psychosis in LMIC. We then integrate these findings with an example of psychosis management through a Behavioral Health Integration Program in Kosrae, an island state in the Federated States of Micronesia. Methods: The

search terms “psychosis” and “low and middle-income countries” were used in all fields in PubMed and PsycInfo. All dates of publications were included and a total of 217 publications resulted. After duplicates were extracted and exclusion criteria were applied, 37 publications met inclusion criteria and were included in the systematic review. Results: The main themes identified in the review included pathways to care, task-sharing initiatives, and the importance of culturally-adapted interventions. Our experience implementing the Collaborative Care Model (CoCM) and mhGAP training in Kosrae adds a valuable perspective given the dearth of literature relating to psychosis management in the Pacific and using the CoCM model in LMIC. Conclusion: Task-sharing initiatives provide a promising strategy to increase access to care for psychosis management in LMIC but must be implemented in a culturally-adapted fashion and consider alternative pathways to care. In Kosrae state, the CoCM Model and mhGAP training have been used to address the treatment gap for psychiatric care and improve management of psychosis.

No. 84

Collaborative Care in the Time of Covid-19: A Solution to the Youth Mental Health Crisis

Poster Presenter: Amrita Solanky, M.D.

SUMMARY:

On a national level, mental health (MH) and substance abuse (SA) collaborative care for youth has mushroomed in a multitude of states, as 1 in 5 youth has either a MH or SA disorder. There are 2 million youth (less than 18 years of age) in the state of New Jersey, and 16–20% have at least one emotional, behavioral or developmental condition, but only 9% ever receive any kind of treatment or counseling from a MH professional. To compound this crisis, there are only 324 practicing child & adolescent psychiatrists (CAPs) in NJ, [9] meaning that we have only 16 CAPs for every 100,000 youth. Some counties, Cumberland and Warren County for example, do not have single CAP between them. Additionally, Pediatricians are not trained to screen for or manage either mental or developmental conditions. Based on the statistics above, the NJ Division of Child & Family Services (DCF) issued a grant which supported a successful Pediatric Psychiatric Collaborative (PPC) program design. With Hackensack Meridian Health (HMH) in the lead, the PPC program was piloted, replicated, and implemented across the State. HMH then formed a coalition with DCF, 3 other Academic Health Systems, the NJ division of American Academy of Pediatrics (AAP), and Kelly Analytics. The HUB & SPOKE design model was then adopted; 9 service centers (HUBs) were established across the state in order to serve youth in all of 21 counties of NJ, Pediatricians were recruited and the HUBs were staffed with CAPs and Case Navigators in order to connect youth with MH specialty services within their own communities (spokes). The primary aim of the PPC Program is to expand access to MH services to all youth in NJ. The secondary aims include, assistance with navigating a fragmented MH system, connecting patients to available resources, and securing Specialty MH services through their own pediatricians who they not only trust but can also see without the stigma of MH care. Program evaluation was conducted during grant years 2 and 4 using a mixed method logic model. The evaluation centered around two main indices. Firstly, the Implementation Index, which is survey developed by the PPC program, determined by four components: data processes, patient and provider support, structure, and staffing. The overall implementation index was high, at 84.7%. Secondly, the Thomson Integration Index, which conceptualizes the collaboration process in terms of five dimensions: governance, administration, organizational autonomy, mutuality, and norms. In addition to these indices, the program was evaluated through a series of annual questionnaires, given to the participating Pediatricians.

No. 85

Implementation and Outcomes of Psychiatric Collaborative Care Conferences in a Safety Net, Primary Care Clinic

Poster Presenter: Nicole Guillery, B.A.

Co-Authors: Charles Manchee, M.D., Jennie Yoo, M.D., Joanne Suh, M.D., Isabel Lagomasino, M.D.

SUMMARY:
Background: The collaborative care model (CCM) for treating depression has been previously shown to result in better clinical outcomes with improved symptoms and faster rates of remission (1-2). While there are several components of collaborative care, there is limited, yet promising data suggesting that case conferencing is associated with improved depression outcomes (3). The objective of this study is to describe implementation of psychiatric collaborative care (PCC) case conferencing and its effect on depression severity and healthcare utilization in an underserved county hospital population. Methods: Adult patients (age ≥ 18 years) empaneled to a large primary care clinic with a Patient Health Questionnaire-9 (PHQ-9) score of ≥ 15 from the period of July 2018 to July 2019 (N=457) were study eligible. These patients were included in a patient registry and discussed in weekly PCC case conferences attended by an interdisciplinary team of psychiatry consultants, a medical case worker, and a licensed clinical social worker. Patients were excluded from the list if they were already engaged in care with an outpatient psychiatrist or mental health clinic. Descriptive data were used to present demographic, clinical and psychiatric characteristics of subjects. Independent two-tailed t-tests were conducted to compare healthcare utilization of patients who had negative PHQ-2 scores with patients who had persistently elevated PHQ-9 scores on follow-up. Results: Of the 195 patients who were case conferenced, patients were predominately in the 40-59 age group (46%), female (66%), Hispanic (76%), and single (61%). Most common medical comorbidities included obesity (81%), chronic pain (51%), and diabetes (44%). 66% of patients had received a diagnosis of depression by their primary care providers and 62% had a prior antidepressant medication trial, with 22% of patients trialed on two or more antidepressants. PCC recommendations included obtaining repeat PHQ-9 score (34%), medication changes (44%), referral to onsite psychiatric consultants (16%), and referrals to social work (8%). Of the medication recommendations (N=68), 15% were carried out by primary care providers and 19% were not because patients did not desire any changes; another 10% were changed by providers who ordered different recommendations. Of the patients who had follow-up PHQ-9 scores (N=155), 55% of patients had a negative PHQ-2 screen and 11% of patients had a ≥5 point improvement in PHQ-9. When comparing number of healthcare visits 12 months pre-PCC to 12 months post-PCC, patients who subsequently screened negative on PHQ-2 on average had fewer primary care visits (4.4 ± 2.5 vs. 3.5 ± 3.1), medical specialty visits (4.9 ± 5.8 vs. 3.6 ± 5.2), and emergency department visits (1.5 ± 2.0 vs. 1.0 ± 2.2). Conclusions: PCC case conferencing is associated with better depression outcomes with lower healthcare utilization for patients with moderate to severe depression.

No. 86

Rapid Digitalization of a Psychiatry Department

Poster Presenter: Katherine Brooke Martin, M.D.
Co-Authors: Rory Lavell Marraccini, M.D., Edward Norris

SUMMARY:
Background The Department of Psychiatry at Lehigh Valley Health Network (LVHN) consists of 26 employed physicians, 20 employed advance practice clinicians, and over 100 social workers. The department provides care yearly to over 25,000 patients in over 125,000 visits. For over a decade, some video care has been provided and has been well received (1). This care usually centered around efficiencies to prevent travel to different emergency departments (ED) for clinical care, remote clinical consultations to distant hospitals, court hearings regarding patient care, and recently some early experiments with providing clinical care to patients in their home. Prior to March 2020, the vast majority of care remained face to face. Methods In early March 2020, LVHN entered disaster planning mode weeks before the first patients would be diagnosed with COVID-19 in the network. As the network entered disaster mode, so did psychiatry. Psychiatry immediately initiated daily video meetings to ensure clear communication, create priorities, and to develop ways to leverage technology to provide these services (2). Results/Discussion With regards to outpatient care, virtual care increased from 2% to 98% throughout March. All outpatient providers are now able to provide EPIC video visits to all their patients. They also provide telephonic or face-to-

face visits when technology is unavailable. Care in the ED became greater than 90% virtual because clinical social workers remoted in from home using mobile-video units. The inpatient provider staff was platooned with half working in the hospital and half at home leading to 10% of care becoming virtual. Those working from home used the mobile-video units to provide care. The consultation liaison service had already been providing video-consultations to LVH-Schuylkill, a rural affiliate, for the past year. In March, these consults started to be performed from home. At the main campuses, consults were performed using chart review alone or with iPads in patients' rooms and 30% of care became virtual between March and June. Using WebEx, three partial hospitalization programs went from closing their doors to running virtual programs with as many as 15 patients per day in just over one week. Conclusions/Implications: The transformation of care that occurred in such a short timeframe truly was amazing. IT services led the way with the deployment of video technology and prioritized and responded to the additional unique needs of Psychiatry. It is hoped that much of the virtual care will remain even after regulations are lightened.

No. 87

Impact of Facemask-Use Policy by Country and Its Impact in Covid-19 Morbidity and Mortality

Poster Presenter: Bernardo Ng, M.D.
Co-Authors: Marlon Edu Saavedra Delgado, Ana Villaseñor Todd, Sandra Patricia Caicedo Agudelo

SUMMARY:

Background. In 2020, the use of a face mask has become a symbol of incomparable meaning. It first gained value in the clinical field so that our valued medical and health personal could work safely, and later, in the impact on containing the spread of the SARS-CoV-2 virus, among the general population. As the spread of the SARS-Cov-2 became global, countries established different policies to instituute and promote its use among their people, with a considerable variation. In fact the recommedations from the World Health Organization, have been dynamic as well, becoming more firm as the pandemic has progresssed. This study aims to establish the impact of FaceMask-Use policies by country on COVID-19 morbidity and mortality. Method. Data on COVID-19 global cases and global deaths were collected from the Johns Hopkins University Resource Center (https://covidinfo.jhu.edu/) and were cross referenced with the FaceMask-Use policies by country from the scientific movements #masks4all, in a point of time during the month of September of 2020. Results. The FaceMask-Use policies by country found through #masks4all were (1)universal; (2)required in shops, restaurants, public transport; (3)partial; (4)recommended; (5)required in any public and absent place. Data on 198 countries were included, all but one of the top five countries in cases and deaths (USA, Brazil, India, Russia, Mexico, UK) had either partial or recommended FaceMask-Use policies, at the time of the study. The associations of the mask use policy with total cases ($p=0.01$), cases per million ($p=0.04$), and deaths per million people ($p=0.02$), were statistically significant; the associations of the epidemiological curve trend with these same variables were also statistically significant ($p=0.00$). Conclusion. Although the results of this study may seem only intuitive, the solid statistical significance after including the data of so many countries is overwhelming. We hope it can give scientists a point of reference to speak in favor of Face MaskUse not only because it makes sense, but because the countries with Universal Face MaskUse policies have been more successful at controlling their outbreaks, and it did not happen by chance. We hope these findings will open a new dialogue between societies and governments, especially in the most affected countries, reinvigorating the proper and widespread use of a facemask, along with the other recommended measures; and not place all the expectation on the rolling out of vaccines. In the meantime, we can still see the numbers of cases and deaths decline, if we can inject a renovated sense of responsibility and understanding of this pandemic, since the widespread of Face MaskUse is a measure with sufficient scientific support to reduce the number of cases and deaths due to COVID-19.

No. 88

Examining Self-Blame Cognitions Among Military Sexual Assault Survivors Over the Course of an Intensive PTSD Treatment Program

Poster Presenter: Enya A. Meade
Co-Authors: Philip Held, Rebecca Van Horn

SUMMARY:

Background: Research has suggested that military sexual trauma (MST) may produce stronger maladaptive cognitions, particularly self-blame, in comparison to other types of trauma. Given the previously established strong association between negative posttrauma cognitions that posttraumatic stress disorder (PTSD) symptom severity, delineating the specific cognitions that are experienced more strongly by individuals who experienced MST could help clinicians improve treatment outcomes for these individuals. This study investigated whether veterans who experienced MST reported more severe self-blame cognitions than veterans who experienced non-MST related traumas at both pre- and post-treatment. Methods: Data were collected from 548 veterans (who participated in a 3-week Cognitive Processing Therapy (CPT)-based Intensive Treatment Program (ITP) for PTSD). MST, PTSD (PCL-5), and negative post-trauma cognitions including self-blame (PTCI) were assessed at pre- and post-treatment as part of routine clinical care. Independent sample t-tests were used to test differences in self-blame cognitions (PTCI items, 1,14,18,21,30) at pre-and post-treatment, and paired sample t-tests were used to examine self-blame cognitions change from pre- to post-treatment for veterans who did (n=226) and did not experience MST (n=322). Results: Analyses suggested that MST survivors endorsed significantly stronger self-blame at pre-treatment compared to veterans with other traumas (all p <.01; d=.23-.75). At post-treatment, MST survivors endorsed significantly higher post-traumatic on 4 of 5 self-blame items compared to veterans with other traumas: “The event to me because of the sort of person I am” (p=.008; d=.22), “Somebody else would have stopped the event from happening” (p=.000; d=.41), “Somebody else would not have gotten into this situation” (p=.000; d=.29), “There is something about me that made the event happen” (p=.002; d=.28). Paired sample t-tests revealed that veterans with MST significantly greater reductions on all self-blame items from pre- to post-treatment except for item 18 (“Somebody else would have stopped the event from happening”). Conclusion: This study suggests that despite being able to achieve reductions in self-blame, certain self-blame cognitions remain elevated for MST survivors after treatment. Future research should examine whether specifically targeting self-blame cognitions that are generally less likely to change for veterans who experienced MST could lead to improved treatment outcomes.

No. 89

Improving Patient Experience in Project-Based Permanent Supportive Housing Located on a VA Medical Campus

Poster Presenter: Zachary M. Jacobs, B.S.
Co-Authors: Heidi M. Weinreich, Ph.D., L.C.S.W., Anjani T. Reddy, M.D., M.H.S., Sonya Gabrielian, M.D., M.P.H.

SUMMARY:

Background: Permanent Supportive Housing (PSH)—which provides subsidies for independent housing and supportive services—is an evidence-based practice that improves health and housing for persons who have experienced homelessness. Though most PSH is scattered-site, i.e., housing dispersed throughout the mainstream rental market, project-based PSH offers housing and supportive services in dedicated facilities with on-site services, which may be best-suited for persons who need additional support due to behavioral health problems. In 2013, the VA Greater Los Angeles opened a novel project-based PSH program located on a VA campus. To inform plans to develop additional project-based PSH programs at VA, we examined patients’ experiences in this program. We aimed to identify services that patients found valuable, as well as gaps between patients’ needs and services provided. Methods: We performed semi-structured interviews with a convenience sample (n=24) of patients who had engaged in this project-based PSH program. Some patients were stably housed; others had lost their housing after move-in. Interviews explored patients’ overall experiences in the program, their views on

supportive services offered, and the influence of substance use, mental illness and physical health problems on their perceptions of support. Interviews were recorded and professionally transcribed. We used rapid analysis methods designed for implementation research; we generated templated summaries of each patient's responses across domains of our interview guide, then used matrix analyses to identify salient themes across the interviews. Key Findings: Patients appreciated the ease of access to medical and mental health services; however, as these services were collocated with their housing, their PSH providers often did not link them with these services as assertively as might be expected in a program off-site. Patients highlighted the low barriers to housing placement at this PSH program, as opposed to scattered-site options. Problems that were frequently raised include concerns about safety and substance use on site. Conflicts with staff and building management were frequently mentioned; patients described a lack of advocacy for patients' needs by staff and poor communication about VA services outside the realm of health care (e.g., vocational rehabilitation, assistance with benefits). Discussion: These data highlight advantages and drawbacks to project-based PSH programs collocated on VA campuses. The ease of access to medical and mental health services suggests that patients with greater physical and mental health needs may benefit from such programs. However, given the vulnerabilities of these patients, enhanced linkages to services, safety protocols, communication with staff, and referral systems are needed to maximize outcomes. As this program expands at VA, embedded systems of high-intensity case management, e.g., Assertive Community Treatment, may prove useful.

No. 90

Case Control Study of Aggressive Behaviors in Patients With and Without IDD in a Psychiatric Outpatient Clinic

Poster Presenter: Joy Justice
Co-Authors: Henry D. Heisey, M.D., Makenzie Elizabeth Hatfield Kresch, M.D., Oluwadamilare Ajayi, M.D., Suzanne Holroyd, M.D.

SUMMARY:
Background: Aggressive behaviors can be seen in patients with intellectual or developmental disabilities (IDD) as well as other psychiatric disorders. Previous research has suggested a prevalence of 45% of aggressive behaviors with those with IDD in a psychiatric clinic but it is unknown how much to attribute the behaviors to IDD versus the coexisting psychiatric disorder. In this study, psychiatric outpatients with and without IDD were studied for presence and history of aggressive behaviors. The purpose was to further understand the presence of aggressive behaviors in those with IDD. Method: In this retrospective case control study, 113 adult psychiatric outpatients diagnosed with IDD were compared to 288 patients without IDD, matched by age, gender, and bipolar disorder diagnosis. Except for one male patient without bipolar disorder in the age group 61-70, all patients with IDD had at least two matches from the sample without IDD. Data was collected on specific types of past and current aggression. Past aggression was defined as any biting, kicking, punching, scratching, or throwing objects recorded in the records as past history, and current aggression was defined as any of those behaviors documented within the patient's most recent note. Results: The matched variables of age group, gender, and bipolar disorder diagnosis all showed no significant statistical difference. For patients with IDD, the prevalence for past, current, and any (past or current) aggression were 45.1%, 23.0%, and 48.7%, respectively. For patients without IDD, the prevalence for past, current, and any aggression were 3.8%, 0.3%, and 3.8%, respectively. When past, current, and any aggression in patients with and without IDD were compared, all were determined to be significantly different ($p<0.001$). Each specific characteristic of aggression also demonstrated significant variation between patients with and without IDD ($p<0.001$). Conclusion: These results indicate that a diagnosis IDD is associated with a higher prevalence of past and current aggression, regardless of gender, age or presence of bipolar disorder.

No. 91

Classification Accuracy of the Neuropsychiatric Inventory–Questionnaire (Npi-Q) With Cognitive Impairment

Poster Presenter: Michel Tabet
Co-Authors: Kyle Jennette, Jason Soble, David Gonzalez

SUMMARY:
The Neuropsychiatric Inventory (NPI) is a valid, reliable, semi-structured, clinician interview of 12 categories of behavioral and psychological symptoms in patients with dementia (BPSD; Cummings, 1997, Lai, 2014). An abbreviated, collateral-report questionnaire (NPI-Q) was subsequently developed and tentatively cross-validated with the original NPI (Kaufer et al., 2000). Although one study established the NPI's classification accuracy for distinguishing normal cognition from mild cognitive impairment (MCI) and dementia (Nunes et al., 2019), the NPI-Q has not been similarly evaluated. A recent study demonstrated meaningful NPI-Q differences across stages of cognitive impairment (Siafarikas et al., 2018), suggesting the NPI-Q could also provide meaningful classification information. This study evaluated the NPI-Q's classification accuracy for differentiating normal cognition vs. MCI and dementia using a large multi-center repository. The sample (n = 40,281) consisted of older adults (Mage=71.53, SD=10.39) from the National Alzheimer's Coordinating Center's (NACC) database who completed NPI-Q and Clinical Dementia Rating scale (CDR Dementia Staging Instrument) during their first visit. The sample was well-educated (Meducation years=15.10, SD=3.46) and was mostly White (75%) and female (57%)[JRS1] . Per the CDR, 38.76% had normal cognition, 36.70% MCI, and 24.54% dementia. Nonparametric analyses of variance revealed statistically significant differences for NPI-Q total severity scores among those with normal cognition (M=0.76, SD=1.76), MCI (M=3.15, SD=3.74), and dementia (M=6.67, SD=5.57), with a large effect size (Kruskal-Wallis H= 13,986.10, $p < .001$, $\eta 2 = .274$). When comparing those without to those with cognitive impairment (i.e., MCI/dementia), receiver operator characteristic curve analyses revealed an optimal cutoff of ≥2 with excellent classification accuracy (AUC=.803) and 67% sensitivity/87% specificity. Results suggest that clinicians can add the NPI-Q to their clinical armamentarium given the total severity score provides meaningful, collateral-report information to help clinicians differentiate normal cognition from varying levels of cognitive impairment. However, the detailed reliability and accuracy of the NPI-Q should continue to be examined by future research, as well as the relationship between NPI-Q scores and other clinical measures (e.g., objective neuropsychological test performance).

No. 92

Comparative Effectiveness of Commonly Used Off-Label Atypical Antipsychotics in the Treatment of Dementia-Related Psychosis: A Network Meta-Analysis

Poster Presenter: Ismaeel Yunusa
Co-Authors: Nazia Rashid, Krithika Rajagopalan, George Demos, Victor Abler

SUMMARY:
Background: Dementia-related psychosis (DRP) is characterized by hallucinations and delusions, which may increase the debilitating effects of underlying dementia. This network meta-analysis evaluated the comparative efficacy, safety, and effectiveness of commonly used off-label atypical antipsychotics (AAPs) in treating patients with DRP. Methods: Pooled data from 22 clinical trials and observational studies from a systematic literature review of AAPs (quetiapine, risperidone, olanzapine, aripiprazole, and brexpiprazole) in DRP were analyzed. Study outcomes included: (i) Efficacy in treating DRP based on neuropsychiatric inventory-Nursing home version (NPI-NH psychosis subscale), (ii) Effectiveness - discontinuations due to all causes, lack of efficacy and adverse events, and (iii) Safety - cerebrovascular events (CVAEs), mortality, and others (somnolence, falls, fractures, injuries, etc.). We evaluated standardized mean differences (SMDs) for NPI-NH psychosis subscale scores and odds ratios (OR) with 95% confidence intervals (CIs) for binary outcomes. Results: Compared to placebo, aripiprazole (SMD, -0.12; 95% CI: -0.31, 0.06) and olanzapine (SMD, -0.17; 95% CI:-0.04; 0.02) demonstrated small, numerical improvement in DRP symptoms (5 studies; n=1891), while quetiapine (0.04; 95% CI: -0.23, 0.32)

did not improve psychosis. In comparison with placebo, the odds of all-cause discontinuation were significantly lower for aripiprazole (0.71; 95% CI: 0.51, 0.98; 20 studies; 5744 patients) and higher for other AAPs. Aripiprazole (0.5; 95% CI: 0.31, 0.82) and olanzapine (0.48; 95% CI: 0.31, 0.74) had significantly lower odds of discontinuation due to lack of efficacy (12 studies; n=4382) compared to placebo while results for quetiapine and risperidone were not significant. Odds of discontinuations due to adverse events (19 studies, n=5445) were higher for olanzapine (2.62; 95% CI:1.75, 3.92), brexpiprazole (1.80; 95% CI: 0.80, 4.07), quetiapine (1.25; 95% CI: 0.82,1.91), aripiprazole (1.38; 95% CI: 0.90, 2.13), and risperidone (1.41; 95% C I: 1.02, 1.94). Risperidone (3.68; 95% CI: 1.68, 8.95) and olanzapine (4.47; 95% CI: 1.36, 14.69) also demonstrated significantly greater odds of CVAEs compared to placebo. The odds of mortality (15 studies, n=4989) were also higher for aripiprazole (1.58; 95% CI: 0.62, 4.04), brexpiprazole (2.22; 95% CI: 0.30, 16.56), olanzapine (2.21; 95% CI: 0.84, 5.85), quetiapine(1.68; 95% CI: 0.70, 4.03) and risperidone (1.63; 95% CI: 0.93, 2.85) . Similar patterns were observed for other safety outcomes. Conclusions: Overall, the results demonstrate that quetiapine exhibited no DRP symptom improvement, while olanzapine and aripiprazole have limited, non-significant improvements. These off-label AAPs had greater odds of mortality, CVAEs, and discontinuations due to adverse events. The results suggest an unmet need for safer and efficacious treatment options in patients with DRP.

No. 93

Incremental Healthcare Utilization and Cost Burden of Comorbid Insomnia in Alzheimer's Disease Patients

Poster Presenter: Zaina Qureshi
Co-Authors: Ellen Thiel, James Nelson, Rezaul Khandker

SUMMARY:

OBJECTIVE: Insomnia is associated with worsened clinical outcomes among Alzheimer's disease dementia (AD) patients and is associated with increased caregiver burden and healthcare utilization. This study aimed to characterize the incremental healthcare burden of insomnia in AD using real-world data. METHODS: A retrospective observational study was conducted on AD patients selected from the IBM® MarketScan Commercial and Medicare Supplemental Databases. Patients diagnosed with AD between 1/1/15-12/31/17 were included in the study. Patients were stratified based on claims-based evidence of insomnia (medication or diagnosis), the first of which was set as the index date for the insomnia sub-cohort. Patients without insomnia were direct matched (up to 3:1) to the insomnia subcohort based on age at AD diagnosis, sex, region, and year of AD diagnosis. Matched non-insomnia patients were assigned index dates based on the distribution of days between insomnia index dates and AD diagnosis dates in order to control for time since AD diagnosis. Outcomes were assessed during the 12 months following the index date. The proportion of patients with different types of healthcare utilization and associated costs were compared via bivariate analyses. RESULTS: A total of 3,500 insomnia AD patients matched to 9,884 non-insomnia AD patients were included in the analysis. Both cohorts included about a third of male patients with a mean age of about 82 years. The insomnia cohort had a higher comorbidity burden at baseline as assessed by the Charlson Comorbidity Index (insomnia: mean=2.5; non-insomnia: 2.2 (p AD patients with insomnia were significantly more likely to have a claim for inpatient hospitalizations (39.8% vs. 32.3%), emergency room services (56.4% vs. 48.0%), and skilled-nursing services (42.6% vs. 31.9%) (all p<0.05). Mean and median total annual healthcare costs during the 12-month follow-up period were significantly higher among AD patients with insomnia as compared to those without. (Mean costs: $37,356 vs. $27,990; Median costs: $18,813 vs. $12,318 (p<0.001)). CONCLUSION: AD patients with claims-based evidence for comorbid insomnia are more likely to be users of higher-cost healthcare services such as inpatient hospitalization, and skilled nursing, and have higher total healthcare costs. This real-world analysis provides evidence that AD disease management should consider proper treatment of comorbid insomnia due to the incremental cost implications. This study was funded by Merck Sharp & Dohme Corp., a subsidiary of Merck & Co., Inc., Kenilworth, NJ, USA.

No. 94

Positive Association Between Neurodegenerative Disease and Cancer in Elderly Koreans: A 10-Year Cohort Study Using National Health Insurance Database

Poster Presenter: Heecheol Kim
Co-Authors: Jihun Kim, Soyeon Lee, Hojun Lee

SUMMARY:

Background and Purpose: Previous studies have suggested a decreased cancer risk among patients with various neurodegenerative diseases, including Alzheimer's disease (AD), Parkinson’s disease (PD), and frontotemporal dementia. However, there is a report that some types of cancer are positively associated with a PD diagnosis and emerging evidence indicates that neurodegenerative disease and cancer share common mechanisms of genetic and molecular abnormalities. The objective of this study is to evaluate the cancer incidence between control group and neurodegenerative disease (ND) group including AD, PD, and frontotemporal dementia. Methods: A population-based 10-year follow-up study was conducted using the Korean National Health Insurance Database for 2002–2015. The study population included the ND group and the control group, aged 60 years or over. The ND group comprised 9,365 patients with various neurodegenerative diseases including AD (n=3,157), PD (n=5,866), and circumscribed brain atrophy (n=342) who had at least 1 medical claim with a diagnostic code of corresponding diseases and had received prescriptions for antidementia or antiparkinsonian drugs one or more times after their first time diagnosis between January 2003 and December 2005. The control group consisted of 46,818 subjects who had not any medical claim with a diagnostic code of various NDs between January 2003 and December 2005 and were selected from the National Health Insurance Database to match each ND patient in terms of age, sex, and comorbidity using 1:5 propensity score matching. We used Cox proportional-hazards regression to determine the 10-year cancer-free survival rates after adjusting for potentially confounding factors. Results: Various NDs were newly developed in the control and ND groups during the 10-year follow-up periods (2006~2015). Newly developed ND cases were 15,459 (33.0%) in the control group and 2,434 (26.0%) in the ND group. Cancer developed in 22.6% of the ND group and in 18.6% of the control group (p=0.000). Cancer development was significantly higher in the ND group with newly developed ND cases than in the control group with newly developed ND cases (24.2% vs. 19.9%, p=0.000). NDs were associated with an increased risk of cancer (HR, 1.51; 95% CI, 1.44–1.58). Of the 10,821 patients (8,708 control group and 2,113 ND group) who developed cancer, 322 patients (3.8%) in the control group and 846 patients (40.0%) in the ND group patients experienced the event, i.e. death, by the last follow-up date of the death certificate (Feb 12, 2018) (p=0.000). The restricted mean survival time after cancer diagnosis is 11.2 years in the control group and 8 years in the ND group. Conclusions: Our results showed a positive association between NDs and cancer. Further replication study is needed to address the positive association between ND and cancer and it is necessary to study whether the positive association between ND and cancer appears in various types of cancer.

No. 95

Psychometric Validation of the Duke Iterative Cognitive Examination

Poster Presenter: Christine Park
Co-Authors: Kim Johnson, Jill Stuart, Deborah Koltai

SUMMARY:

Background Mild cognitive impairment (MCI) carries a high risk of progression to dementia and is associated with lower quality of life, greater frequency of depression, and lower general mental wellbeing.1,2 The Montreal Cognitive Assessment (MoCA) is a well-validated and popular cognitive screening tool routinely used in a variety of clinical practice settings that has improved the rate of identification of cognitive impairment.3,4 The Duke Iterative Cognitive Examination (DICE), also a brief screening tool, was developed as an enhanced cognitive screening instrument, but probes additional cognitive domains (e.g., visual and prose recall, abstract discrimination, expanded naming), allowing for broader characterization of cognitive deficits. The primary objective of this study is to validate the DICE to the well-established MoCA in a

clinic population and in normal control subjects. Methods This interim analysis includes a prospective cohort of patients attending the Duke Memory Disorders Clinic and normal controls recruited from a Duke research setting, all aged 55 years and older. Age, gender, race, and education were recorded for all subjects, as well as the working clinical diagnosis for clinical patients. To date, 50 patients and 50 control subjects have enrolled in the study. Administration of the tests were counterbalanced. The MoCA and DICE test similar cognitive functions including: visuospatial and executive function, naming, memory, attention, language, abstraction, delayed verbal recall, and orientation. Spearman's rank order correlation was used to establish the concurrent validity of the DICE and MOCA. Results 50 normal controls and 50 clinic patients have been recruited: the average age was 72±6.41 years, average years of education was 16±2.53, and the majority of the sample (87%) were Caucasian. Of the 50 clinic patients, 24 (48%) were diagnosed with MCI and 24 (48%) were diagnosed with dementia. The average DICE scores differed across normal controls (n=50, $\bar{x}$=45.9, SD=3.00), patients with MCI (n=24, $\bar{x}$=32.4, SD=10.0), and patients with dementia (n=24, $\bar{x}$=23.7, SD=8.70), $p<0.001$. There was a very strong correlation in the overall MoCA and DICE scores (r=0.86) in the patient group. DICE demonstrated shorter average administration time compared to the MoCA (10.1 min vs 11.9 min, $p<0.01$) in the patient cohort whereas the average time was similar for the normal control cohort (8.8 min vs 9.5 min). Conclusion In this initial study of elders recruited in a memory clinic setting, concurrent validity for the DICE is demonstrated with significant correlation with the well-established MoCA. Furthermore, DICE scores differ between groups of control subjects, those with MCI, and those with more severe cognitive impairment. The DICE takes slightly less time to administer and offers additional screening of cognitive function that may be useful for clinical characterization.

No. 96

15-Year Old Male With Manic Symptoms Post Right Middle Cerebral Artery Stroke Treated With Quetiapine

Poster Presenter: Usman Ghumman, M.D., M.P.H.

Co-Authors: Roshni Ashok Mandania, Marrium Ghumman, Shivani Mehta, Carla Alvarado

SUMMARY:

Introduction: Strokes in children can be subdivided into three main types: arterial ischemic stroke (AIS), cerebral sino-venous thrombosis (CSVT), and hemorrhagic stroke (HS), with AIS as the most common, usually involving the middle cerebral artery (MCA). Stroke can predispose to mania, which changes the medical management. Mania can present with decreased need for sleep, poor judgment and disregard for social constraints, and is associated with bipolar disorder and schizo-affective disorder but can also occur after strokes. Post-stroke mania (PSM), with MCA involvement is poorly understood. It can be difficult to recognize in a patient, especially with 2% prevalence, because of its delicate interlacing of psychological and neurological deficits that can be misdiagnosed. **Case Report**: Patient X, a 15-year-old male, with no previous medical, surgical, or psychiatric history initially presented with weakness and altered mental status one month ago. Five days prior to the initial presentation, he was acting confused and experienced a fall, hitting his head. He had an occipital headache and bilateral eye pain for four days. Two hours prior to admission, he developed left-sided weakness, slurred speech, and confusion. CT imaging showed acute ischemic infarction of right basal ganglia. MRI showed a right MCA stroke but no evidence of aneurysm or arteriovenous malformation. Aspirin and Levetiracetam were initiated as prophylaxis medications. Patient recovered fully and was discharged. One month later, he was readmitted for aggressive behavior. One week prior to readmission, he had stripped naked in front of family members, made several sexual comments and threatened to physically assault them, at which point an ambulance was called. The psychiatrist provided patient and parent scales to screen for psychiatric disorders, delirium and mania. The parent version of the Young Mania Rating Scale score was 50, consistent with severe mania. Patient X was started on Quetiapine 25 mg twice daily for mania. He showed significant improvement for his manic symptoms and was discharged home with outpatient psychiatry follow-up. **Discussion**: Symptoms of mania are commonly

seen in patients with psychiatric disorders, however, mania can present with neurological etiologies like stroke. The prevalence of stroke in pediatric populations is 1.2-13 per 100,000 but the prevalence of PSM is less than 2%. It can be easy to overlook neurological etiologies and focus on psychiatric diagnoses, but PSM should be considered. PSM patients experience symptoms of irritability, decreased need for sleep, elevated sense of well-being and hyper-sexuality, which are well controlled with atypical antipsychotics.

No. 97

Epigenetics of Trauma and Resilience: A Clinician's Review

Poster Presenter: Kyle Rutledge, D.O., Ph.D.
Co-Author: Kai Anderson, M.D.

SUMMARY:

The long-lasting effect of trauma, as well as the protective influence of resilience, have together provided meaningful avenues of clinical research. The current presentation seeks to provide clinicians with an update on findings regarding trauma from the field of epigenetics. Environmental traumas, including adverse childhood experiences, have been shown to create lasting biological effects in mouse models and human studies. Applications from the field of epigenetics - the modification of gene and genome products without alteration of the base sequence - have meaningfully advanced our understanding of the pathways of these effects. Such findings include the epigenetic effects on genes relevant to corticolimbic brain regions involved in regulation of the HPA axis and stress response. Beyond glucocorticoid receptors, relevant epigenetic effects of environmental stressors and trauma have been found with: NMDA and opioid receptors, serotonin transporters, and monoamine oxidase, among others. Epigenetic modifications have also been shown to play a role in driving the intergenerational transmission of trauma. This review highlights how our understanding of the impacts of trauma and resilience continues to be informed by research within applied epigenetics which provides a hopeful perspective in helping patients to stop the cycle of trauma.

No. 98

HPA Axis Healing With Abstinence in Alcoholism

Poster Presenter: Thomas P. Beresford
Co-Author: Patrick J. Ronan

SUMMARY:

Background: A lifetime alcohol dependence (AD) diagnosis applies to 20%-50% of patients in public and university general hospitals. Subtle early brain healing processes may involve changes in the neuro-endocrine stress system that can affect both cognition and decisions about treatment options. Method: To test whether neuro-endocrine healing occurs in frequent, heavy drinkers, this study 1) compared AD test subjects (n=16) with light drinking control subjects (n=15) at baseline and then 2) assessed the test subjects prospectively at three, and six months of supervised, disulfiram assisted abstinence. The subjects provided diurnal salivary cortisol samples on waking, waking +30 minutes, noon and 4 PM for each of the follow-up time points. Significance required alpha = 0.05. Results: Baseline test group cortisol means were significantly higher than control levels ($p < 0.04$ to <0.003) with a notable absence of the morning cortisol response. The Three Month average diurnal curve suggested an exaggerated morning response ($p< 0.038$), while the Six Month average curve approximated the baseline control values ($p>0.05$). Conclusions: These data indicate that neuro-endocrine healing may take up to six months to reach its full potential. This suggests the possibility that 1) neuro-endocrine effects may impair complex cognition and decision making early in the healing course and 2) neuro-endocrine healing late in the course may account for the often unrealistic sense of well-being that occasions alcohol relapse. Focused treatment may serve to expedite healing and add to the likelihood of sustained remission.

No. 99

Levetiracetam Induced Catatonia

Poster Presenter: Hamiyet Ipek, M.D.

SUMMARY:

Levetiracetam is one of the most commonly prescribed FDA approved antiseizure medications (ASM).In general, levetiracetam is relatively well

tolerated and safe medication. However neuropsychiatric adverse reactions have been reported in up to 16% of patients and can include behavioral disturbances, mood disorders, anxiety and rarely psychosis, delirium, suicidal and homicidal thoughts have been already described. Currently, there is only one care of levetiracetam-induced catatonia reported in the literature. We report 75-year-old male with medication resistant epilepsy and no prior psychiatric history who presented with progressively longer episodes of speech arrest, mutism, staring, posturing, echopraxia, echolalia, rigity, negativism and waxy flexibilty after an increase dose of levetiracetam. His symptoms were initially thought to be seizures, however multiple EEGs didn''t show any epileptic activity. His levetiracetam level was found to be 83.6 (reference range 12-46) and levetiracetam toxicity was suspected. As levetiracetam was being tapered off, he was monitored with the Bush-Francis Catatonia Rating Scale. Our case presentation expands on current knowledge of this rarely seen neuropsychiatric adverse effects including the levetiracetam blood level and objective catatonia rating scale to daily clinical practice. The differential diagnosis of medical catatonia may be challenging in the patients with co-morbid epilepsy especially as its presentation can resemble a seizure. Prompt recognition of catatonia is critical as failure to recognize and treat may result in inability to tolerate oral feeding, aspiration, and secondary infection.

No. 100

The Neuroscience Network: Development of a Mobile Application to Disseminate Neuroscience Training to Medical Professionals

Poster Presenter: Kathleen Ferreira, Ph.D.
Co-Authors: Melissa Arbuckle, M.D., Ph.D., David Ross, M.D., Michael Travis, M.D., Maja Skikic, M.D.

SUMMARY:

Over the past two decades, advances in neuroscience have enhanced our understanding of the brain and of the neurobiological basis of psychiatric illness. Despite this progress, the field of psychiatry has been slow to integrate a neuroscience perspective into clinical practice.1 The National Neuroscience Curriculum Initiative (NNCI) was created to address this gap. The Neuroscience Network mobile application, a collaboration between NNCI and C4 Innovations, offers accessible neuroscience content for mental health professionals, using videos, podcasts, brief articles, and case studies. This app's online platform, content, and ability to customize topics of personal interest and utility and to receive continuing education credits is more relevant than ever, given the rapidly expanding need for online learning resources over the past year. In Phase I of the study, our team developed a prototype of the Neuroscience Network and used a mixed methods approach to pilot the app with 40 psychiatrists to determine feasibility, acceptability, and preliminary effectiveness. After four weeks of app use, psychiatrists demonstrated improved knowledge and self-reported application to practice. The mean score for participant knowledge before the intervention was 46.9% (SD= 12.8) and 86.4% (SD=11.1) at follow up ($p<.01$ in paired t-test). Participants were also asked whether they considered neurotransmitters, genetics, epigenetics, synaptic plasticity, and neural circuits in case formulation and treatment planning and whether they discussed this information with patients over the past typical work week. Across the five domains, the minimum possible score was a 5 (never considered or discussed) and the maximum was 25 (frequently considered or discussed). Mean scores for considering these domains in case formulation and treatment planning increased from 13.0 (SD= 4.0) at baseline to 17.1 (SD=3.5; $p<0.01$) after training. Participant ratings for discussing this information with patients increased from 11.3 (SD= 4.4) to 15.1 (SD=3.7; $p<0.01$). In qualitative interviews, participants described the content as an interesting way to improve knowledge of neuroscience topics in an approachable, learner-directed manner and valued the ability to complete the brief lessons between work responsibilities. In Phase II of the study, the team will further develop the app based on Phase I findings and test the app with psychiatrists, psychologists, psychiatric nurses, and masters level clinicians, using a randomized, non-blinded prospective lagged start single crossover design to assess changes in participant outcomes. The poster will highlight Phase I findings and Phase II activities to date. This Small Business

Innovation Research study is supported by the National Institute of Mental Health.

No. 101
Understanding the Evolving Continuing Medical Education Needs of Psychiatrists Managing Patients With TD
Poster Presenter: Chirag Shah, Pharm.D.
Co-Authors: Shereta Wiley, M.P.H., Sylvie Stacy, M.D., Leslie Lundt, M.D.

SUMMARY:
As our understanding of the pathophysiology of tardive dyskinesia (TD) deepens and new therapies become available, it is imperative that education directed toward psychiatrists addresses knowledge gaps and needs reflective of these advances. This study sought to understand the evolving continuing medical education (CME) needs of psychiatrists managing patients with TD. A case-based survey was developed and later updated, to assess current practice, knowledge, and attitudes of US practicing medical specialists, including psychiatrists, in the management of patients with TD. The original survey was fielded in May 2018 and the updated survey was fielded in March 2020. Results were obtained from 213 psychiatrists in 2018 and from 125 psychiatrists in 2020. On average, psychiatrists completing the survey in 2020 had been in practice for 31 years and managed 15 patients per month with TD. Less than half of psychiatrists in both 2018 and 2020 were able to correctly identify the prevalence of TD in patients on maintenance antipsychotics, with many underestimating reported prevalence. Regarding perceptions of TD burden, majority of psychiatrists (64%) believe that TD may contribute to stigmatization experienced by patients with mental illness. Regarding patient evaluation, the majority of psychiatrists in both 2018 (77%) and 2020 (80%) would use a standardized rating scale to assess movement symptoms in the initial evaluation in a patient with symptoms suggestive of TD. With regard to management, respondents reported moderate familiarity with VMAT2 inhibitor therapies for TD, with self-reported familiarity with valbenazine (mean 2.9 in 2018, 3.2 in 2020) deutetrabenazine (2.5 in 2018 and 3.0 in 2020), and tetrabenazine (2.8 in 2020) increasing little among psychiatrists from 2018 to 2020. Further, while there was an increase in the percentage of psychiatrists who would use a VMAT inhibitor in 2020 as compared to 2018 (54% and 44% respectively), a notable percentage (24% of psychiatrists in 2018 and 16% in 2020) would use an anticholinergic to manage TD symptoms despite lacking clinical evidence supporting its use in the management of TD. Psychiatrists reported the most significant barriers to the optimal diagnosis and management of patients with TD were maintaining control of the underlying psychiatric disorder while treating patients for TD and formulary restrictions. Despite recommendations from APA guidelines and evidence suggesting that anticholinergic drugs may exacerbate dyskinesias, these continue to be used for TD management. Moreover, standardized assessments, which can assist in objectively evaluation and tracking symptoms during treatment, are not routinely used by all psychiatrists. The findings support the need for continued CME on TD focused to psychiatrists, specifically including information on TD prevalence, newer treatments for TD, and best approaches to maintain control of underlying psychiatric disorders when managing patients with TD.

No. 102
Efficacy of Troriluzole, a Novel Glutamate Modulator, as Adjunctive Therapy in Patients With Obsessive Compulsive: Analysis by Illness Severity
Poster Presenter: Azim Munivar, M.D.
Lead Author: Loren Aguiar, M.D.
Co-Authors: Alexander Bystritsky, Christopher Pittenger, M.D.

SUMMARY:
Background: Obsessive-compulsive disorder (OCD) is a prevalent psychiatric disease, affecting 2-3% of the general population. Up to 60% of patients have an inadequate response to conventional pharmacotherapy. Adjunctive neuroleptics are used off-label for more treatment resistant cases but none are currently FDA approved. Troriluzole is a third-generation glutamate modulating agent and new chemical entity that reduces glutamate, a key neurotransmitter implicated in obsessive compulsive disorder. This post hoc analysis evaluated the

efficacy of troriluzole with respect to illness severity at study entry. Methods: Patients having an inadequate response to their current standard of care (SOC) medication for the treatment of OCD were enrolled into a randomized, double-blind, placebo-controlled proof of concept study and were treated for 12 weeks with troriluzole 200 mg or placebo. Inclusion criteria included a Yale-Brown Obsessive Compulsive (Y-BOCS) score of at least 19 and patients needed to be on a stable dose of a SOC medication at study entry. The primary endpoint was the change in the Y-BOCS total score from baseline to the end of the double-blind phase of the study. Results: 244 patients, ages 18-65, were enrolled into the study. Troriluzole 200 mg administered once daily as adjunctive therapy resulted in a numerically greater improvement versus placebo in the change from baseline in the Y-BOCS during all efficacy assessment visits (weeks 4, 8 and 12). At week 8, the mean Y-BOCS change from baseline was -5.1 points for the troriluzole group (n = 96) versus -3.6 points for the placebo group (n=108). The treatment difference was -1.5 points (nominal p-value = 0.041). At Week 12, the mean Y-BOCS change from baseline was -5.9 points for the troriluzole group (n = 99) versus -4.9 points for the placebo group (n = 102), but the treatment difference (-1.0 point) did not reach statistical significance (p = 0.22). In post hoc analyses, the troriluzole treatment difference compared to placebo was greater both at week 8 and week 12 in subjects who had more severe OCD symptoms at baseline (Y-BOCS total score ≥ 24). At week 8, the Y-BOCS mean change from baseline in this subset was -5.7 points for the troriluzole group (n = 66) versus -3.8 for the placebo group (n = 76). The treatment difference was -1.9 points (nominal p-value = 0.051). At Week 12, the mean Y-BOCS change from baseline was -6.7 points for the troriluzole group (n = 69) versus -5.0 for the placebo group (n = 73). The treatment difference was -1.7 points (nominal p value = 0.105). Conclusion: This proof of concept study in adult patients with OCD revealed a consistent treatment benefit of adjunctive troriluzole over time. Subjects with more severe illness at study entry demonstrated larger effect sizes. New treatments are needed for patients with OCD, particularly those with more treatment resistant disease. This study was supported by Biohaven Pharmaceuticals, Inc.

No. 103

Xeplekomania: A Case Report of a Rare Variant of Trichotillomania in a Teenager With Kidney Disease and First Episode of Peritonitis

Poster Presenter: Karina C. Menezes
Co-Author: Antonio Leandro Carvalho de Almeida Nascimento, M.D., M.Sc.

SUMMARY:

Introduction: Trichotillomania is a mental disorder characterized by a compulsive urge to pull out one''s own hair leading to noticeable hair loss. This disorder is associated with significant distress and social or functional impairment. Although trichotillomania may be present in infants, the peak age of onset is 10 to 13. Hair pulling in patients with trichotillomania is usually preceded by feelings of rising tension and anxiety and succeeded by feelings of pleasure, relief or gratification. Trichotillomania is classified in DSM-5 in the chapter on obsessive compulsive disorder and related disorders, along with obsessive-compulsive disorder (OCD), excoriation disorder, body dysmorphic disorder, and hoarding disorder. Objective: to describe the case of a 10-year old male student who would unknit his shirts, trousers, towels, socks and gauze pads and eat the textile fibers. Case Report: We present the case of a 10-year old male student with kidney disease on daily peritoneal dialysis who began psychiatric treatment during hospitalization for his first episode of peritonitis. Five months before the hospitalization family members noticed that the Tenckhoff catheter dressing gauze disappeared after the procedure and also found he would unknit his shirt''s collars, jeans trousers, socks and towels thus destroying these clothes. At the same time, they noticed fabric threads in his feces and increased episodes of intestinal constipation. At first, he was ashamed of the habit, denied it, and did it secretly. He would unknit pieces of clothes and eat the fibers several times a day, most commonly at night when he was alone. He described the sensation of unknitting fabrics and eating them as an uncontrollable and impulsive desire preceded by feelings of anxiety. Although he could not elaborate explanations for that habit, he listed some emotional triggers. The patient was initially treated with

clomipramine (10mg/day) with poor results and worsening of intestinal constipation. His prescription was changed to sertraline (25mg/day), associated with family psychoeducation and regular follow-up. When the Sertraline dose was increased to 100mg/day, and risperidone was added (0.5mg/day) the patient stopped unknitting and eating gauze pads and fabrics. Discussion: Patients with trichotillomania have been described to present several variants of this habit. The ingestion of hair can result in the formation of gastrointestinal hairballs (trichobezoars), which can cause obstructions that may require surgical intervention and the intestinal obstruction interferes with the functioning of peritoneal dialysis. The habit of unknitting fabrics was described in 1969, but very few reports of this disorder have been published so far. Further studies are needed to reveal the relations of this habit to trichotillomania and other obsessive-compulsive spectrum disorders and also to develop treatment approaches for this variant of trichotillomania.

No. 104

Impact of Scheduling on Gabapentin Prescriptions at a Veterans Administration Hospital

Poster Presenter: Motaz Alshami, M.D.
Co-Authors: Alexandru I. Cojanu, M.D., Cynthia Arfken, Victoria Tutag Lehr, Jody Wong, D.O.

SUMMARY:

BACKGROUND: Gabapentin is an antiepileptic drug with an unclear mechanism of action with approval for post herpetic pain. In 2019 gabapentin was the 5th most prescribed drug in the U.S. though 83% of use is off-label. Reports of misuse and overdose deaths prompted a December 2019 FDA safety warning. Scheduling a drug as a controlled substance (CS) based on abuse potential can raise prescriber awareness of risk and affect prescribing patterns. Since 2017, 5 states have classified gabapentin as Schedule CS-V with Michigan scheduling it January 2019. OBJECTIVE: To describe the changes in prescription claims for gabapentin at a Veterans Administration Medical Center (VAMC) before and after becoming a Schedule CS-V drug in Michigan in January 2019. METHODS: Monthly prescription claims data from October 2016-August 2020 for gabapentin and tramadol as the comparator at the Detroit VAMC were analyzed using joinpoint regression to determine annual percentage change with 95% confidence intervals (95% CI) with points of change in prescription patterns. IRB approval was not required as the analysis did not include human identifiers. RESULTS: Gabapentin prescriptions increased rapidly (36.7%, 95% CI 21.3, 54) from October 2016 to December 2016, then moderated (9.9%, 95% CI 5.8, 14.1) until May 2017 when it slowed (0.9% , 95% CI 0.5, 1.4) until October 2019. From October 2019 through the remaining months the number of gabapentin prescriptions showed a slow decline (-0.4%, 95% CI -0.7, -0.1). For the comparator, tramadol prescriptions also had a fast increase initially (27.1%, 95% CI 8.9, 48.3) from October 2016 to April 2017 but then had a steady decline (-2.7%, 95% CI (-3.6, -1.9) for the remaining months. CONCLUSIONS: Gabapentin prescriptions at this VA medical center showed monthly increases until 10 months after scheduling in January 2019, suggesting that scheduling did not impact prescribing patterns. Tramadol prescriptions went from an annual percentage change of 27.1% to an annual percentage change of -2.7%. This change occurred prior to the instatement of a law requiring prescribers in Michigan to check Michigan's Prescription Drug Monitoring Program when prescribing scheduled drugs in December 2017. No impact of the FDA safety warning on prescribing was detected. Limitations include one institution with a veteran population and not including tramadol prior to CS scheduling, no data on diagnoses, other drugs; gabapentin adverse effects, or changes to alternative drugs or discontinuations. However, the strengths include that the prescribers were all subject to the same regulations and interventions. Gabapentin prescribing in the VA system in Detroit was not associated with scheduling or FDA warnings.

No. 105

Novel Pharmacotherapies for Exhibitionism and Frotteuristic Disorder

Poster Presenter: Austin W. Blum, M.D.
Co-Authors: Lala Park, M.D., Jon Grant, M.D.

SUMMARY:
Paraphilic disorders are unfamiliar to many clinicians and pose substantial treatment challenges. There are few established pharmacological treatments for paraphilias, which, if available (e.g., serotonergic and antiandrogen agents), work primarily by inducing sexual dysfunction. By means of this poster, we suggest that some paraphilic disorders may be treated using a different approach that targets the opioid and/or glutamatergic systems. Case histories: (1) A 38-year-old man with an approximately 15-year history of exposing himself to women in the park. He enjoyed the look of shock on their faces. He would then return home and masturbate. He exposed himself on average once every two to three months. He had no legal problems associated with the exhibitionism. We initially tried naltrexone 50 mg/d and, although it decreased his exhibitionist urges, he continued to struggle. We then increased the dose to 100 mg/d; two years have now elapsed without any exhibitionist urges or behavioral problems. Liver function tests performed every six months were found to be within normal limits. (2) A man in his 50s with a 40-year history—beginning in adolescence—of frotteurism, an irresistible urge to rub against women in crowded public spaces. He would engage in frotteurism approximately once per week. Treatment was initiated with topiramate 50 mg/day. We increased the dosage to 100 mg/day and subsequently to 100 mg twice daily. He reported that topiramate had reduced but not eliminated his paraphilic urges. The patient also underwent cognitive behavioral therapy. After treatment, he reported approximately one episode of frotteurism per month. In summary, we believe that these are the first reported cases in which patients with specific paraphilic disorders (exhibitionism, frotteurism) were treated using naltrexone (an opioid receptor antagonist) and topiramate (a glutamate-modulating GABA agonist). These findings suggest that pharmacological manipulations of reward-related circuitry may play a role in the treatment of certain paraphilias.

No. 106
Pedophilia in a Female Adolescent: A Diagnostic Dilemma
Poster Presenter: Lala Park, M.D.
Co-Authors: Austin W. Blum, M.D., Jon Grant, M.D.

SUMMARY:
According to the *Diagnostic and Statistical Manual of Mental Disorders*, 5th Edition (DSM-5), pedophilic disorder is a paraphilia assigned to persons aged 16 and older who have sexually arousing fantasies, urges, or behaviors involving sexual activity with a prepubescent child. Persons affected by pedophilia are mostly male, with studies suggesting only a 1% to 4% prevalence of pedophilic sexual interest in women. In this case, we discuss the diagnostic considerations in the differential diagnosis of pedophilic behavior in a young female patient in late adolescence who was brought by her family to an outpatient child/adolescent clinic seeking a second opinion on medication management. Beginning around puberty (i.e., age 11 or 12), the patient became sexually attracted to and started fantasizing about prepubescent girls. She admitted performing a sexual act on an infant, resulting in vaginal tearing. She also reported a history of consuming violent and abusive pornography. At the time of presentation, she was treated with oxcarbazepine 600 mg/d, duloxetine 20 mg/d, clomipramine 200 mg/d, and aripiprazole 7.5 mg/d. She was also undergoing dialectical behavior therapy (DBT) with a therapist she found through a list of treatment providers for sex offenders. Her neuropsychological test results revealed problems with anxiety, low frustration tolerance, and emotional dysregulation. In addition to DSM-5 pedophilia, she met the criteria for obsessive-compulsive disorder and borderline personality disorder. She was continued on her previous medication regimen, except that aripiprazole was decreased to 5 mg/d—due to suspected extrapyramidal symptoms—and oxcarbazepine was switched to lamotrigine 200 mg/d due to lack of perceived benefits. She continued to undergo DBT. At her most recent follow-up appointment (15 months later), she reported no further incidents with infants or children. This case contributes to the limited literature currently available on pedophilia in female adolescents. Clinicians should be aware that pedophilic behavior in this population may be related to co-occurring personality disorders or other conditions.

No. 107

Beyond the Usual Suspects: Substance Use and Homelessness as Risk Factors for COVID-19

Poster Presenter: Gagandeep Singh, M.D.
Co-Authors: Pia Wahi-Singh, Bhanu Wahi-Singh

SUMMARY:
Introduction: The COVID-19 pandemic has had major impact on the delivery of psychiatry services across the globe1. We began testing patients presenting to our inpatient psychiatry service, given the risk of asymptomatic transmission and potential uncontrolled spread in psychiatry wards2. There has been widespread attention to risk factors for poor outcomes in COVID-19 including obesity, immunocompromised states, diabetes mellitus4 and hypertension4. We did a retrospective cohort analysis to see if other factors including homelessness, alcohol use, smoking, cannabis use and other drug use could help identify those at higher risk to have COVID-19 at admission to a psychiatry unit. **Method**: We conducted a retrospective chart review of patients who were COVID-19 PCR positive at admission, compared to those that were COVID-19 PCR negative at admission at a free-standing psychiatry hospital. Between April and September 2020, 23 patients tested positive for COVID-19. To compare this population, we selected the first COVID negative adult patient admitted on each day a COVID-19 positive patient was admitted. We excluded 5 under-18 COVID-19 positive patients from our analysis, to have a cohort of 18 adult patients. We explored a correlation with the following variables: homelessness, alcohol use, cannabis use, other drug use, hypertension and smoking status **Results**: 3 patients showed mild symptoms of COVID-19, the rest were asymptomatic. Only 1 could identify a definite exposure to COVID-19. No patients required transfer to the medical service for physical decompensation. The risk factors with strongest correlation to COVID-19 were hypertension, cannabis use, homelessness and alcohol use. Other drug use and smoking did not show a correlation. Given the small sample size, none of these were statistically significant. **Conclusion**: The majority of COVID-19 patients admitted to our inpatient service were asymptomatic. Only 16% showed mild symptoms. We were able to manage these patients safely without requiring transfer to the medical service. Presence of symptoms or known COVID-19 exposure were not helpful for identifying these patients. We saw a trend for increased risk of COVID-19 in those that were homeless, using alcohol, using cannabis, or had co-morbid hypertension. It would be worthwhile to explore if these associations hold up and show statistical significance in larger samples. While universal testing for those admitted to inpatient psychiatry units is a good practice, if this is not possible, it may be worthwhile to consider testing those with co-morbid hypertension, homelessness, or alcohol or cannabis use.

Poster Session 11

No. 1

Drastic Reduction in Restraint/Seclusion on a Child/Adolescent Inpatient Psychiatric Unit Through Developmentally Appropriate, Trauma Informed Care

Poster Presenter: Carrie Robey, M.D.
Co-Authors: Luis Isaza, M.D., Dixie Waye, Jim Shannon

SUMMARY:
Background: It is well established that use of restraint or seclusion on inpatient psychiatric units can cause emotional trauma, psychological distress, and even death. In the current climate of COVID pandemic, keeping patients/staff safe now becomes more complex. With greater need for maintaining spatial distance, use of restraint or seclusion on inpatient units now poses even more potential safety hazards due to risk of viral spread. Over the past 3 years, an academic unit of a psychiatric hospital implemented a multi-faceted approach aimed at dramatically reducing use of restraint/seclusion on its 12-bed inpatient child/adolescent unit. While prevention of viral spread was in no way the original motivation for implementing these measures, the hospital now finds itself well positioned to maximize safety in the midst of pandemic due to its results. Purpose: The purpose of this quality improvement project was to reduce total number of restraints per year (on the child/adolescent unit) to 6 or less, decrease hours of restraint to 12 or less, and reduce restraints per

1000 patient care hours to a rate of 0.123 or less. By detailing the project's results, authors hope to lend support to a growing body of research suggesting preventative care and strategic training can dramatically reduce need for restraint/seclusion (and subsequent emotional and sometimes physical toll on patients and staff) in an inpatient setting. Methods: A multi-faceted intervention to reduce restraint/seclusion was implemented, including: 1) Addressing systems issues (particularly hand-off communication between weekday and weekend teams who were less familiar with patients); 2) Formal staff training, including de-escalation techniques (utilizing the Handle with Care® behavioral intervention model); 3) Individualized behavior modification plans for each patient based on feedback from family, hospital staff, and patient; 4) Daily unit meetings with patients and staff to explain expectations, discuss concerns, and encourage long-term cultural change on the milieu; 5) Utilizing a highly trained, seasoned employee in a "rapid response" capacity overnight. All education, training, and behavioral plans emphasized the importance of reinforcement-driven, non-punitive, developmentally appropriate strategies in a trauma informed milieu. Seclusion/restraint data from 12 months prior and 2 years after intervention was then analyzed and compared. Data continues to be tracked monthly (project is ongoing). Results: Total restraint episodes per year reduced by 91.6%. Time in restraint (hours) reduced by 89.3%. Total restraint rate per 1000 care hours reduced by 87.1%. In the 38 months since implementation, 32 months reported zero restraint episodes (with 18 of those being consecutive months). Conclusions: This QI project shows a dramatic decrease of seclusion/restraint through use of developmentally appropriate, trauma informed interventions and staff education on this inpatient unit.

No. 2

Provisions for Monitoring Health Outcomes in State Medical Marijuana Laws in the US

Poster Presenter: Gagandeep K. Bhatia, M.B.B.S.
Co-Authors: Samuel Wilkinson, M.D., Hun Millard, M.D., Rajiv Radhakrishnan, M.D.

SUMMARY:

Introduction: As of March 2020, a total of 33 states, District of Columbia, Guam, Puerto Rico and US Virgin Islands, have approved of comprehensive medical marijuana programs. Meanwhile, the FDA continues to classify marijuana as a Schedule I drug with no medical use and potential for abuse, under the Controlled Substances Act (CSA) of 1970. California was the first to pass the law in 1997, which was followed by a report issued by Institute of Medicine examining the potential therapeutic benefits of marijuana (1). The scientific data suggested that cannabinoids, primarily THC, had some potential therapeutic value in pain relief, appetite stimulation, control of nausea and vomiting but the cause of concern is the crude delivery system which also delivers other harmful substances. Spillover effects of medical marijuana like "drugged driving" and illicit adolescent access have been recorded (2). Severe intoxication, hyperemesis, psychiatric symptoms, and severe cardiovascular events have been reported to be a major cause of cannabis-related visits to emergency departments in Colorado (3). There is also a reported increase in adult cannabis use and cannabis use disorder (CUD) in the states with Medical Marijuana Laws (MML) as compared to the non-MML states (4). Since medical marijuana is not backed by the FDA, it by-passes all the associated rules regarding drug efficacy testing, safety profile, labeling and marketing. It leaves the states to come up with their own set of provisions which has resulted in a patchwork of inconsistent rules in order to fill the gap. While most states have put forward a set of rules, there is a dearth of data regarding reporting of health outcomes. **Methods**: Search engines used were PubMed, NCSL website and the keywords used were "medical marijuana", "state medical marijuana laws", "patient outcomes" and "monitoring health outcomes". **Results**: Among 33 states, D.C., Guam, Puerto Rico and US Virgin Islands, only 12 have a policy in place that requires the state public health department to monitor health outcomes. None require producers or dispensaries to monitor health outcomes. Currently, 31 states have requirements for quality testing, 30 have a policy in place against diversion and only 10 have legislation regarding setting aside funds for medical marijuana research. **Conclusion**: Provisions for monitoring health outcomes are not uniform

across state MMLs with only 12 having a written policy in place. Some states require physicians to monitor outcomes for individual patients, but physicians recommending marijuana may not be routinely involved in patient's ongoing care. Few MML states allocate funds for medical marijuana research. It is imperative that MML states make monitoring of health outcomes related to marijuana use a top priority and develop a consensus metric for monitoring that would allow data across states.

No. 3

The Relationship Between Physical and Verbal Aggression on a Psychiatric Inpatient Unit

Poster Presenter: Andrew Deptula
Co-Authors: Terence Howard, Katya Potkin, Emily Hill

SUMMARY:
Background: Among inpatient psychiatric populations, violent behavior is a primary concern for hospital staff, and it is likely to be a barrier to the delivery of treatment. As the creation of a therapeutic environment is an essential goal for psychiatric inpatient settings, the threat of violence impairs the development of a treatment-conducive milieu, produces adversities for staff well-being, and detracts from patient care. It also results in increased restrictions and longer length of stays for patients. This study sought to examine the relationship between factors of aggressive behavior among patients on an inpatient psychiatric setting to inform avenues for intervention. **Methods**: Episodes of aggression were documented on each patient for the past 10 months on an adult inpatient psychiatric unit using the Modified Overt Aggression Scale (MOAS). The MOAS is a widely used tool for measuring the severity and frequency of aggressive episodes in inpatient setting. The MOAS scoring system is subdivided into 4 types of aggression: verbal, physical, aggression against self, and aggression against objects. Correlational analyses were conducted to determine how these types of aggression are correlated with each other, as well as other patient characteristics. **Results**: A total of 732 episodes of aggression in an adult inpatient psychiatric unit between the months of August 2019 and June 2020 were evaluated by medical staff using the MOAS to report aggression severity and subtype on the inpatient unit. These episodes represented 134 unique patients. Of these patients, 46% had a diagnosis of schizophrenia or schizoaffective disorder, 23% had a bipolar disorder diagnosis, and 13% had a diagnosis of Major Depressive Disorder. Not surprisingly, there was a positive correlation between scores of physical aggression scores, aggression against self, and aggression against property. Interestingly, the data indicated an inverse relationship between physical and verbal aggression ($r = -.24$, $p = .01$); that is, patients with higher physical aggression scores had lower verbal aggression scores. Additionally, the length of stay was positively correlated between the frequency ($r = .35$, $p < .001$), but not the severity, of aggressive episodes. **Conclusion**: The results of this data showed that inpatients prone to physical aggression were less likely to display verbal aggression. This may indicate that physically aggressive patients lack effective verbal communication skills to express needs and instead rely on physical aggression. Thus, patients demonstrating physical aggressive may benefit from early interventions focused on improving verbal communication and expression skills in an effort to prevent and reduce violent incidents on adult inpatient psychiatric units.

No. 4

Identifying Both Diagnosed and Potentially Undiagnosed Patients With Borderline Personality Disorder From a Large Electronic Health Record Database

Poster Presenter: Marianne Seligson Goodman, M.D.
Co-Authors: Zheng Zhu, Zsuzsanna Tamas, Vikas Mohan Sharma, Nan Shao

SUMMARY:
Background: Borderline personality disorder (BoPD) is a personality disorder with many comorbid conditions often leading to misdiagnoses. We have undertaken the development of a machine learning algorithm utilizing electronic health record (EHR) data to automatically screen patients likely to have BoPD, but without a formal diagnosis, to facilitate and inform real-world clinical decision making. This study describes the data foundation for the screening algorithm. **Methods**: This study used de-identified EHRs from the US-based Cerner Health

Fact database of patients aged 18–65 years. Two cohorts of patients with BoPD diagnosis were identified using ICD-9-CM codes from 01-01-2000 to 09-30-2015 and ICD-10-CM codes from 10-01-2015 to 07-11-2018. A separate cohort of patients with dates of clinical care from 10-01-2015 to 7-11-2018 and without a formal BoPD diagnosis were identified as a "potential BoPD" cohort based on the following: 1) patients with bipolar disorder or suicidal/intentional self-harm, and 2) patients without bipolar disorder or suicidal/intentional self-harm but had other mental disorders in ≥3 diagnosis categories associated with BoPD. Diagnosis categories were based on the Clinical Classifications Software Refined for ICD-10-CM codes. A clinical expert in BoPD reviewed 456 patient records from two random samples drawn independently from the potential BoPD cohort and clinically rated each patient on the likelihood of having BoPD. **Results**: We identified 13,783 and 7112 patients with BoPD in the ICD-9 and ICD-10 cohorts, respectively. Demographics were similar between BoPD cohorts. BoPD comorbidities were similar between cohorts with depression, anxiety, bipolar disorder, and suicidal ideation the most prevalent. Furthermore, EHRs for half of both BoPD cohorts included 'ever had suicidal/intentional self-harm' related diagnosis during study periods. There were 183,475 patients identified in the potential BoPD cohort. Using EHR diagnoses and visit data, our clinical expert identified 127 (28%) patients as 'mostly likely having BoPD' between the two random samples; 29% and 27% for sample 1 (training set for the screening algorithm development) and sample 2 (test set for the screening algorithm development), respectively (proportion test, p=0.676). **Conclusion**: Results from the two BoPD cohorts show consistency between the data-driven EHR BoPD diagnoses and the expert clinical judgement of BoPD, demonstrating the potential of using EHR data to develop a disease screening algorithm. Almost 30% of patients with "potential BoPD" in the two random samples were most likely to have BoPD, signalling the proper rules in defining the potential BoPD cohort for further screening. These cohorts and expert ratings provide a solid data foundation for the development of the machine learning algorithm for automatic BoPD screening.

No. 5

Negative Affectivity: Association With Changes in Depression and Anxiety Across Inpatient Psychiatric Treatment

Poster Presenter: Ryan P. Smith, M.A.
Co-Authors: John M. Bouras, M.D., Katrina Rufino, Ph.D.

SUMMARY:

Background: Negative affectivity (NA) is correlated with many psychiatric disorders, such as anxiety, depression, OCD and PTSD (Kunst, 2011; Moore, 2017; Watson, 1988). In the alternative DSM-5 model for personality disorders the NA trait domain is described as frequent and intense experiences of negative emotions and their behavioral manifestations (American Psychiatric Association, 2013). Previous research has demonstrated that personality disorders, such as OCPD, can be predictive of failure to remit from anxiety post-discharge (Smith et al., 2017). In the present study, it was hypothesized that individuals endorsing the NA trait domain would show less improvement in depression and anxiety symptoms than those who do not. Methods: Adult inpatients at a psychiatric clinic completed the Personality Inventory for the DSM-5 (PID-5) during their stay (N=1,490). The Patient Heath Questionnaire for Depression (PHQ-9) and Generalized Anxiety Disorder measure (GAD-7) were completed at admission and discharge. Patients stayed an average of 46.9 days and received a multi-modal approach to treatment which included individual, group, family therapies and pharmacological interventions. Using propensity score matching (PSM) participants with a NA trait domain score of two or higher (n=297) were matched with patients scoring less than two (n=297). Participants were matched on gender, age, length of stay and treatment program attended. Results: An ANOVA was conducted comparing change scores (admission-discharge) for the NA and non-NA groups on anxiety and depression. Participants identifying with the NA trait displayed significantly more improvement in depression (M = 10.65, SD = 7.34) than those who did not [(M = 9.17, SD = 7.33) F (1,572) = 5.82, p = .016]. Anxiety change was not significantly different between the NA (M = 7.42, SD = 6.36) and non-NA groups [(M = 7.18, SD = 6.22), F (1,572) = .213 p = .644]. Participants identifying with

the NA group reported significantly higher levels of depression (M = 19.61, SD = 4.89) and anxiety (M = 16.59, SD = 4.15) at admission compared to the non-NA group for depression [(M = 16.2, SD = 6.76), F (1,591) = 49.74, p <= .001] and anxiety [(M = 12.99, SD = 5.52), F (1,591) = 80.84, p <= .001]. The NA group continued to endorse more depression [(M = 9.11, SD = 6.57), and anxiety at discharge (M = 9.22, SD = 6.09) compared to the non-NA group for depression [(M = 7.09, SD = 6.34), F (1,591) = 14.02, p <= .001] and anxiety [(M = 5.87, SD = 5.14), F (1,591) = 50.86, p <= .001]. Conclusion: Inpatients identifying with the NA trait domain demonstrated more improvement with depression and no differences in anxiety severity; although more improvement in depression was identified for the NA group, overall the NA group reported higher depression and anxiety at admission and discharge. This is consistent with literature suggesting NA contributes to emotional disorders (Goldberg, Krueger, Andrews, Hobbs, 2009).

No. 6

A Literature Review on Minority Physician and Medical Student Burnout

Poster Presenter: Shruti Nadkarni, D.O.
Co-Author: Rashi Aggarwal, M.D.

SUMMARY:

Background: It is documented that physicians and medical students have stressors that contribute to burnout and therefore burnout is widespread. However, research has not shown how and why the rates of burnout in minorities differ from those of a general population of physicians. Objectives: The aim of this literature review study is to elucidate whether race is a statistically significant factor in the rate of physician burnout. Methods: A literature search was performed on PubMed using the key words “physician burnout in minorities”; “physician burnout based on race”; “minority medical student burnout”. Reference lists of existing articles were cross-checked and reviewed. Results: We found more than 200 papers that discuss physician burnout, out of which only eight papers discussed burnout rates in minority physicians. Of the eight papers found, three found no difference in the rate of burnout. The first, included 7653 physicians, concluded that there was no difference in burnout rate for female and male underrepresented minorities. The second, included 1098 medical students, concluded that minority students report similar levels of depression symptoms and burnout rates. The third, included 4696 resident physicians, utilized an abridged MBI scale and discovered that the rates of the difference in burnout for minorities were not statistically significant. While the three papers highlighted increased burnout rates in females over their male counterparts, there was no difference in the burnout rate for minority physicians or medical students. Two papers contained nuanced findings with differences based on the ethnic group or IMG status physicians. The first paper, included 3080 medical students from five medical schools and utilized an MBI scale, found no difference in burnout and depression rates in minority students but found that minority students who reported racial discrimination were more likely to meet criteria for burnout. The second paper, included 16394 Internal Medicine residents, concluded that while burnout rates in IMG status physicians are less than US physicians, the number of dollars of debt which causes burnout is higher for IMG status physicians. The last paper found minority physicians had an increased burnout rate. The sample size was 179 trainees at the University of Pittsburgh. It found that burnout was most prevalent among underrepresented minorities. Also, two additional studies highlighted how minority physicians may report less burnout than their non-Hispanic White physician counterparts. The first highlighted a study of 4424 physicians, and the second was a review article which highlighted minority physicians were less likely to report burnout when compared to non-Hispanic White physicians. Conclusion: While physician and medical student burnout has been well documented and stressors of burnout for minority physicians and medical students have been highlighted, the rate and root cause of burnout are still not known.

No. 7

Burnout Among Behavioral Health Providers in the Military: Potential Lessons for the Occupational Health of Behavioral Health Providers During COVID

Poster Presenter: Andrea Weiss, Ph.D.

Co-Authors: Scott Guthrie, M.D., Walter J. Sowden, Ph.D., Larquetta Jones

SUMMARY:

Burnout is a widely recognized occupational phenomena linked to adverse organizational and individual outcomes within the field of medicine (Shanafelt et al., 2018; World Health Organization, 2020). Behavioral health (BH) providers are especially prone to burnout and its negative correlates (Maslach & Leiter, 2016; Paris & Hoge, 2009). Evidence mounts on the negative impact the COVID-19 pandemic will have on our collective mental health and wellbeing (Pfefferbaum, & North, 2020; Thakur & Jain, 2020). As mental health issues rise, so does the demand for BH care. BH providers are asked to simultaneously care for the psychological needs of their patients reacting to the pandemic while experiencing the same stressor themselves. This relationship echoes what military BH providers have experienced over the past two decades. While research has identified several factors related to burnout for BH providers in the general population (O'Conner et al, 2018; Paris & Hoge, 2009), few studies have examined this relationship within the military (Stearns, Shoji, & Benight, 2016), leaving the question: what are the causes, correlates, and outcomes associated with burnout among military BH providers? To address this gap, we systematically reviewed of the literature on burnout among military BH care providers following Khan et al (2003). We searched PubMed, Google Scholar, and PsychINFO screening for empirical studies where burnout was measured/defined among military behavioral health providers. We used several specific search parameters, revealing 2 articles meeting our search criteria. We then included Veterans Affairs providers as the population they serve may have similar, albeit are in different stages of, mental health concerns. Our initial search resulted in 201 articles with 2 specifically examining burnout among military BH providers, and 5 after including VA providers. Factors associated with burnout included patient, provider, and work environment characteristics, job demands, and caseload (Ballenger-Browning, et al 2011; Stearns et al, 2018; Garcia et al, 2014; Garcia et al, 2015; Horrell et al, 2011). There is a dearth of literature looking at burnout among military BH providers. However, military BH providers appear to be just as, or more so susceptible to burnout as other populations of BH providers (Stearns et al., 2018). Further research is needed in order to determine risk factors for developing burnout and ways to mitigate this risk in military BH providers. This research would not only benefit the military, or military BH providers, but due to the similarities between the operational environments, it could also provide valuable insights into the mental and occupational health of BH providers during COVID-19. There are no funding sources to disclose in relation to this abstract. The views in this abstract are those of the authors alone and do not reflect the official policy or position of the Department of the Army, DoD, or US government.

No. 8

Creative Writing as Reflective Practice: A Novel Curriculum for Medical Student Education

Poster Presenter: Joshua Hamilton, M.D.
Co-Author: Francesca Cimino, M.D.

SUMMARY:

Background: Humanities education plays an important role in medical student education with goals of cultivating empathy, professionalism, and wellness. Reflective writing is a popular, well-studied tool used in medical humanities education, and has been shown to be effective in developing and maintaining empathic values for students and physicians. Studies have shown that cynicism and physician burnout often begin during medical school, with subsequent decrease in empathy and wellness overtime. Physician burnout and lack of empathy are known to negatively impact patient care. Reflective practice through the use of student essays or journaling is the most widely used form of expressive writing in medical student education. Use of creative writing such as poetry or short fiction appears to be far less common, and there is a paucity of literature on its use in teaching reflective practice. Methods: We developed a syllabus and teaching plan for our pilot curriculum. The course consists of self-contained three hour writing workshop for 6-12 students in which didactics are paired with practical writing exercises followed by group discussion. We have taught this course to 6

separate groups of students over the course of two years at the Uniformed Services University (USU). Students volunteered for participation in the course as an elective session. We collected feedback from students by anonymous survey consisting of both Likert scale and free response questions. Currently, we aim to develop protocol for a formal literature review following PRISMA-P guidelines, and will discuss our initial findings in this poster. Results: During the course, students produced original works of short fiction based on experiences in medical school. On our preliminary feedback survey, by Likert scales a majority of students felt the course met its objectives and a majority rated the course as valuable as a modality for teaching humanities in medicine. Students found the writing exercises to be the most valuable component of the course, and the most common response for how to improve the course was to increase the time spent on the practical writing exercises. Discussion: Our initial feedback suggests that creative fiction writing was well-received by students and is a promising novel modality for teaching reflective practice to medical students. Student buy-in is key to effective education, and we believe creative writing courses may be an effective way to augment reflective practice curricula in a fashion that is enjoyable to students. These preliminary findings are limited to a relatively small sample of self-selected students (students who chose to participate in the course) and should be interpreted with some caution. Future avenues of study include more rigorous evaluation of our curriculum by use of the REFLECT rubric, as well as direct comparisons of creative fiction writing to more traditional modes of reflective practice teaching such as journaling.

No. 9

Depression, Anxiety, PTSD Symptoms in U.S. Physicians Treating Covid-19

Poster Presenter: Danielle M. Gainer, M.D.
Co-Authors: Julie M McCormack, Autumnn Merrill, Ramzi Nahhas, Nita V. Bhatt, M.D., M.P.H.

SUMMARY:

Importance: Studies of the impact of the coronavirus disease 2019 (COVID-19) pandemic on frontline physicians around the globe have revealed psychological consequences. During previous infectious disease outbreaks, physicians treating infected patients reported increased rates of stress and trauma compared to those who were not involved with pandemic care. **Objective**: The primary objective of this study was to examine the association between time spent treating patients with COVID-19 and levels of depression, anxiety and post-traumatic stress disorder (PTSD). **Design**: This study was cross-sectional. **Setting**: We conducted an anonymous voluntary online survey of U.S. physicians between April 30 and June 1, 2020. Recruitment was done through email and social media. **Participants**: Respondents were asked to affirm their status as an actively practicing U.S. physician. Linear regression was used to test the association between proportion of day treating COVID-19 and total score from each outcome (depression, anxiety, or PTSD) measure. Prior to data collection, we hypothesized that those physicians who spent more time treating COVID-19 would suffer from higher scores on depression, anxiety, and PTSD rating scales. **Results**: We did not attempt to calculate a response rate due to the anonymity of the survey. 1,958 individuals accessed the survey. Of these, 1,855 were eligible (U.S. physicians) and consented however 131 answered no questions and so were excluded, resulting in a sample size of 1,724 U.S. physicians. Respondents were age 26 to 60+ years, from all 50 states and the District of Columbia. 21% were non-white, 56% were female, 26% were trainees, and over half (56%) worked in an academic/university setting. The demographic characteristics with the highest proportion of physicians spending more than 25% of their day treating COVID-19 patients were age 26-30 years, female, non-white, Emergency Medicine specialty, hospital work setting, trainee, Northeast region, and urban county. Proportion of day treating COVID-19 was positively and significantly associated with depression, anxiety, and PTSD scores ($p < .001$ each). Age and gender were also strongly associated with all three outcomes. **Conclusions and Relevance**: Long-term and short-term mental health services should be provided to physicians who treat COVID-19. Future studies should investigate the long-term mental health effects of COVID-19 upon physicians.

No. 10

Helping the Helpers: Mindful Self-Care, Compassion Fatigue, Burnout, and Compassion Satisfaction Among Utah Mental Health Professionals

Poster Presenter: Sofia M. Scaletta

SUMMARY:

Work for mental health professionals can be extremely rewarding, but it can come at a cost. Compassion fatigue and burnout are related emotional and psychological risks. They are associated with less effective delivery of care and higher secondary traumatic stress, which may influence client outcomes. Mental health professionals in rural regions are especially susceptible to these risks, as they have fewer resources and face additional barriers as compared to their urban counterparts. Effective self-care has been shown to mitigate the effects of compassion fatigue and burnout; however, little research has been done to specifically observe the relationship between each of these variables and mental health professionals' environments of practice. The present study compared a self-report survey of 139 mental health professionals across the rural state of Utah to further understand the influence of mindful self-care practices on levels of compassion fatigue, burnout, and compassion satisfaction. Findings indicated that genuine connection with others, compassion for oneself, a sense of purpose, and personal structure can greatly contribute to the decrease of compassion fatigue and burnout and increase of satisfaction with one's work. Additionally, though many mental health professionals experience compassion fatigue and burnout regularly, they still find satisfaction and enjoyment in the work that they do. It is suggested that an increase in mindful self-care practices may "help the helpers" and subsequently their clients.

No. 11

Psychiatry Program Directors' Perspective Toward Pregnancy and Parenthood in Residency Training: A National Survey

Poster Presenter: France M. Leandre, M.D.
Co-Author: Almari Ginory

SUMMARY:

Background: Although studies indicate that the early bond between parents and infants is essential for positive developmental outcomes (1), in the United States (US), working parents are often required to return to work prematurely (2). During residency training, parental leave is also frequently briefer than may be optimal for infant needs. The Accreditation Council for Graduate Medical Education (ACGME) requires residency programs to have a parental leave policy; however, there are no specific guidelines on its makeup. This lack of clarity results in varying policies, and confusion among applicants and residents planning parental leave. Furthermore, when returning from leave, resident parents face negative bias when evaluated by peers and attendings (3, 4). Most studies on parental leave have been in surgical residencies and so far none have published on psychiatric programs. Traditionally, psychiatry is perceived as less challenging than surgical programs; however, biases against parents as well as lack of clarity in policies may still be prevalent. The objective of this study was to identify differences in parental leave policies in psychiatry residencies, and if biases exist, how they vary relative to program directors'' demographics. Methods: A 45-question anonymous survey was sent via email to general psychiatry and fellowship program directors in the US. Emails were collected from the Fellowship and Residency Electronic Interactive Database (FREIDA online) and the American Association of Directors of Psychiatric Residency Training (AADPRT). The survey received approval from the IRB. Results: 35.7% (186/520) of program directors responded.57.3% (90/157) identified as female, 88.5% (139/157) had children and 61.1% took parental leave during their training. 94.1% (175/186) had policies for maternity leave, 79.8% (146/183) had policies for paternity leave, and 67.2% (121/180) had policies for non-childbearing parental leave such as adoption leave. There were variations in how these policies were implemented, where they were available, how coverage was managed, and what accommodations were available. 11.5% (19/165) of program directors believed that parenthood affected residents' overall performance especially in patients'' care and clinical skills. 36.5% (59/163) believed that parenthood affected overall residents' wellbeing. In addition,

57.1% (92/161) believed that residents' would benefit from more parental leave. 32.9% (53/161) were not confident in the ACGME, ABPN, federal, and hospital rules parental leave policies and 7.5% (12/161) felt that they were negatively influenced when an applicant was pregnant or was planning to become pregnant during residency. Conclusion: Parental leave policies are not universal in psychiatry residency/fellowship programs in the US. Some program directors feel that parenthood affects residents' clinical performance as well as wellbeing; however, this may be due to pressure to return to work prematurely.

No. 12

Wellness Interventions for Healthcare Professionals During Covid-19 Pandemic

Poster Presenter: Laura T. Safar, M.D.
Co-Author: David William Van Norstrand, M.D., Ph.D.

SUMMARY:

Background: The Covid-19 pandemic strained the healthcare system in multiple ways, including increasing psychological stress among healthcare professionals. Lahey Hospital and Medical Center (LHMC) is an academic tertiary care medical center in Massachusetts, which began treating Covid-19 patients very early in the pandemic, during a time of fear and uncertainty. The role of LHMC Psychiatry Division during the pandemic, in coordination with the hospital's Caregiver Resilience and Wellness Team (CRAW) and the Employee Assistant Program (EAP), was to provide psychological support to colleagues deployed to the frontlines. There was early recognition that a menu of tools was needed to address the evolving needs and preferences of our healthcare colleagues. Methods: The implemented interventions included: a Warm Line, skills-based virtual groups, debrief / support groups, 1:1 psychotherapy and medication management treatment, participation from leadership town-hall meetings and the institution's peer support program, an ambassador program, self- directed online resources, and others. The CRAW "tile" in the hospital's intranet functioned as a centralized access point for the various resources. We evaluate utilization and effectiveness of the deployed resources during the March-September 2020 period. Results: The CRAW "tile" was the second-most- visited section of the hospital's intranet during the period studied. The utilization of resources was modest early on, when frontline colleagues were acutely dealing with the Covid-19 surge. One- to-one interventions such as the warm line (n=30) and self- referrals to mental health services (n=12) and EAP (n=39) were more frequently used during the early phase. Debrief groups (n=40) were proactively requested and highly utilized post- surge; colleagues strongly preferred in-person debrief groups to virtual ones. The utilization of skills- based virtual groups (mindfulness, sleep- hygiene, coping with posttraumatic stress, etc.) also increased post-surge. Feedback from frontline colleagues was actively elicited throughout the studied period, to customize resources to their needs and preferences. Mental health professionals working with colleagues at the frontline identified early on the need to also play the roles of advocates and communicators. With colleagues' consent, de-identified information about their material and operational needs was communicated to the hospital's leadership. Conclusions: The availability of a set of tools, coordinated and centralized, and deployed at different points during the period studied, allowed for a more effective use of our resources. Some aspects of colleagues' wellness and psychological health were related to the availability of resources and to institutional policy, management, and communication. In that context, mental health professionals took on also the roles of advocates and communicators, to better meet colleagues' needs.

No. 13

Depiction of Mental Illness in Film and Association With Financial and Critical Success

Poster Presenter: Shaan Kamal
Co-Author: Jelena Goldoni MacLeod, M.D., M.H.S.

SUMMARY:

Background: Since the Academy Awards were first held in 1927, film and cinema have been an important part of American culture and discourse. The film industry is a multi-billion dollar business, with the domestic box office total in 2019 exceeding $11 billion. In recent years, media content such as the Netflix television series 13 Reasons Why and the

2019 film Joker have ignited debates around the media portrayal of suicide and psychiatric illness in media and its subsequent impact on prejudice towards those with mental illness. To date, there is no published work quantifying the depiction of mental illness in film. Here we use plot descriptions to identify movies that depict mental illness and compare their financial and critical success to all movies released during the same time period. Methods We used BoxOfficeMojo.com to scrape the list of all 16,333 movies released domestically from 1977 to 2019. In order to identify films that depict mental illness, we used Wikipedia plots as proxies for the actual storyline content depicted in each film. Doing so yielded 10,491 total plots, which were analyzed for their representation of mental illness. Search terms derived from DSM5 diagnoses were used in addition to search terms such as “psychiatrist”, “suicide”, and “mentally ill”. Using this methodology, movies depicting mental illness were compared to all movies released during the same time period in terms of financial and critical success. This comparison was done using BoxOfficeMojo’s reported domestic total box office totals for each film as a proxy for financial success and IMDB ratings and Academy Award nominations and wins as proxies for critical success. Results Overall, 19.5% of all films in our search were identified as depicting mental illness, with "suicide" being the most commonly found search term (1,114 films total). The number of films depicting mental illness increased on average each year from 1977 to 2019 by 2 films per year. The average gross of films depicting mental illness each year was significantly higher than the average gross of all films in 83% of the years from 1977 to 2019. The average IMDB rating for the films depicting mental illness released each year was significantly higher than the average IMDB rating for all films each year over the period from 1977 to 2019. Conclusion This work adds to the literature by highlighting that films depicting mental illness have high audience and critic interest and that as such, there is a need for them to have accurate portrayals of mental illness to prevent increasing stigma or negative outcomes including suicide contagion.

No. 14
WITHDRAWN

No. 15
Facilitators to Drug Use Behavior Change in Diverse Patients With Moderate Risk Drug Use in the QUIT SBIRT Trial in Los Angeles FQHCs

Poster Presenter: Zachary M. Jacobs, B.S.
Co-Authors: Stephanie Sumstine, M.P.H., Dallas Swendeman, Ph.D., M.P.H., Lillian Gelberg, M.D., M.S.P.H.

SUMMARY:
Background: Through Screening, Brief Intervention, and Referral to Treatment (SBIRT) protocols, health care providers can identify patients who misuse psychoactive substances, deliver brief interventions to reduce substance use, and facilitate referral to specialty care if indicated. We aimed to identify facilitators that patients with moderate levels of drug use, but do not meet diagnostic criteria for serious Substance Use Disorder (SUD), believe would help them reduce their drug use. The goal is to inform improvement of paraprofessional coaching and content of automated text-messaging strategies to facilitate drug use behavior change and enhance SBIRT’s capacity to affect drug use behavior change before problematic drug use evolves into SUD. Methods: Data were gathered from a randomized controlled trial of the Quit Using drugs Intervention Trial (QUIT) SBIRT protocol to reduce drug use among adult primary care patients (n~150 in the intervention group) at Federally Qualified Health Centers (FQHCs) who are indicated for early intervention and prevention of drug use behaviors but do not screen positive for serious SUD (i.e., ASSIST score 4-26, ASAM Level 0.5). Qualitative data analysis included thematic content analysis of QUIT health educator coaching log data. Two research assistants closely examined the data to identify common themes through iterative rounds of coding and discussion. Results: Mean age was 44 years, 36% female; 57% were White, 33% Latino, 27% Black, and 26% other race/ethnicity; highest scoring drug on baseline ASSIST was 54% cannabis, 33% stimulants, 12% opioids/sedatives. The most common facilitators to drug use reduction were, in order of frequency: 1) current or anticipatory health

concerns, 2) exercise to improve physical and emotional wellbeing, 3) emotional support from family or use of family as motivation, 4) alternative relaxation techniques such as meditation, journaling, or reading, 5) socialization with and support from peers. Less commonly cited facilitators included financial motivation, engagement in mental health treatment, and pharmaceutical or nonpharmaceutical alternative pain management. Conclusions: Findings of this study suggest that there are commonly occurring facilitators to drug use reduction among diverse low-income primary care patients. When compared with previously noted barriers to drug use reduction, social factors as well as physical and emotional wellbeing are shown to play important roles in both facilitating and impeding drug use reduction, whereas financial factors functioned more commonly as a barrier than a facilitator. Future studies should examine if these facilitators differ among different drugs of use, as well as further examine how cultural, social, and environmental aspects may influence drug use in order to develop text-messaging and coaching feedback that is targeted for specific patient populations.

No. 16

Utilizing Youth Voice in the Creation of a Youth Mental Health Survey to Be Administered in a School Setting

Poster Presenter: Bridget Sumner, B.S.
Co-Authors: Jake Neill, Phillip Yang, M.A., Jennifer Todd, J.D., R.N., Kristen Plastino, M.D.

SUMMARY:

Community-engaged research is a powerful tool in creating relevant and culturally appropriate solutions to improve health outcomes. The partnerships are collaborative, giving the community a voice in the research process. Unfortunately, community-engaged research is not commonly used in the youth population and youth participating as young investigators in a university-led project is even less common. The project objective is to incorporate community-youth voice into a university-led mental health research project. The authors utilized a long-standing partnership with the UT Teen Health Youth Leadership Council, composed of high schoolers throughout South Texas. The project had 3 phases: recruitment, survey design, and survey administration. Recruitment consisted of an electronic application with two questions pertaining to youth mental health. 25 applications were collected and 19 were selected as investigators. They attended eight 2-hour virtual meetings that required pre-work and consisted of designing survey content. The first meeting included introductions and forming collaborator agreements to establish rapport, unity and respect among youth. Time was spent introducing youth to the scientific method, identifying qualitative and quantitative data, and discussing adolescent mental health. The last 7 meetings focused on identifying survey objectives, creating questions, establishing administration protocols, and finalizing the survey. During recruitment, teens were asked why they were interested in the project; the 3 most common responses were: to improve the lives of the community through advocacy and education, were motivated by their own experiences with mental health, and giving their insight on adolescent mental health. When asked about mental health resources for youth, responses included: expanding support options, allowing time off from school for improving mental health, increasing expressive outlets, and providing education to the community. Their ideas were reflected in the objectives and questions addressed in the finalized survey with priority areas in environmental factors, mental health, and relationships. The investigators utilized pre-work and meeting discussions to address 28 objectives in the 236-question survey. After receiving feedback from an advisory board, the young investigators prioritized the survey topics and questions and reduced the survey to 20 topics addressed and up to 196 questions. The application process recruited 19 high schoolers to participate as investigators from 10 different schools in 15 zip codes. Through the youth-led survey design, current mental health struggles of San Antonio youth were elucidated and better understood. The youth voice in this project significantly contributes to the validity of the designed survey and the forthcoming survey results. The methodology of community-engagement to empower youth voice is a powerful tool for community mental health projects.

No. 17

Yes I CAN: Increasing Retention and Student Connection Using Virtual Coaching and Eclectic Therapy

Poster Presenter: Daniel Upchurch, Ph.D.

SUMMARY:

Student retention has become a major policy concern within the educational system. Research shows that identifying clear educational goals and coaching students to make informed and rational choices may influence overall retention (Brogen, 2016). The Network for Student Success at Pulaski Technical College has constructed a coaching program to assist in increasing retention and graduation rate for African American males. This in-person model provided Black male students with their own coach throughout their time at the college. According to staff, the retention increased by 30% among Black males. The Affordable Telemental Health model provides coaching, therapy, and assessment for students at Historically Black Colleges and Universities and Predominantly White Institutions. It is different from the normal in-person coaching model because it allows students to communicate remotely and within the comfort of their own space. In addition, it also allows students to have a mediator The remote program prepares and trains coaches using the "Yes, I C.A.N. (Cognitive Behavioral Therapy, Acceptance and Commitment Therapy, and Narrative Family Therapy) model and coaches playbook. This five-week pilot study was conducted using four universities; two historically Black colleges and universities and two predominantly white universities. Students who participated were randomly selected from 4 general psychology courses at each university. Descriptive Statistics was conducted examining the overall percentage of individuals' perception of the program. Over 90% of students enjoyed the program, application, and coach and 100% of students believe that the model is needed in colleges. In addition, 72% of students asked to continue into the next semester, and over 70% of students wanted to use the program over the summer and throughout the fall and summer breaks.

No. 18

A 6-Week, Double-Blind, Randomized, Placebo-Controlled Study of Duloxetine in Child and Adolescent Patients With Major Depressive Disorder in Japan

Poster Presenter: Takuya Saito, M.D.
Co-Authors: Mitsuhiro Ishida, Atsushi Nishiyori, Toshimitsu Ochiai, Hideaki Katagiri, Hideo Matsumoto

SUMMARY:

Background. Major depressive disorder (MDD) is a serious illness in child and adolescent. Recently, the number of child /adolescent patients with MDD has increased in Japan. However, little is established for standardized and evidence-based treatment for MDD, and no approved antidepressants to child/adolescent patients in Japan. As with adult MDD, prompt and appropriate diagnosis and treatment are important for child and adolescent MDD. The aim of this study was to evaluate the efficacy and safety of duloxetine (DLX) in Japanese child and adolescent patients, with MDD (NCT03315793, JapicCTI-173734). Method. One hundred forty-nine child and adolescent (age 9-17 years with ≥7 at the initial onset of major depression episode) with major depressive episode were randomized to DLX(n=75) or placebo(n=74). The patients had either MDD or persistent depressive disorder with major depressive episode as defined in DSM-5 and had Children's Depression Rating Scale-Revised (CDRS-R) total score of ≥40 and the Clinical Global Impression-Severity (CGI-S) score of ≥4. DLX was titrated from 20 mg/day to 40-60 mg/day over 1-2 weeks and maintained at 40-60 mg/day (approved doses in adults with MDD in Japan) for 4-5 weeks. The primary efficacy measure was change from baseline in CDRS-R total score compared with placebo at Week 6. Secondary efficacy measures included changes from baseline in CDRS-R subscales and item 13 (suicidal ideation), changes from baseline in CGI-S score as well as 30% response rate, 50% response rate and remission (CDRS-R total score ≤ 28) rate. Safety and treatment-emergent adverse events (TEAEs) were assessed at each visit. Efficacy measures were assessed using mixed-effects models for repeated measurements (CDRS-R total score, CDRS-R subscales and item 13, CGI-S) or Cochran-Mantel-Haenszel test (30% response rate, 50%

response rate, remission rate) for between-group comparisons. Results. There was no significant treatment group difference in change in CDRS-R total score from baseline to Week 6 (difference of least square mean change [95% confidence interval: 1.39 [-3.30, 6.08], p=0.5587). Similarly, there was no significant difference in all secondary efficacy measures. More patients in the DLX group reported TEAEs compared with placebo (78,7% vs 62.2%). All TEAEs were mild-to-moderate in intensity. No serious TEAEs and no deaths were reported. Overall reported adverse events were consistent with the currently available DLX safety profile. No new safety related finding was reported in this study. Conclusion. DLX showed no superiority over placebo in child and adolescent patients with MDD in this study but no new adverse event was reported.

No. 19

A Novel Extended-Release Stimulant Formulation for ADHD

Poster Presenter: Judith C. Kando, Pharm.D.
Co-Authors: Antonio Pardo, M.D., Thomas R. King, M.P.H., M.S.

SUMMARY:

Background ADHD guidelines recommend treatment with a psychostimulant (typically, amphetamine or methylphenidate). Ideal stimulant coverage for most patients provides an immediate effect within 1 hour of dose followed by an extended duration of efficacy (up to 12-14 hours post-dose). To facilitate this need, the LiquiXR drug delivery technology was developed. The LiquiXR drug delivery technology complexes any protonated, water-soluble active drug product to an ion-exchange resin particle. A portion of these particles is then coated with an aqueous, pH-independent polymer designed to provide sustained release of drug product. The polymer coating applied to the ion-exchange resin particles is of varying thickness, allowing for extended release of active drug product while uncoated particles provide for immediate release of active drug product. The resulting release characteristics allow for customized, sustained release of active drug for up to 24 hours post-dose. The LiquiXR drug delivery technology has already been successfully utilized in the development of treatment options (liquid suspension and chewable tablet) that offer rapid absorption and sustained plasma levels after once-daily dosing: amphetamine extended-release oral suspension (AMPH EROS), methylphenidate for extended-release oral suspension (MEROS), and methylphenidate extended-release chewable tablets (MRCT). The studies and data supporting these products are summarized here. General Study Methods Efficacy was established in 3 separate clinical trials using the Swanson, Kotkin, Agler, M-Flynn, and Pelham (SKAMP) attention and behavioral rating scale. The assessments were conducted in a laboratory classroom following dose optimization. Study/Product compared with placebo Design Assessment Primary endpoint (active vs placebo) Subjects (all aged 6-12 years with ADHD) MEROS Double-blind, open-label dose optimization classroom study SKAMP 4 hours post-dose n=45 AMPH EROS 4 hours post-dose n=108 MPH ERCT Average of all time points post-dose n=42 Results: The primary efficacy endpoints were met in all 3 pivotal clinical trials (p<0.001 compared with placebo at designated timepoint). No serious adverse events were reported, and most adverse reactions were mild or moderate. Conclusion: The LiquiXR drug delivery technology provides for an immediate release followed by extended-release profile that demonstrated efficacy in treatment of ADHD for these patient populations, with an acceptable safety profile.

No. 20

A Novel SMS Intervention to Improve Adherence to Stimulants in Children and Adults With ADHD

Poster Presenter: Joseph Biederman, M.D.
Co-Authors: Ronna Fried, Maura DiSalvo, M.P.H., Allison Green

SUMMARY:

Attention-deficit/hyperactivity disorder (ADHD) is a prevalent neurobiological disorder that has been associated with a wide range of adverse outcomes. Large datasets document that stimulants decrease the risk for many adverse outcomes, however stimulant compliance remains poor. Text message reminders, which have been shown to improve adherence with treatment for various chronic medical conditions, have never before been used to

improve adherence to stimulants in ADHD. This study examined the effectiveness of a text messaging intervention aimed at improving adherence to stimulant medications in both children and adults with ADHD. Subjects were adults ages 18-55 and children ages 6-12 diagnosed with ADHD and prescribed stimulant medication who were recruited as text messaging intervention patients after receiving approval from their prescriber. Text Messages were sent 4 times weekly to parents of children and twice daily to adult subjects. Comparators for both groups were selected from the Partners HealthCare Electronic Medical Records (EMR) who had been prescribed stimulant medications within the same time frame matched by demographics. Using logistic regression, we compared rates of adherence to stimulant medication between the text messaging group and individuals receiving treatment as usual. We determined whether patients had timely prescription refills using prescriptions documented in their EMR. A patient was considered adherent if a stimulant prescription was issued within 37 days of the start date of the text messages for the text messaging group or within 37 days of the index prescription for the EMR group. For both adults and children receiving the text messaging intervention the adherence rate was double of that in comparators receiving treatment as usual. Based on an NNT=3, for every three patients who receive the SMS intervention, we can keep one engaged in their stimulant treatment. Our data indicates that a novel ADHD-centric text messaging intervention significantly improved patient engagement in both adults and children with ADHD. These findings provide strong support for the utility of this readily accessible, inexpensive, and widely available technology to improve the poor rate of adherence to stimulant treatment in clinical practice.

No. 21

A Unique Case of Small Bowel Obstruction Associated With the Use of Paroxetine

Poster Presenter: Yam R. Giri, M.B.B.S.
Co-Author: Nazar Muhammad, M.D.

SUMMARY:
Background: Paroxetine is an SSRI with most anticholinergic properties with a high affinity for the M1 receptor. Its antimuscarinic properties may lead to complications like constipation resulting in bowel obstruction. We report a case report in which a patient on Paroxetine after prolonged use of Paroxetine that developed acute intestinal obstruction leading to surgical intervention. **Case**: We present a 52 y/o female, no past medical history, and past psychiatric history of depression and anxiety. Paroxetine was started and titrated up to 20 mg daily with an improvement of depression and anxiety. After 6 months on Paroxetine, she developed intestinal obstruction which required surgical intervention. Paroxetine was discontinued and switched to Sertraline that was titrated up to 200 mg daily. She had remission of depression on Sertraline. **Conclusion**: Paroxetine has a higher incidence of adverse effects like constipation, sedation, discontinuation syndrome, sexual dysfunction, weight gain, and congenital malformation compared to other SSRIs. The pathophysiology is a decrease in smooth muscle contraction and a decrease in intestinal motility that may lead to intestinal obstruction. Clinicians should be aware of the anticholinergic properties of Paroxetine and the possibility of intestinal obstruction. If the patient has a history of constipation and risk factors of intestinal obstruction, use Paroxetine with caution or use other antidepressants.

No. 22

Adherence and Persistence to Long-Acting Injectable Dopamine Receptor Blocking Agent Therapy: Systematic Review and Meta-Analysis of Cohort Studies

Poster Presenter: Shaina Musco, Pharm.D.
Lead Author: Sun Lee, Pharm.D.

SUMMARY:
Background: Dopamine receptor blocking agents (DRBA antipsychotics) are used for multiple psychiatric conditions. Schizophrenia treatment guidelines recommend switching from oral to long-acting injectable (LAI) DRBAs to improve therapy adherence. Adherence and persistence to the

prescribed therapy can improve clinical outcome, decrease hospitalization, and reduce healthcare expenditure. Studies have attempted to estimate the adherence and persistence rate of LAIs, and a wide range of estimations have resulted due to variability in measurement strategies and treatment settings. This systematic review and meta-analysis study aim to establish adherence and persistence rates of LAI by reviewing cohort studies published from 1990 to present. We plan to categorize patient-, medication-, and service-related factors that affect LAI treatment adherence and persistence patterns. Objective: To assess the overall adherence and persistence rate of LAI DRBAs in a real-world setting (systematic review) and to compare the adherence and persistence rate of LAI and oral DRBAs (meta-analysis). Method: A systematic literature review was performed to examine rates of LAI adherence and persistence in studies with a naturalistic design accessible via MEDLINE, CINHAL, and Cochrane Library. Two independent investigators assessed study quality using the Newcastle Ottawa Scale and extracted study-level data for a random-effect meta-analysis of adherence rate (defined by PDC>80%) and persistence rate (defined by not having more than 60 days gap in therapy at follow-up). Comprehensive Meta-Analysis (Englewood, NJ) software was used to analyze pooled effect on categorical data, heterogeneity, and publication bias. Results: Of the 26 articles included in the systematic review, 21 studies (80.8%) were funded by the manufacturers of the long-acting injectable antipsychotic agents and 1 study (3.8%) received government funding. The meta-analysis included 8 studies, including 19,473 patients prescribed LAIs and 81,819 patients on oral DRBA. The mean (SD) age of patients was 39.6 (21.9) years. Groups exposed to long-acting injectable agents had a cumulative benefit of achieving optimal adherence (PDC>80%) at rate 1.36 times higher compared to oral group (95%CI, 1.22-1.51; p<0.05). The persistence rate was 1.64 times higher among the groups exposed to long-acting injectable agents compared to the groups exposed to oral agents (95% CI, 1.19-2.25; p<0.05). Conclusion: Higher adherence and persistence rates were observed among patients on LAI DRBA therapy compared to oral formulations. Considerable heterogeneity in defining adherence and persistence rate was observed across the 26 studies reviewed in systematic review.

No. 23

Adjunctive Lumateperone (ITI-007) in the Treatment of Bipolar Depression: Results From a Randomized Clinical Trial

Poster Presenter: Lakshmi Yatham
Co-Authors: Suresh Durgam, Susan Kozauer, M.D., Richard Chen, Mauricio Tohen, M.D., D.P.H., M.B.A.

SUMMARY:

Background: Approved treatments for bipolar depression are limited and associated with a spectrum of undesirable side effects. Lumateperone (lumateperone tosylate, ITI-007), a mechanistically novel antipsychotic that simultaneously modulates serotonin, dopamine, and glutamate neurotransmission, is FDA-approved for the treatment of schizophrenia. In a recent phase 3 clinical trial (Study 404, NCT NCT03249376), lumateperone 42-mg monotherapy significantly improved depressive symptoms in patients with a major depressive episode [MDE] associated with both bipolar I and bipolar II disorder. This Phase 3 randomized, double-blind, placebo-controlled multinational study (Study 402, NCT02600507) investigated the efficacy and safety of lumateperone adjunctive therapy to lithium or valproate in patients with bipolar I or bipolar II disorder experiencing an MDE (bipolar depression). **Methods**: Patients (18–75 years) with a clinical diagnosis of bipolar I or bipolar II disorder who were experiencing a MDE with a Montgomery-Asberg Depression Rating Scale (MADRS) Total score ≥20 and a Clinical Global Impression Scale-Bipolar Version-Severity (CGI-BP-S) score ≥4 at screening and baseline were randomized 1:1:1 to adjunctive placebo, lumateperone 28 mg, or lumateperone 42 mg with lithium or valproate for 6 weeks. The primary and key secondary efficacy endpoints were change from baseline to Day 43 in MADRS total score and CGI-BP-S Depression scores, respectively. Safety assessments included treatment emergent adverse events, laboratory parameters, vital signs, extrapyramidal symptoms (EPS), and suicidality. **Results**: In this study, 528 patients received treatment (placebo, 175; lumateperone 42 mg, 177; lumateperone 28 mg, 176) and 430

completed the 6-week study. Patients in the lumateperone 42-mg group had significantly greater improvement on MADRS total score as indicated by mean change from baseline to Day 43 compared with placebo (least squares mean difference [LSMD] −2.4; 95% confidence interval [CI] −4.42, −0.37; P<.05), with numerical improvements in the lumateperone 28-mg group compared with placebo (LSMD −1.7; 95% CI, −3.65, 0.32; P=.10). There were significantly greater mean improvements in CGI-BP-S Depression score compared with placebo for patients treated with lumateperone 42 mg (LSMD −0.3; 95% CI −0.59, −0.09; P<.01) and lumateperone 28 mg (LSMD, −0.3; 95% CI, −0.50, −0.01; P<.05). Lumateperone treatment was well tolerated, with minimal risk of EPS, metabolic, and prolactin side effects. **Conclusion**: Lumateperone 42 mg demonstrated efficacy as an adjunctive treatment to lithium or valproate, significantly improving depressive symptoms in patients with bipolar depression. Lumateperone was generally safe and well tolerated with no new safety concerns. These results suggest that lumateperone 42 mg may be a promising new treatment adjunctive to lithium or valproate for depression associated with bipolar I or bipolar II disorder.

No. 24

Adventures of the Clear Web: A Case Report of Tianeptine and Deschloroketamine Abuse

Poster Presenter: Christopher Paul Marett, M.D., M.P.H.
Co-Author: Justin McCutcheon, M.D.

SUMMARY:

Mr. M is a 25-year-old man with major depressive disorder and panic disorder who has been treated in outpatient clinic. Several months into the treatment course, he reported developing a tolerance to tianeptine, an antidepressant medication he purchased online. He described tianeptine as a "nootropic that helps with mood at a dose of 12.5 mg three times a day," though at this point, he had taken nearly two grams of tianeptine each day. Tianeptine is an antidepressant used in some European countries that is believed to exert effects via modulation of glutamatergic pathways. It is a mu-opioid agonist and exerts effects expected with this particularly at much higher doses than typically prescribed. To wean off tianeptine, Mr. M had sought out treatment with buprenorphine at a local addiction clinic, but the clinic advised against this. His psychiatrist prescribed clonidine to help with withdrawal symptoms as Mr. M tapered off of tianeptine over four months. During this time, Mr. M experienced severe depression, anhedonia, and daytime sleepiness. Three months after tapering off of tianeptine, Mr. M experimented with deschloroketamine (DCK). DCK is a ketamine analogue with a common arylcyclohexylamine backbone. DCK has been posited to treat bacterial infections at a dose of 2 mg a day, but it has been sold online as a designer drug with doses ranging between 10-50 mg. Mr. M cited the recent trend of psychiatric treatment of depression with ketamine as a primary factor that motivated him to try this. He noticed that it cleared his chronic acne, and he explained that deschloroketamine is an antibiotic, so he was not surprised. He had protracted diarrhea, though, and eventually stopped taking DCK. This case illustrates the clinical challenges of addressing patients who self-experiment with novel psychoactive substances. Psychiatrists may find it difficult to keep abreast of the wide range of new substances, as well as repurposed drugs, that are easily obtained. It is important to develop rapport to encourage openness with patients about their experimentation with such substances. Further, psychiatrists should have some understanding of both clear and dark web methods through which patients may obtain psychoactive substances.

No. 25

Anticonvulsants and Antipsychotic Polypharmacy for Non-Bipolar Psychiatric Indications in a State Psychiatric Hospital

Poster Presenter: Evaristo O. Akerele, M.D.
Co-Author: Ijeoma Jennifer Hassan, M.D.

SUMMARY:

BACKGROUND: Antipsychotic polypharmacy (APP) and other pharmacologic co-treatment strategies continue to occasion much discussion and some controversy. Performance improvement initiatives at our 500 bed state psychiatric hospital have examined patterns of APP since 2001 and have

begun to consider co-prescribing of other agents. In addition to their regular use in the treatment of bipolar disorders, anticonvulsants have been used in clinical settings as adjunctive treatments for schizophrenia and other disorders. The prevalence of such co-treatment strategies has not been extensively examined. We have begun to assess the use of anticonvulsants among hospitalized long term psychiatric patients. We sought to identify the frequency of anticonvulsant co-treatment for indications other than epilepsy, other medical conditions, and bipolar disorder. The extent to which anticonvulsants were used in combination with antipsychotic medication and antipsychotic polypharmacy was also examined. **METHODS**: Hospital-wide data sets for all active hospital orders on a typical day in September, 2018 identified anticonvulsant and antipsychotic medications. The frequency of prescriptions for anticonvulsants often utilized in the treatment of psychiatric disorders were examined, including valproate, carbamazepine, oxcarbazepine, lamotrigine, topiramate, and gabapentin. Anticonvulsant medication orders that had indications explicitly linked to non- psychiatric conditions such as seizure and headache were excluded; data for patients with explicit indications for bipolar disorder were not included in the analyses. Standing orders for antipsychotic monotherapy and polypharmacy were identified (different formulations of the same agent, e.g., P.O., i.m., LAI, were not considered polypharmacy). **RESULTS**: Excluding patients with explicit indications for bipolar disorder and not including prescriptions for neurologic/medical disorders, 31.4% of 431 patients were prescribed anticonvulsants (3.9% were prescribed 2-3 anticonvulsants). Most commonly prescribed were valproate compounds (26.7% of patients; 66.1% of prescribed anticonvulsants), gabapentin (5.3%; 13.0% of anticonvulsants), and topiramate (4.6%; 11.5% of anticonvulsants). Among patients treated with antipsychotic agents, anticonvulsants were prescribed for 35.1% of those receiving monotherapy and 44.7% of those receiving APP (chi-square 3.95; $p<0.05$). **CONCLUSION**: Anticonvulsant medication was prescribed for a substantial minority of patients for non-bipolar psychiatric indications. The use of such agents as co-treatments for patients with incomplete clinical response to psychotic disorders is suggested by more frequent anticonvulsant orders for patients prescribed multiple antipsychotics. Clinical and demographic factors associated with anticonvulsant co-treatment and the use of specific agents and combinations will be further considered.

No. 26

Cardiovascular Safety of Pimavanserin in Patients With Neurodegenerative Disorders

Poster Presenter: Pierre N. Tariot, M.D.
Co-Authors: George Demos, Bradley McEvoy, Estelle Urbain, Mary Ellen Turner

SUMMARY:

Background: Cardiovascular adverse events contribute to increased mortality associated with antipsychotic use in elderly patients with dementia-related psychosis (DRP), and prolonged QT intervals in such patients increase risk of serious/fatal arrhythmias. Thus, cardiovascular safety is an important consideration when treating patients with neurodegenerative disorders, including DRP. This is particularly relevant when considering that patients with dementia are often older adults with multiple comorbid conditions. Pimavanserin is a selective 5-HT2A receptor inverse agonist/antagonist approved to treat hallucinations and delusions associated with Parkinson's disease psychosis. Here we evaluate the cardiovascular safety of pimavanserin in a large population of patients with neurodegenerative disorders. Methods: Safety data were pooled from 8 double-blind, placebo-controlled, parallel-group studies for patients with neurodegenerative disorders treated with ≥1 dose of pimavanserin (34 mg) or placebo once daily. Electrocardiograms were reviewed centrally, and electrocardiogram parameters from this evaluation were summarized with descriptive statistics as changes from baseline and proportion of patients with potentially clinically important electrocardiogram changes. Results: Among the 580 and 649 patients treated with pimavanserin and placebo, respectively, median ages were 74.0 and 74.0 years, 92.2% and 93.5% were white, 59.1% and 60.4% had ≥1 vascular disorder, and 45.3% and 47.9% had hypertension, respectively. Mean (SE) change in corrected QT interval using Fridericia's formula (QTcF) from baseline to last postbaseline assessment was 5.2 ms

(1.14) in the pimavanserin group and 0.0 ms (0.67) in the placebo group. QTcF >500 ms was reported in 0.2% of patients in both groups. Change from baseline in QTcF >60 ms was reported in 1.5% of pimavanserin and 0.5% of placebo patients. None of the patients with these QTcF interval values had associated treatment-emergent adverse events (TEAEs). Electrocardiogram-associated TEAEs reported in ≥1% were atrial fibrillation (1.2% pimavanserin, 0.6% placebo) and prolonged QT (1.0%, 0.8%, respectively). Serious cardiac-related TEAE occurred in 0.2% of pimavanserin and 0.8% of placebo patients. There were no reports of torsade de pointes or ventricular tachycardia. Conclusions: Baseline characteristics show that many of these patients with neurodegenerative disorders were older and comorbidities were common, including vascular disorders and hypertension. This underscores the importance of a thorough understanding of the safety of medications used in these patients. Data from this large group of patients with neurodegenerative disorders shows that pimavanserin prolonged the QT interval by an average of 5.2 ms compared with placebo. Patients with potentially clinically important changes in QTcF did not report associated TEAEs. Results were consistent with previous findings and prescribing information.

No. 27

Clozapine-Associated Enuresis: A Literature Review and Report of Two Cases

Poster Presenter: Samuel Ayodeji Adeyemo, M.B.B.S.
Co-Authors: Christianah Ogunlesi, Olalekan Olaolu, Oluwatoyin Oladeji, Sarah Tedesco

SUMMARY:

Clozapine is the most effective drug for management of treatment-resistant schizophrenia. Its unique properties make it a promising but challenging drug to use in the treatment of psychiatric illnesses. Some of the more common side effects of clozapine include sedation, hypersalivation, tachycardia, seizures, agranulocytosis, and other less reported side effects like urinary incontinence. Reports show that clozapine associated enuresis (CAE) is the most common of the urogenital effects of clozapine and can occur in up to 44.3% of patients. The pathophysiology of CAE is not fully understood. However, suggestions include retention overflow consistent with inhibition of detrusor muscle contraction due to anticholinergic action reduced external sphincter tone due to anti-alpha adrenergic activity sedation lowering of seizure threshold drug-induced diabetes insipidus9, detrusor muscle hyperreflexia and dopamine blockade of basal ganglia. Suggested treatment for CAE includes desmopressin, anticholinergics, antipsychotics, adrenergic agonists, and oxybutynin. We present two female African American patients, ages 40 and 45, with refractory schizophrenia managed with clozapine. Both patients developed enuresis while on clozapine. Our presentation highlights the likely pathophysiology of CAE in one of these patients. Furthermore, we identified and reviewed published articles that describe an association between clozapine and enuresis using PubMed, MEDLINE, and Google Scholar. This review analyzes the symptom presentation of patients, comorbid patient characteristics, putative pathophysiologic mechanisms, and management measures of CAE. CAE is underreported probably due to patient embarrassment which can result in poor quality of life if not treated. Also, when reported, CAE is often ignored by physicians. This literature review intends to bring more attention to this significant side effect.

No. 28

Effects of Adjunctive Pimavanserin and Current Antipsychotic Treatment on QT Interval Prolongation in Patients With Schizophrenia

Poster Presenter: Dragana Bugarski-Kirola, M.D.
Co-Authors: Rene Nunez, Ramzey Odetalla, I-Yuan Liu, Mary Ellen Turner

SUMMARY:

BACKGROUND: Pimavanserin, a selective 5-HT2A receptor inverse agonist/antagonist, is approved by the U.S. FDA for the treatment of hallucinations and delusions associated with Parkinson’s disease psychosis and is being actively investigated for its potential to treat the negative symptoms of schizophrenia. Here we focus on QT interval prolongation in 3 studies investigating once-daily pimavanserin as adjunctive to current antipsychotic (AP) treatment in patients with schizophrenia as QT

interval prolongation may be a concern among these patients. METHODS: Electrocardiograms were unblinded from trials in which pimavanserin or placebo were added to main APs over 6 weeks (ENHANCE; NCT02970292), 26 weeks (ADVANCE; NCT02970305), and up to 78 weeks (ongoing 52-week, open-label rollover study; NCT03121586) of treatment. AP use was permitted throughout these studies; the 3 most frequently used APs were examined—aripiprazole (including long-acting injectable [LAI]), risperidone (including LAI), and olanzapine. QT intervals were corrected (QTc) using Fridericia''s method with elevated risk defined as either postbaseline value maximum of >500 ms or change from baseline to postbaseline maximum of >60 ms. RESULTS: Of patients who were treated with adjunctive pimavanserin in ENHANCE (risperidone, n=73; aripiprazole, n=37; olanzapine, n=69), there were no postbaseline QTc values above 481 ms; one patient in each of the risperidone and aripiprazole groups had change from baseline to postbaseline maximum >60 ms. More patients had change from baseline to postbaseline maximum ranging from 31 to 60 ms in the risperidone plus adjunctive placebo group (n=5; 6.6%) than in the risperidone plus adjunctive pimavanserin group (n=3, 4.1%). In the pimavanserin plus AP arm of ADVANCE (risperidone, n=83; aripiprazole, n=60; olanzapine, n=47), one patient had postbaseline QTc value above 481 ms, and one patient treated with aripiprazole had change from baseline to postbaseline maximum of >60 ms. More patients had change from baseline to postbaseline maximum between 31 to 60 ms in each of the groups treated with other APs (n=22, 9.4%) than in the group treated with risperidone (n=7, 4.7%). During the double-blind period prior to enrollment in the open-label rollover study (risperidone, n=253; aripiprazole n=171; olanzapine, n=214 [all both arms]), one patient treated with aripiprazole had postbaseline maximum of 481 to 500 ms, and one patient each treated with aripiprazole and risperidone had double-blind baseline to post double-blind baseline maximum of >60 ms. Similar proportions of patients had changes from double-blind baseline to post double-blind baseline maximum between 31 to 60 ms across treatments. No adverse events associated with an increase in the QTc interval were reported. CONCLUSIONS: Adjunctive pimavanserin with background AP treatment showed no evidence of QTc prolongation >500 ms post baseline.

No. 29

Effects of Herbs on the Metabolism of Psychoactive Drugs Cleared by Cytochrome P450: A Case Report

Poster Presenter: Anshuman Srivastava, M.D.
Co-Author: Douglas Opler, M.D.

SUMMARY:

Interactions between herbal supplements and medications are a known, but potentially overlooked, source of clinical complications. *Bacopa monnieri* is an herb found in Asia and the southern region of the United States, and *Centella asiatica*, also known as gotu kola, is an herb grown in South Asia. We present a case in which *Bacopa monnieri* and *Centella asiatica* potentially affected the metabolism of a patient’s antidepressant and antipsychotic medications, resulting in oversedation. The patient is a 22 year-old-man with a psychiatric history significant for major depressive disorder with psychotic features. His medication regimen included ziprasidone 40 mg at bedtime and mirtazapine 30 mg at bedtime. The patient had been experiencing symptoms of tardive dyskinesia, which included twitching of his eyebrows, neck, and hands. He declined prescription pharmacotherapy for this but was agreeable to take *Ginkgo biloba* 240 mg daily, an evidence-based treatment for tardive dyskinesia, to address these symptoms. However, instead of taking isolated *Ginkgo biloba* extract as recommended, the patient began taking a commercial supplement which included 240 mg of *Ginkgo biloba* extract, 300 mg of *Bacopa monnieri*, and 120 mg of *Centella asiatica*. After starting this supplement, he began to sleep more than usual, falling asleep earlier in the evenings, with difficulty waking in the mornings, and he would nap throughout the day. *Bacopa monnieri* at the daily oral dosage of 300 mg inhibits the catalytic activities of CYP3A4, CYP2C9, and CYP2C19 to less than 10% of total activity, and *Centella asiatica* has been shown to effectively inhibit CYP2C9 and have some inhibitory effect on CYP2D6 and CYP3A4. Mirtazapine is metabolized by both CYP3A4 and CYP2D6, and ziprasidone is metabolized by CYP3A4. Therefore, *Bacopa monnieri* and *Centella asiatica*

would be expected to increase the serum levels of these drugs, thus explaining the onset of sedation. The patient was instructed to stop taking this supplement and instead start a supplement containing only Ginkgo biloba extract. His ziprasidone dosage was concurrently decreased to 20 mg from 40 mg. Soon after these changes, his sedation resolved. The patient was previously stable for over a month on 40 mg of ziprasidone without any prior sedation, so it is unlikely that the reduction in ziprasidone dosage to 20 mg was the dictating factor in the resolution of his sedation. The most likely cause of his improvement was the discontinuation of *Bacopa monnieri* and *Centella asiatica* in the herbal supplement. This case serves to highlight the importance of monitoring drug-herbal interactions for potential clinical effects, as well as reports on two specific commercially-available herbs that are potentially of concern to prescribers.

No. 30

Hyperthyroidism-Induced Psychosis Treated With Paliperidone: A Case Report

Poster Presenter: Saranyan Senthelal, M.D.

SUMMARY:

Although very rare, complications of hyperthyroidism can manifest as neuropsychiatric symptoms such as; nervousness, irritability, anxiety, unstable mood, and psychosis. The display of psychotic symptoms in the setting of thyrotoxicosis is rarely seen in clinical practice and there are limited studies that explore the biological link between hyperthyroidism and psychosis. As a result, this topic is poorly understood, and this case report attempts to add to the limited literature that is currently available. Psychotropic medication may be useful as an adjuvant treatment of psychotic symptoms in the setting of psychosis and hyperthyroidism. More importantly, this can especially be applied when treatment with an antithyroid medication (ex. methimazole) and propranolol is not showing improvement, or the diagnosis of psychosis precedes the diagnosis of hyperthyroidism. Our case report discusses the case of a 33-year-old Chinese female, with no prior psychiatric history, who was brought in due to increased anxiety, paranoia, and not sleeping for 5 days. She has a past medical history of hyperthyroidism that is managed with methimazole 10 mg daily and had been compliant with medication. On assessment, the patient was disorganized, disheveled, mumbling to herself with illogical thought process, thought content was significant for paranoid and persecutory delusions. Laboratory results on admission showed the patient had significantly low TSH levels and elevated T3 and T4 levels, indicating a hyperthyroid state. The patient was managed with Paliperidone, Methimazole and Propranolol. The patient showed significant improvement in both her thyroid function and psychotic symptoms during the second week of her admission. The present case discusses the use of the antipsychotic, Paliperidone, alongside the conventional therapy (antithyroid medication paired with a β-adrenoceptor antagonist) to target psychotic symptoms secondary to hyperthyroidism.

No. 31

Initiation on High Weight Gain Risk Versus Low Weight Gain Risk Antipsychotics: Do Baseline Characteristics Predict Prescribing Behavior?

Poster Presenter: Rezaul Khandker
Co-Authors: Ellen Thiel, Farid Chekani

SUMMARY:

Objective: Weight gain has been shown to be a side effect of many antipsychotic (AP) medications. The risk of weight gain differs by the type of antipsychotic. Our objective was to identify predictors of initiating on high weight gain risk antipsychotics versus low-weight gain risk. We hypothesized that baseline risk factors for cardiometabolic conditions may channel patients towards being prescribed a low weight gain risk AP. Methods: A retrospective observational study was conducted using administrative claims data the IBM® MarketScan Multi-State Medicaid Database. Patients with at least one medical claim with a diagnosis for schizophrenia and newly initiating AP therapy between 1/1/11-6/30/16 were included in the study. Baseline patient characteristics, including demographics and underlying obesity and other cardiometabolic conditions, were assessed in the 12 months prior to the AP initiation. Based on

outpatient pharmacy claims, patients were categorized as initiating on high weight gain risk APs (olanzapine, chlorpromazine, iloperidone, paliperidone, quetiapine, risperidone, mesoridazine) or low/unknown weight gain risk APs (fluphenazine, haloperidol, perphenazine, thioridazine, thiothixene, aripiprazole, asenapine, lurasidone, ziprasidone, brexpiprazole, trifluoperazine, cariprazine). A logistic regression model to predict the odds of being prescribed a high-weight gain risk AP was created. Predictor variables included baseline characteristics. Results: A total of 8,748 schizophrenia patients were identified as new initiators of APs. Of those, 6,004 patients initiated high weight gain risk APs (68.6%). Bivariate analyses revealed that those initiating high weight gain risk APs were significantly younger than low-risk patients (39 vs. 41 years; $p<0.001$). When comparing baseline characteristics, those initiating high-risk APs were less likely to be diagnosed with obesity(11% vs. 13%), dyslipidemia (19% vs. 22%), type 2 diabetes (14% vs. 19%), and hypertension (33% vs. 36%) (all $p<0.05$). Depression (16% vs. 13%) and drug abuse (22% vs. 18%) were more often diagnosed in the group initiating on high-risk APs ($p<0.05$). The results from the logistic regression model suggest that baseline cardiometabolic conditions were not significantly associated with being prescribed the low-risk APs, when adjusted for other covariates. Baseline characteristics that remained significantly predictive of being prescribed a high weight-gain risk in the adjusted model were depression (Odds ratio(OR): 1.22; $p=0.005$) and drug abuse (OR: 1.21; $p=0.004$). Conclusions: Cardiometabolic conditions that are associated with weight gain and obesity were not predictive of being prescribed a low weight gain risk AP, indicating the prescribing patterns may not take into account baseline characteristics when determining risk of AP side effect profiles. This study was funded by Merck Sharp & Dohme Corp., a subsidiary of Merck & Co., Inc., Kenilworth, NJ, USA.

No. 32

Innovative Psychopharmacology in Treatment-Refractory Patient Population

Poster Presenter: Mujeeb Uddin Shad, M.D., M.S.

SUMMARY:

There is growing number of treatment-refractory patients in psychiatric practice. Although evidence-based treatments may be effective in most patients, there is a significant number of psychiatric patients, who may not have an adequate response to currently available psychotropic medications, especially in treatment-refractory patient populations in a state hospital setting or community mental health centers. Over a relatively short period of time several molecules with extremely novel and exciting mechanisms of action have been approved by the FDA for some novel indications, such as tardive dyskinesia, pseudobulbar affect, Parkinson's disease psychosis and female hypoactive sexual desire disorder. These newly approved neuro-psychopharmacological molecules have novel mechanisms of action and although they should not be used routinely for indications not approved by the FDA, it may be useful to consider these new molecules in treatment-refractory patient population, when no other medications have made a difference. However, it remains extremely important to provide clinical and neurobiological rationale to use these agents based on their putative mechanism(s) of action. For example, using an agent with glutamate-modulation may be a reasonable approach in patients with treatment refractory schizophrenia or even treatment refractory depression, if currently approved agents are not helpful. The main objective of this abstract is to discuss novel, but rational and mechanism-of-action based uses of new and some relatively older psychotropic medications for treatment-refractory patient population, who have not responded and/or tolerated currently used psychotropic medications. Although psychopharmacology is becoming an art primarily due recent advances in brain and mind research, for it to be used as an art, one has to have some training in advanced psychopharmacology. Although evidence based-medicine works for a large number of psychiatric patients, it may not adequately address the growing treatment-refractory population. It is extremely useful to employ 'outside the box" thinking using translational neuroscience skills and knowledge to manage difficult-to-treat patient population. In future, combination of novel research tools, such as pharmacogenetics, pharmacogenomics,

neuroproteomics, and metabolimcs along with a holistic approach integrating diet, sleep, exercise, gut flora, and neuroinflammation will help address the complexities of neuropsychiatric disorders. We will present recently published case reports, case series and reviews (1-10) by our group will be used to provide background information to define "Innovative Psychopharmacology."

No. 33

Pimavanserin in the Treatment of Parkinson's Disease Psychosis: Meta-Analysis and Metaregression of Randomized Controlled Trials

Poster Presenter: Ramu Vadukapuram
Co-Authors: Zeeshan Nisarahmed Mansuri, M.D., M.P.H., Chintan Trivedi, Mounica Reddy Thootkur, M.D., Abhishek Reddy, M.D.

SUMMARY:

Background: Parkinson's disease psychosis (PDP) can be a high burden on patients and hospitals as it is a common reason for being admitted to the hospital. The management of PDP has been challenging. Atypical antipsychotics were previously used for PDP, but only Clozapine has shown a good effect, but with serious side effects. Pimavanserin is approved by the United States Food and Drug Administration to treat PDP, and several studies have evaluated its effect on PDP. We sought to evaluate Pimavanserin's safety and efficacy in the treatment of Parkinson's disease psychosis by performing a meta-analysis of the randomized controlled trial data. Methods: All the articles, which assessed the Pimavanserin effect on the treatment of PDP [1-4], were explored from Google Scholar, PubMed, and abstracts from annual scientific sessions. Data on Pimavanserin dose, duration of therapy, the total number of patients by group, safety and efficacy data, and year of the studies were collected from all the studies. Meta-analysis was performed with the Random Effect model using the inverse variance method and the Mantel-Haenszel method. The standardized mean difference was calculated for the summary effect since the duration of the study was different in one study. In addition, because of moderate heterogeneity, we also performed meta-regression to explore the covariates (mean age, year of study, dose, and duration of therapy), which might contribute to heterogeneity. Results: A total of four studies, with a total of 6 comparisons between Pimavanserin and placebo, were selected for the analysis. A total cohort was composed of 680 patients (263 placebos, 417 Pimavanserin). Treatment with Pimavanserin was associated with a significant reduction in a scale for assessment of positive symptoms (SAPS) [Standardized Mean Difference (SMD): -1.54 (-2.71, -0.37), p-value: 0.0097]. There was a moderate heterogeneity of 45%. In the Meta-regression, mean age was the significant predictor of the summary effect (Beta: -0.85, p-value: 0.01). Other efficacy outcomes composite score for Unified Parkinson''s Disease Rating Scale II and III (UPDRS II and III) were similar between the groups [SMD: 0.12 (-1.27, 1.50), p-value: 0.87]. Orthostatic hypotension was less common in Pimavanserin group (Risk ratio: 0.33 (0.30, 0.37), P<0.001). Conclusions: There was a significant improvement in psychosis symptoms in PD patients taking Pimavanserin. In addition, there was less prevalence of orthostatic hypotension in patients taking Pimavanserin. There was no effect on the course of Parkinson's disease.

No. 34

Randomized Clinical Trial of Fluvoxamine Versus Placebo Shows Promise in Prevention of Clinical Deterioration in Outpatients With Symptomatic Covid-19

Poster Presenter: Kishan B. Shah, M.D.
Co-Author: Shivam M. Patel

SUMMARY:

Introduction The most current recommendations for COVID-19 put forth by the NIH state that outpatients who are at high risk for disease progression may benefit from receiving the anti-SARS-CoV-2 monoclonal antibodies. Remdesivir is presently the only approved drug for the treatment of COVID-19 for hospitalized patients who require supplemental oxygen, while dexamethasone has been found to improve survival.1   Infection by the highly pathogenic virus SARS-CoV-2 is driven by replication of severe acute respiratory syndrome coronavirus 2 and subsequently
by an amplified immune and inflammatory response that results in tissue damage.1 Onset of clinical

deterioration is generally during the second week of illness, and hospitalization most often occurs within 8 to 10 days of mild to moderate symptoms.2 A recent study examined whether fluvoxamine, a selective serotonin reuptake inhibitor and s-1 receptor agonist, can prevent clinical deterioration in outpatients with mild Covid-19 illness.3 Psychiatric medications are often prescribed for conditions for which they have not been approved for by the Food and Drug Administration, and fluvoxamine is a s-1 receptor agonist, which allows it to regulate cytokine production and subsequently reduce damaging aspects of the inflammatory response seen in COVID-19.2,3 Methods A double-blind, randomized, and fully remote contactless clinical trial of fluvoxamine vs a placebo occurred to assess for clinical deterioration in outpatients with confirmed COVID-19 infection, with symptom onset within 7 days and an oxygen saturation of 92% or greater. The study comprised of 152 non-hospitalized adults in the St Louis metropolitan area, and assignment to receive 100 mg fluvoxamine (n = 80) or placebo (n = 72) 3 times daily for 15 days occurred randomly. The study took place between the time period of April 10, 2020 to August 5, 2020, with September 19, 2020 as the final follow-up date.2 Results Of the 152 patients who were randomized, in the fluvoxamine group, 0 out of 80 patients underwent clinical deterioration. In the placebo group, 6 out of 72 patients underwent clinical deterioration. The fluvoxamine group had 1 serious adverse event and 11 other adverse events, whereas the placebo group had 6 serious adverse events and 12 other adverse events.2 Conclusion This preliminary study reveals that patients treated with the SSRI fluvoxamine, compared with placebo, had a lower likelihood of clinical deterioration over the course of 15 days. The limitations include a small sample size and short follow-up duration.2 The world is facing lockdown for the first time in decades due the pandemic, leading to global disruption.4?While we await widespread vaccination, these findings are encouraging as fluvoxamine is widely available, affordable, and can be orally administered. Further exploration is likely to be met with great interest, as tools to prevent mild COVID-19 from progressing to severe disease are desperately needed.2

No. 35

Randomized, Double-Blind, Placebo-Controlled, Fixed-Dose, Parallel Group Study to Evaluate the Efficacy and Safety of the Amphetamine Extended-Release

Poster Presenter: Andrew J. Cutler, M.D.
Co-Authors: Stephanie Duhoux, Ph.D., Antonio Pardo, M.D., Thomas R. King, M.P.H., M.S., Judith C. Kando, Pharm.D.

SUMMARY:

Objectives: To evaluate the efficacy and safety of an Amphetamine Extended-Release Tablet (AMPH ER TAB) in adults with ADHD aged 18 to 60 years. In a 5-week forced dose-titration phase, eligible subjects were randomized to either oral double-blind AMPH ER TAB 5 mg starting dose or matching placebo, once daily in the morning beginning the day after the Baseline Visit. Subjects were titrated up (5 mg increments) each week. Safety and efficacy assessments were done weekly. After Visit 3, subjects received 20 mg for 14 (±3) days before Visit 5 (V5). Subjects who could not tolerate study drug discontinued. A Permanent Product Measure of Performance (PERMP) placement test was done at Screening or Baseline. At V5, efficacy assessments included the administration of serial PERMPs predose, 0.5, 1, 2, 4, 8, 10, 12, 13, and 14 hours postdose. The primary efficacy endpoint was the mean PERMP-T score across postdose time points during the Visit 5 serial PERMPs. Safety was monitored by AEs assessed at each visit, C-SSRS, vital signs, weight, and assessment of sleep, appetite, mood, and psychotic AEs. Results: The mean postdose PERMP-T score over all postdose time points at V5 was statistically significantly higher in the AMPH ER TAB group vs placebo (302.8 vs 279.6; p=0.0043). Common adverse events were decreased appetite, insomnia and dry mouth. The majority of TEAEs were mild to moderate in severity, and no SAEs were reported. Conclusion: The AMPH ER TAB demonstrated efficacy in treatment of symptoms of ADHD in adults, with an anticipated safety profile.
Acknowledgement of Funding: This study was

sponsored by Tris Pharma, Inc., the developer of the DYANAVEL® XR Tablet.

No. 36

The Efficacy of Lumateperone in Patients With Bipolar Depression With and Without Mixed Features

Poster Presenter: Roger McIntyre, M.D.
Co-Authors: Suresh Durgam, Jason Huo, Sharon Mates, Stephen Stahl

SUMMARY:
Background: Many patients with bipolar depression present with mixed features, which are challenging to treat and are associated with lower response rates, increased risk of recurrence, as well as worse clinical outcomes. Lumateperone (LUMA), a mechanistically novel antipsychotic that simultaneously modulates serotonin, dopamine, and glutamate neurotransmission, is FDA-approved for the treatment of schizophrenia and is being investigated in adults with bipolar depression. A phase 3 randomized, double-blind, parallel-group, placebo (PBO)-controlled multinational study (Study 404, NCT03249376) established the efficacy, safety, and tolerability of LUMA 42-mg monotherapy in patients with bipolar I or bipolar II disorder experiencing a major depressive episode (MDE). A post hoc analysis of Study 404 evaluated the efficacy of LUMA in patients with bipolar depression with mixed features. **Methods**: The 6-week study evaluated the safety and tolerability of LUMA in patients aged 18–75 years with DSM-5-defined diagnosis of bipolar I or bipolar II disorder who were experiencing a current MDE (Montgomery Åsberg Depression Rating Scale [MADRS] Total score ≥20 and a Clinical Global Impression Scale-Bipolar Version-Severity [CGI-BP-S] score ≥4 for depression and overall bipolar illness). Patients were required to have a Young Mania Rating Scale (YMRS) score ≤12 at screening and baseline. The primary and key secondary efficacy endpoints were change from baseline to Day 43 in MADRS Total score and CGI-BP-S score, respectively. For post hoc analyses, patients were categorized as having mixed features (YMRS Score ≥4) or not having mixed features (YMRS Score <4) at baseline. Comparisons between treatment groups for change from baseline in MADRS and CGI-BP-S scores were analyzed using a mixed-effects model for repeated measures. **Results**: Of the intent-to-treat population (n=376), 41% had mixed features (LUMA, 73; PBO, 83). Mean baseline MADRS Total score for patients with mixed features (LUMA, 31.6; PBO, 30.5) and patients without mixed features (LUMA, 30.4; PBO, 30.1) indicated moderate-to-severe depression. In MADRS total score, LUMA compared with PBO, showed significant improvement for both patients with mixed features (least square mean difference [LSMD]=−4.4, 95% CI [−7.26, −1.52]; *P*=.0030) and patients without mixed features (LSMD=−4.2, 95%CI [−6.46, −1.92]; *P*=.0004). Improvement in CGI-BP-S scores for LUMA vs PBO were similar in patients with mixed features (LSMD=−0.7, 95%CI [−1.43, −0.05]; *P*=.0369) and with non-mixed features (LSMD=−1.0, 95%CI [−1.62, −0.47]; *P*=.0004). Treatment-emergent events of mania (LUMA, 2; PBO, 4) and hypomania (LUMA, 1; PBO, 1) were low. Mean change in YMRS scores were −1.1 and −0.6 for LUMA and PBO, respectively. **Conclusion**: In this post hoc analysis of a phase 3 clinical trial, LUMA compared with PBO demonstrated significant and clinically meaningful efficacy in patients with bipolar depression with or without mixed features.

No. 37

Measuring the Effectiveness of Benzodiazepine Prescriptions Control in Community Setting Using Prescription Drug Monitoring Program (PDMP)

Poster Presenter: Ruchita Agrawal, M.D.

SUMMARY:
Introduction: Benzodiazepines have been widely prescribed for several years for the treatment of anxiety and insomnia. Benzodiazepines were meant to be for short term use but in clinical settings, long term use has been the " norm" Benzodiazepines have been the cause of accidental overdose deaths. According to NIDA, there has been a 10 fold increase in the number of deaths from 1999 to 2017. There were reported 11537 deaths in 2017 (1) from Benzodiazepines, Seven Counties Services, a community mental health setting, took the initiative to protect the community by removing Benzodiazepines from the approved formulary in

outpatient clinics in 2016. Method: 1. To implement this change, we made a committee to educate staff including physicians, APRN's and therapists. Patients were also educated and informed regarding benzodiazepine free policy.We started collecting quarterly PDMP(KASPER) reports to monitor the benzodiazepine prescriptions given by each prescriber starting from July 2016. Each prescriber quarterly report mainly shows the total doses of drugs prescribed including Benzodiazepine in 3 months and compared with the state of Kentucky total prescriptions. 2.MSHIP survey was conducted annually to monitor patient satisfaction. 3.An open patients report was run to monitor any change in caseload. Result: 1. After compilation of the KASPER/ PDMP data of all the prescribers- We found an 89 % decrease in the number of benzodiazepine prescriptions over the span of 2 years. 2. We did the open patients report and did not find any decrease in caseload. In 2016, there were 10,359 open patients and in 2018 there were 12,266 open patients. 3. We reviewed the MSHIP general patient satisfaction survey that is done annually and we did not find any major difference in overall satisfaction. Conclusion: These practice-based interventions implementing harm reduction strategies suggest that, although it was a difficult task, with strict adherence to no benzodiazepine policy, we were able to achieve a stark drop in the number of benzodiazepine prescriptions, in the span of 2 years, and have been able to continue to maintain the low numbers of benzodiazepine prescriptions.

No. 38

Treatment of Bipolar Disorder With Lithium Also Improved Cognitive and Functional Symptoms of Mitochondrial Depletion Disorder in Two Brothers

Poster Presenter: Angela S. Thorp, M.D.
Co-Authors: Tamara Murphy, M.D., Hillary Porter, D.O., Suzanne Holroyd, M.D.

SUMMARY:

Lithium, a tiny metal ion, has long been recognized as a treatment for bipolar disorder in both acute and maintenance therapy. Research also shows promise for its treatment of degenerative disorders such as amyotrophic lateral sclerosis, Alzheimer's disease, Huntington's disease, and Parkinson's disease. Although its roles in various biological processes have not been fully explored, recent studies describe benefits including neuroprotection, neurogenesis, reduction of inflammation, and increase in mitochondrial function (Forlenza et.al.). Mitochondrial DNA depletion syndromes (MDS) are the result of defects in the replication machinery for mitochondrial DNA. These clinically and genetically diverse conditions involve marked reduction of mitochondrial DNA, which hinders energy production in impaired tissues and organs. MDS can be classified as myopathic, encephalomyopathic, neurogastrointestinal, or hepatocerebral. Symptoms can range from early onset hypotonia to liver dysfunction and neurological problems presenting before age two. Overall, these syndromes are considered to be severe, and prognosis is poor. No effective treatment is available, and medical management is mainly aimed at reducing symptoms (El-Hattab et. al.). This case presentation follows the course of lithium treatment for two brothers with both bipolar disorder and MDS. The brothers were first seen at initial assessment in our clinic, diagnosed with bipolar disorder, and prescribed lithium. The reduction of inflammation, improvement in mitochondrial function, and neuroprotective qualities of lithium have led to its selection as a treatment for mitochondrial disorders. These qualities are also likely, in part, the reason for the successful treatment of bipolar disorder by this medication. Brother 1 was started on lithium 150 mg qHS, and brother 2, 300 mg qHS. Brother 1 is 22 and has bipolar disorder type 1, severe intellectual disability, OCD, and PTSD related to medical treatment. Brother 2 is 20 and has bipolar disorder type 2 and moderate intellectual disability. The brothers showed quick and steady progress including sleep and appetite regulation, mood stabilization, and most strikingly, improved cognitive function. Over the following months brother 1, who is largely nonverbal, increased his vocabulary, began toilet training, tolerating new foods, and showing improved tolerance of stressors. Brother 2 had a more stable mood, reduced anxiety, greater frustration tolerance, and improved appetite, sleep, and gait stability. In less than one year, the brothers have made impressive initial strides. It is our hope that this case series adds useful

information for psychiatrists selecting treatment strategies for patients with MDS and bipolar disorder. As current treatment of MDS is largely supportive, this report may further substantiate the hypothesis that lithium is a potential ameliorative treatment that can yield meaningful cognitive, emotional, and physical benefits.

No. 39

Treatment of Gastritis With Promethazine Linked to New-Onset Psychotic Symptoms

Poster Presenter: Marshall Steele, M.D.
Lead Author: Thomas Klotz

SUMMARY:
Hallucinations and other harbinger psychotic symptoms can be varied and difficult to interpret. Patients often struggle when clarifying or articulating their experience, and are further disadvantaged if they have any comorbid intellectual deficits. As such, a broad medical evaluation and differential diagnosis with deliberate continual observation are essential. This is even more critical when a patient presents with possible first-episode psychosis and mood symptoms in the context of medical and intellectual confounders. This is the case of a 20 year old Hispanic male, active duty service member, who presented with new-onset auditory hallucinations, disorganized behavior, and suicidal ideation in the context of a protracted episode of gastritis of unknown origin. This led to his inpatient psychiatric hospitalization with diagnostic considerations including Brief Psychotic Disorder, Schizophreniform disorder, and Medication Induced Psychotic Disorder. The patients mental status exam and his difficulty participating with treatment initially favored Schizophreniform disorder. However, on careful case review it became apparent that his psychotic symptoms had only developed following a protracted gastrointestinal illness and self-administration of numerous anti-emetic agents including per rectum promethazine. After initial stabilization, removal of the offending agent, and close follow-up with a multidisciplinary team that provided thorough psychoeducation and social interventions the patient made a full recovery and resumed his prior career path with the military. This poster attempts to address the lingering question of the cause of his index presentation, with focus on the possibility of an iatrogenic source from an unusual suspect: Promethazine

No. 40

Treatment Patterns and Outcomes in Patients With Major Depressive Disorder Treated With Vortioxetine in a Real-World Setting

Poster Presenter: Maggie McCue
Co-Authors: Brandon McDaniel, Victor Cornet, Sheetal Patel, Jay Fawver

SUMMARY:
Background: Major depressive disorder (MDD) has been reported to have a 12-month prevalence of over 10% in the US adult population. Numerous studies have shown patients with MDD experience modest rates of response and remission after antidepressant treatment. **Methods**: 1247 patients from Parkview Physicians Group - Mind-Body Medicine who were ≥18 years of age with at least 1 diagnosis of MDD, a prescription for vortioxetine (VOR), and an initial visit and at least 2 follow-up visits (from September 1, 2014, to December 31, 2018) were included. This study evaluated retrospectively the care experiences of patients with MDD (mean age 46 years; 91% White) and the effectiveness of VOR treatment on patient outcomes. On average, patients had about 3 psychiatric diagnoses (most frequent being general anxiety disorder [GAD], MDD, and post-traumatic stress disorder) during their VOR treatment and were on ≥4 other medications for various comorbidities. The primary outcome was the effectiveness of VOR on depression severity (assessed by change from baseline in the Patient Health Questionnaire [PHQ]-9 score) at 12 weeks after initiation of VOR. Secondary outcomes included changes in anxiety symptoms (GAD-7), cognitive symptoms (Perceived Deficits Questionnaire [PDQ]-20), sexual dysfunction and sleep disturbance (assessed by the Patient-Rated Inventory of Side Effects [PRISE]), and analysis of clinical narrative notes using a MATLAB algorithm developed by the study team. Other secondary outcomes included response (at least 50% reduction in PHQ-9 score), remission (PHQ-9 ≤4), and persistence rates (percent of patients who continued to use VOR) at 12 weeks.

All outcomes were examined at index (start of VOR) and at 12 weeks; mean differences were analyzed using t-tests. **Results**: At 12 weeks, PHQ-9 mean scores decreased significantly from baseline, on average by 4.39 points from 14.16±5.79 to 9.63±6.02, P<0.001; and mean GAD-7 scores decreased from 11.48±5.58 to 8.29±5.51, P<0.001. In a smaller subsample of patients where data were available, cognitive symptoms, sleep disturbance, and sexual dysfunction decreased significantly at 12 weeks. The latter two outcomes also showed significant improvements as revealed by review of clinical notes in the full sample. At 12 weeks, the response and remission rates were 31.1% and 23.0%, respectively, and the persistence rate of VOR was 66.9%. The median dose of VOR was 5 mg at index and 10 mg at 12 weeks. **Conclusions**: In a real-world retrospective sample of patients, with over 40% having ≥3 comorbid psychiatric and physical conditions, those with MDD treated with VOR experienced significantly reduced depression severity as well as improvement in anxiety, sexual dysfunction, sleep, and perception of cognitive dysfunction. At 12 weeks, about 1 in 3 patients showed clinical response, and two-thirds of patients continued on VOR treatment. **Funding**: Takeda Pharmaceuticals U.S.A., Inc., and Lundbeck LLC.

No. 41

Beta-Blocker-Assisted Exposure Therapy for Psychodynamically and Existentially Mediated Anxiety

Poster Presenter: Ramaswamy Viswanathan, M.D., D.Sc.

SUMMARY:

Background: The use of beta-adrenergic blocker medication propranolol with exposure therapy as an anxiety-deconditioning treatment is being explored in the treatment of specific phobias and post-traumatic stress disorder. The rationale is interference with the reconsolidation of affective memory. To the author's knowledge there has been no such reports in the treatment of existential anxiety, and of psychodynamically relevant themes. Here the author reports two such cases. Case Reports: A 73 yo woman with illness anxiety disorder, generalized anxiety disorder and persistent depressive disorder improved partially on psychotherapy combining cognitive-behavioral and psychodynamic principles, and escitalopram 20 mg po daily and clonazepam 0.5 mg po tid. Even after 4 years of treatment she still had repetitive bothersome nightmares, and woke up with distressing anxiety. A 6-week trial of prazosin 1-2 mg po hs was not helpful. Imaginary exposure treatment to the troublesome dream was distressing and was not followed by any improvement. After ingesting propranolol 40 mg, imaginal exposure to the same dream scene was done for 8 minutes, again producing similar distress. She reported reduction in dream distress and early morning anxiety from that night onwards. In a session a month later she ventilated with considerable distress memories of childhood adverse emotional experiences of rejection by her mother and teachers, just like she had done in several sessions in the past. The author asked her to take propranolol 40 mg po in that session. Subsequently her morning anxiety was even less than before, and the troublesome dreams disappeared. She had reduced daily clonazepam to 0.25 mg po hs. When she thought about the childhood painful memories they did not bother her much unlike in the past. The second case is a 62 yo man with panic disorder, triggered by images or thoughts about the universe. He had unease watching television shows or reading about astronomy from early 20s, but began having panic attacks at age 61. The panic attacks subsided on escitalopram 2.5 mg po daily, but he continued to have limited anxiety episodes, and would avoid news related to the cosmos. The underlying theme was how insignificant he was in the vastness of the universe, and possible destruction of the earth. Exposure to astronomy videos alone was not helpful, and he was successfully treated with exposure to such videos taking propranolol 40 mg po before the session, and subsequent visit to a planetarium show taking propranolol 40 mg po. Both patients have maintained their improvement at 11-month follow-up. Conclusion: These cases suggest that it will be worthwhile to do large scale experimental studies on whether beta-blocker-assisted exposure therapy, which is being studied in specific phobias and PTSD, can be extended to complex anxieties such as existential anxieties, and to reduce current

detrimental emotional valence of childhood adverse interpersonal emotional experiences.

No. 42

Caring for Our Teachers: A Pilot Study Assessing the Impact of Individual Psychotherapy on Teacher Wellbeing

Poster Presenter: Alison Rose Neuwirth, B.A.
Co-Authors: Megan McCormick, Ph.D., Aubrey Harrison, Ph.D., Anna Jesseman, Elizabeth Demeusy, Ph.D.

SUMMARY:
Background: Existing research has found that teachers' stress and wellbeing is directly associated with the academic and socioemotional competence of their students (Hoglund et al, 2015; Mclean et al, 2015). However, teacher wellbeing is compromised by the demands of their work, and teachers often feel underappreciated and overworked (Gonzalez et al, 2008). Teachers' stress is tied with nurses''' for the highest rate of stress among all occupations (Gallup, 2014). Stressed teachers are more likely to leave the profession, and nearly a third of teachers quit teaching in their first 5 years (Greenberg et. al 2016). Teacher turnover is costly and negatively impacts school climate and student performance (Ronfeldt et al, 2013). Due to the high rates of stress in the teaching profession and its detrimental effects, programs and policies have been recommended to support teacher wellbeing. This study investigates the utility of a school-wide, elective, no-cost, individual therapy program for teachers. Methods: This pilot study was conducted in a low-resourced public charter school in one of D.C.'s highest need neighborhoods to determine the impact of psychotherapy for teachers on teacher and student wellbeing. These services were offered to all teachers at the school. Of the thirty teachers at the school, thirteen engaged in therapy (85% male; 85% African American; 15% Caucasian). 62% of the participants were in their first 5 years of teaching. Cognitive Behavioral Therapy and Motivational Interviewing served as the primary evidence-based intervention models in therapy. A post-intervention survey was administered to determine the reasons for engagement and outcome of therapeutic services. Survey responses were reviewed to determine prevalent themes across teacher responses. Results: Teachers participated in an average of 17 sessions during the school year. No teachers discontinued services. Of the 13 teachers enrolled in the intervention, 8 completed the post-intervention survey. 100% of teachers indicated that services "had a positive impact on student wellbeing, mental health, and academic performance." When asked how therapy supported their role as an educator, 88% of respondents shared that the change had been significant and positive. 100% of respondents reported an improvement in their personal wellbeing. Additionally, only 10% of the school's teachers did not return to teach at the school the following year, whereas the average rate of teachers leaving in that Ward annually is 30%. Conclusions: The results of this study suggest that providing evidence-based, individual therapy to teachers in the school setting can promote personal and professional wellbeing and reduce teacher turnover. Given the promising findings of this pilot study and the dearth of research on teacher-focused therapeutic intervention, more rigorous research is needed to examine the impact of teacher therapy on teacher and student wellbeing and performance.

No. 43

Exploring the Mediating Role of Alexithymia in the Relationship Between Adult Attachment, Depression, and Social Anxiety

Poster Presenter: Phillip Radetzki, B.A.
Co-Authors: Thuy Le, Ph.D., Camelia Adams, M.D., M.Sc.

SUMMARY:
Major Depressive Disorder (MDD) and Social Anxiety Disorder (SAD) are some of the most commonly occurring conditions, either alone or as a comorbidity (MDD-SAD). Recent research has linked insecure attachment and alexithymia to MDD and/or SAD, indicating that the way individuals relate interpersonally and their ability to identify and communicate emotions are pertinent issues. The current study is the first to investigate the mediating role of alexithymia in the relationship between insecure attachment and severity of MDD and SAD using a combined sample of clinical groups and healthy controls. Participants aged 18-65 (N = 159)

were recruited via ads displayed at psychiatry/doctor offices, university websites, and the general community. Participants were identified with the Structural Clinical Interview (SCID) for DSM IV as MDD-only ($n = 43$), MDD-SAD ($n = 56$) or healthy controls ($n = 60$). In addition to a MDD and SAD diagnosis, inclusion criteria for the clinical groups required a score of ≥ 12 on the Beck Depression-II (BDI-II), a score of ≥ 8 on the Hamilton Rating Scale for Depression (HRSD), and a score ≥ 30 on the Leibowitz Social Anxiety Scale (LSAS). Alexithymia was measured with Toronto Alexithymia Scale-20 (TAS-20) and adult attachment with Experiences in Close Relationships Scale (ECR). A two-step mediation analysis approach recommended by Shrout and Bolger (2002) was performed to determine if alexithymia mediates the relationship between attachment-depression and attachment-social anxiety. When TAS-20 total score was included in the attachment-depression regression, attachment avoidance was no longer a significant predictor of depression, whether measured by the BDI-II ($b = 1.66$, $t = 1.81$, $p = .07$) or HRSD ($b = .95$, $t = 1.74$, $p = .08$). Therefore, alexithymia was a full mediator between attachment avoidance and depression. When TAS-20 score was included as the IV in the mediation analysis, there was a decrease in significance of the relationship between attachment anxiety and BDI-II ($b = 3.95$, $t = 6.49$, $p < .001$) and HRSD ($b = .242$, $t = 5.27$, $p < .001$) from 6.93 and 3.95, respectively, indicating that alexithymia is only a partial mediator between attachment anxiety and depression severity. When TAS-20 total score was included in the attachment-social anxiety regression, all relationships between attachment and social anxiety remained significant (all $p < .001$). The unstandardized beta values decreased in magnitude indicating that alexithymia is a partial mediator between attachment and social anxiety. The results suggest emotional awareness and expression play a role in the illness severity for MDD and/or SAD—particularly in those with high avoidant attachment, offering a possible target for treatment.

No. 44

The Efficacy of PTSD Treatment for Individuals With Elevated Neurobehavioral Symptoms

Poster Presenter: Karyna Bravo

Co-Authors: Kelsey Petrey, Rebecca Van Horn, Philip Held

SUMMARY:

Introduction: The presence of neurobehavioral symptoms (e.g., psychological/stress, somatic, and cognitive) has been shown to be significantly associated with psychological distress, such as posttraumatic stress disorder (PTSD) and depression. The degree to which neurobehavioral conditions may impede the effects of evidence-based PTSD treatment for veterans has yet to be determined. This research intended to determine whether individuals with elevated neurobehavioral symptoms were able to experience significant PTSD and depression symptom reductions. **Methods**: Data from 519 treatment-seeking veterans was collected before and after a three-week intensive treatment program for PTSD. Questionnaires assessed symptom severity in the following areas: PTSD severity (PCL-5), depression severity (PHQ-9), and neurobehavioral symptom severity (NSI). **Results**: Treatment was effective in reducing PTSD and depression severity for both individuals with elevated ($d=1.093$, $d= 1.207$) and low pre-treatment NSI scores ($d=.898$, $d =.831$). Moreover, independent sample t-test revealed individuals with elevated NSI scores ($M= 45.26$, $SD=18.17$) at pre-treatment had significantly greater PCL-5 scores post-treatment when compared to veterans with low NSI scores ($M=36.44$, $SD=18.09$, $t(517) =5.540$, $p <.001$). **Conclusion**: Although veterans with high levels of neurobehavioral symptoms at the start of treatment reported greater PTSD and depression severity post treatment, they were still able to experience clinically meaningful symptom reductions. Future research should investigate methods, including adjunctive services, which can further improve outcomes for individuals who enter treatment with elevated levels of neurobehavioral symptoms.

No. 45

Age Related Focus of Family Therapy: A Text Analysis of Family Therapy Notes

Poster Presenter: Cameron Johnson

Co-Author: Hyuntaek Oh

SUMMARY:
Family therapy is an important component of treatment for mental illness. It is an effective clinical tool that can increase family involvement, increase family knowledge, and help families address conflicts in a constructive manner. One goal of family therapy is to provide education and develop a positive support network for the patient (Solomon et al., 2012). Although many patients have different preferences for family involvement (Cohen et al., 2013), recent findings suggest that meeting the needs of the patient and respecting their wishes maybe more important in affecting outcomes (Bolkan et al., 2013). As such, the aim of this study was to examine how family therapy content shifts depending on patient age. We explored the clinical family therapy notes of 299 adult patients admitted to an inpatient psychiatric hospital between the ages of 18 and 59 (M age = 23.71; SD = 6.49) using the Text Analytics Toolbox in MATLAB 2019a. We extracted the frequency of each family term (father, mother, parent, son, daughter, husband, and wife) along with the total number of words used in each family therapy note. A total frequency for each family term was calculated by obtaining the sum of the frequencies across family therapy sessions for each patient. Finally, the total frequency of each family term was divided by the total number of words used in their family therapy notes to obtain a percentage of which family terms were used in relation to non-family related terms. Analyses demonstrated that there were significant (p r = -.153 to -.278), such that family therapy contained fewer family of origin terms if patients were older. There was a significant ($p<.001$) positive relationship between age and the use of the term "Husband" (r = .265), older patients were more likely to have family therapy content that contained discussion regarding their spouse. No significant relationship was shown between age and the terms "Son", "Daughter", and "Wife" in our data sample ($p > .05$). As expected, older adult patients were more likely to have the focus of family therapy content on their spouse (husband in particular) and less likely on their family of origin (father, mother, parent). Future research will need to examine the relationship of family therapy content and age to patient outcomes as well as replicate results in a sample with less range restriction in age.

No. 46

Comparing Levels of Service Need Between Over-Utilizers and Super-Utilizers of a Psychiatric Emergency Room

Poster Presenter: Noah N. Smith, M.D.
Co-Authors: Michelle Miller, Nikita Bodoukhin, M.D., Jacob T. Kannarkat, M.D., Dante Durand, M.D.

SUMMARY:
The finding that a small proportion of patients accounts for an outsized proportion of utilization of psychiatric emergency rooms has represented an area of focus for health systems seeking to improve cost and quality outcomes.1 Though many studies have well-characterized these over-utilizers, little exists in the way of a meaningful stratification of this population for the purposes of targeted intervention.2 Looking more broadly to the work on overutilization in the medical context, interventions focusing on "super-utilizers", those at the top percentiles of utilization, have failed to make a clear and measurable impact. These interventions have faced challenges related to study design, including lack of controls3 and statistical regression to the mean,4 and aspects of the over-utilizing population itself, including its lack of temporal consistency at the individual level5 and being one chronically affected by systemically entrenched, negative social determinants of health.6 To shed light on the appropriateness of interventions directed specifically toward super-utilizers, this study compares the levels of service need between super-utilizers and general over-utilizers of the primary psychiatric emergency room at Jackson Health System in Miami, Florida. Chart review performed independently by two psychiatrists reveals the proportions of patients requiring various treatment interventions (psychiatric, social, and substance abuse) do not differ significantly between the sub-populations. These results help explain why efforts intended to reduce over-utilization by narrowly targeting super-utilizers have had limited impact, as unmet need over the entire population of over-utilizers has been traditionally neglected. Thus, a shift in the approach to these kinds of interventions, with a greater emphasis on addressing present unmet need and

risk of future increased utilization, should be considered.

No. 47
WITHDRAWN

No. 48
Emergency Certifications for Medication Over Objection in State Psychiatric Hospital
Poster Presenter: Evaristo O. Akerele, M.D.
Co-Author: Ijeoma Jennifer Hassan, M.D.

SUMMARY:
Introduction: In New Jersey State Hospital there are two modalities to ensure patients who are imminently dangerous to self and others and refuse treatment get medicated. The first modality is the use of an emergency certification on the hospital unit when an emergency situation arises. The second, is for non-emergency situations is known as Involuntary Medication Administration (IMAR). Increased use of emergency certifications is undesirable for several reasons. First, it indicates a failure to act proactively to reduce risk of patient decompensation. Second, most likely compromises patient/physician relationship. Here, we present the results of a project to reduce the rate of emergency certifications in a 350 bed psychiatric hospital. Method: The following systems were put in place in an effort to reduce the number of emergency certifications. a) The patients with high Broset scores were identified and reviewed during the Morning Briefing. b) IMAR is used when the patient is consistently refusing medication. c) PRN medication by mouth was offered before administering IM injections. d) Patients identified by the Treatment Team as high risk for violence based on the Broset score were discussed during the Hands-Off Communications at the change of shift. e) For all responses to emergency situations on the units oral medication and verbal de-escalation were the first line of action. When patients agree to voluntarily take medications, completion of an emergency certification document is unnecessary. Results: Significant reduction in emergency certifications (approximately 40 percent) was observed in the first three months of implementation. In April there were 5 patients with 3 or more emergency certifications. in May that number dropped to 4. In April there were 21 emergency certifications, in May that number dropped to 13. The reductions continued over the next three months. A total of nine (9) patients had three (3) or more Emergency Certifications in the months of April through May 2020. Those nine (9) patients had a total of thirty-four (34) emergency certification and received fifty-four (54) stat IM injections. A total of thirty nine (39) patients on one or two Emergency Certifications with a total of forty-six(46) Emergency Certifications. There were fifty-seven (57) patients who received Stat IM injections during the period of April- May 2020. Conclusion: Moderate interventions can result in significant reductions of emergency certifications. These reductions improve quality of care and are a cost effective modality of enhancing patient-physician relationship and consequently optimize patient care. Given the relatively high number of emergency certification from a small group of patients in this sample (9), it makes immanently good sense to develop interventions targeted at these patients. This would go a long way in further reduction of the total number of emergency certifications. This will also reduce the number of stat IM injections.

No. 49
Examining Potential Safety Concerns Secondary to Deficits in System Integration in a Public Specialty Mental Health Clinic
Poster Presenter: Jonathan Tsang, M.D.
Co-Authors: Harminder Gill, M.D., Andrea Nicolei Ponce, B.A., Cynthia R. Chatterjee, M.D., M.A., Rachel Loewy, Ph.D.

SUMMARY:
Background Patients with severe mental illness (SMI) have higher rates of physical health conditions, yet face significant obstacles in navigating a fragmented system of care that often consists of separate primary care (PC), behavioral health (BH), and substance use treatment (1). Lack of shared electronic health record information between providers raises the potential for safety concerns such as disease-drug and drug-drug interactions (2, 3). Integrated PC and BH care have been effective in addressing some of these challenges (4). When such

integration is not possible, shared Electronic Health Records (EHRs) can facilitate communication between providers or workarounds must be developed (5). Unfortunately, most public health systems—where the majority of people with SMI are served—have multiple and separate EHRs. In this quality improvement study, we will evaluate the current accuracy of BH records in reflecting the allergies, medications and medical conditions noted in PC electronic records. Given that only 68% of behavioral health records correctly identify a patient's medical home (6), we hypothesize that clinical history details will be even less accurate. Methods Design: Retrospective cohort analysis Setting: South County Clinic is a Specialty Mental Health clinic in Redwood City, CA under San Mateo County Behavioral Health and Recovery Services (BHRS). Sample: The study cohort will include ~100 patients with SMI seen for an initial psychiatric assessment at SCC from 01/2019 to 12/2019. Procedures: We will extract data on allergies, clinical diagnoses, and medications from initial psychiatric assessment notes in Behavioral health EHR. We will then examine similar variables for patients seen at San Mateo health PC clinics within 90 days prior to their initial BH assessment. BH records will be reviewed for: (1) accuracy defined as having the same information listed in PC records for each category (allergies, diagnoses and medications), and (2) safety concerns regarding disease-drug and drug-drug interactions that could arise from inaccurate records (e.g., Coadministration of benzodiazepine and opioids). Results Data collection will be completed by the 2021 Annual Meeting of the American Psychiatric Association. Conclusions Lack of electronic integration between BH and PC can lead to an information gap between providers, and contribute to potential adverse outcomes. Our study will help community mental health clinic administrators understand the extent of the potential adverse outcomes, to help guide future EHR decision-making.

No. 50

Impact of Familial Contact on the Quality of Life of Patients With Mental Illnesses

Poster Presenter: Shawyon Sedaghati
Co-Authors: Saher Zaidi, Rimal Bera, Sebastien Fuchs

SUMMARY:
Family is the primary social institution and a major component through which people develop their social identity and are provided with emotional support. People with serious mental disorders often live with their primary family members or have some ongoing contact with their family. The primary objective of this study aimed to determine whether the frequency of primary family contact had a direct relationship with the quality of life in patients with mental disorders. Family members serve a substantial role in the recovery and management of these individuals, from early recognition of behavioral changes to aiding and encouraging a person to seek mental health services. The Quality of Life Enjoyment and Satisfaction Questionnaire (Q-LES-Q-SF) was used in conjunction with the Family Contact Time (FCT) in an outpatient psychiatric setting. We hypothesized that patients with a history of mental disorders who have increased FCT amongst primary family members would show higher QOL scores. Being that the mother-infant bond is the most permeating social bond in all mammals, we anticipated contact with the mother to be the most significant familial impact on QOL of patients with mental illnesses. 84 participants, 35 which were male, all over the age of 18, who had a primary diagnosis of generalized anxiety disorder, major depressive disorder, bipolar disorder, schizophrenia, or schizoaffective disorder took a self-administered two-instrument (Q-LES-Q-SF, FCT) survey. The Q-LES-Q-SF is a 16-item questionnaire, scaled from 1 (very poor) to 5 (very good), designed to obtain measures of the degree of patient satisfaction and enjoyment in daily functioning. Incomplete Q-LES-Q-SF surveys were omitted from the analysis. The FCT is a 5-item questionnaire, scaled from daily/once a week/once a month/once every 6 months/yearly/never on social interactions with spouse/partner, mother, father, sibling(s), children over the past year. To clarify if empty responses on FCT indicated deceased/not applicable from never, the administrator of the scale would review the answers on the frequency of family contact with the patient to ensure accuracy of their response. Linear regression results showed an r2 value of 30%, representing no clear indication that the proportion of variation in total QOL scores was attributable to FCT. The analysis was refined with

two parameters: a threshold for total QOL percent set to 65% (a value above the mean, 59%) while comparing only the extremes of FCT, never vs daily, for each primary family member. Despite the small size of the studied population, a trend was shown revealing a direct relationship between QOL and FCT with one's father, children, and spouse/partner. QOL with mother had an inverse relationship with participants who stated no interaction, possibly due to impaired mother-infant bonding. Further direction includes increasing the sample size as this may be the correction needed to show a direct relationship for the mother.

No. 51

Implementing an Effective Covid-19 Infection Control Protocol in a State Psychiatric Hospital

Poster Presenter: Adam Fijtman, M.D., Ph.D.
Co-Author: Justin Gettings, M.D.

SUMMARY:

Introduction: The COVID-19 pandemic has resulted in several challenges to inpatient psychiatric care. Since early 2020, several outbreaks have been reported in psychiatric facilities across the globe. State psychiatric hospitals in United States and the unique patient population they serve have a number of risk factors for COVID-19 infection and its associated sequalae. This study describes a COVID-19 infection control protocol and its outcomes in a large state psychiatric hospital. Methods: A strict infection control protocol was implemented in March 2020. (1) A COVID-19 screening questionnaire and COVID-19 test within the past 48 hours were requested of all admissions transferred from an outside hospital. (1.1) If asymptomatic and COVID-19 negative, new patients were transferred to the Admission Quarantine Unit (AQU) where they stayed in isolation for 14 days before being admitted to a Standard Unit (SU). (1.2) If a suspected case (defined as no recent negative COVID-19 test) presented for admission, the patient was placed in airborne isolation in the Medical-Psychiatric Unit (MPU). After a negative COVID-19 PCR test, newly admitted patients were transferred to the AQU for 14 days. (2) Every patient in the hospital received on-going education about the importance of hand washing, social distancing, and mask wearing. Visitations were prohibited. Patients' temperatures were checked at least once daily in the SU and twice daily in the quarantine units (2.1) SU patients who were suspected of having COVID-19 had a thorough medical assessment by staff donned in appropriate PPE. If indicated, patients were isolated in the MPU. (2.2) If a case was confirmed in an SU, an investigation would be opened to trace contacts. Additionally, hospital administration would consider converting the infected unit into a quarantine unit for a period of time. (3) Designated staff providing behavioral interventions for patients in isolation or in a quarantine unit were donned in appropriate PPE. (4) Additional staff monitoring followed standard CDC recommendations for health care facilities. Results: From March 2020 to November 2020, the hospital had 411 patients admitted. During this time, 11 patients in this state hospital tested positive for COVID-19 (2.7 %). Of these, 4 were known COVID-19 positive prior to admission, and 2 were found positive shortly after admission in the quarantine unit. This hospital has approximately 2000 employees. 77 staff members (3.85%) tested positive for COVID-19. Conclusion: A strict protocol, including isolation of new or suspected COVID-19 cases to a quarantine unit, establishment of low threshold for isolation using airborne precautions, frequent patient education, prohibition of visitations, and standard patient monitoring appears to have limited the spread of COVID-19 in a large inpatient state psychiatric hospital. Further adaptations to the protocol might be required as the COVID-19 pandemic continues to evolve.

No. 52

Inpatient Psychiatry Outcomes System Design: Better Working Alliance Predicts Higher Post-Discharge Measure Completion Rates

Poster Presenter: Led Camille R. Soriano, B.A.
Co-Author: Tiffany T. Tran, B.S.

SUMMARY:

Working alliance is an important component of effective psychotherapy and psychiatric treatment (Munder et al., 2010). Previous research has shown that higher working alliance is significantly associated with improved psychiatric symptoms and increased post-discharge aftercare plan adherence

(Andrade-Gonzales et al., 2019). As the use of patient-reported outcomes are related to improvements in psychiatric symptoms (Andrade-Gonzales et al., 2019), further examination on what factors contribute to increased adherence to outcomes measurement post-discharge from an inpatient psychiatric hospital are needed. The current study examined the effects of symptoms (depression, anxiety) and therapeutic alliance as potential contributing factors to post-discharge outcome measure completion. Data was examined from 3,023 adults between the ages of 18-89 (M age = 35.24, SD = 15.04) who were receiving inpatient psychiatric treatment (M length of stay = 42.16 days, SD = 20.90 days). Working Alliance Inventory – Short Revised (WAI-SR) was used to capture the patient's perception of therapeutic goals, tasks, and the treatment team relationship (Mortberg, 2014). Therapeutic alliance was measured bi-weekly using the WAI-SR during their inpatient stay. The Patient Health Questionnaire (PHQ-SADS) was administered bi-weekly to measure anxiety and depression. The follow-up outcome measures were conducted over the phone at two weeks, three months, six months, and one year after discharge. In the current sample, patients with a longer length of stay (B = -.005, SE = .003, [OR] = .995, [95% CI = .988, 1.001], p = .000) and those with higher working alliance with their treatment team at discharge (B = .02, SE = .006, [OR] = 1.028, [95% CI = 1.016, 1.039], p = .000) were more likely to complete one year post-discharge outcome measures. This model was significant ($\chi 2$ = 39.15, p = .000) and accounted for between 1.3% and 2.7% of the variance in the one-year post-discharge outcomes completion rate. Age, gender, and depression and anxiety at discharge were not significant predictors of one-year post-discharge outcomes completion rates. A similar pattern emerged for the two-week, three month, and six month post-discharge measures, which will be further displayed in the full presentation. This study did not identify symptoms of psychopathology - specifically depression or anxiety – as significant predictors of post-discharge outcome measure completion (e.g., individuals at discharge who were healthier were not more likely to complete). Instead, these findings indicate that treatment team working alliance at discharge, as well as a longer length of stay in the hospital, are related to increased outcomes measure completion post-discharge.

No. 53

Prevalence of Psychopathology in the Atopic Patient, Family Functioning and Caregiver Quality of Life: Results From a Cross-Sectional Study

Poster Presenter: Emilio Soto, M.D.
Co-Authors: Farid Carranza, M.D., Andrea Guerrero, M.D.

SUMMARY:

Background Psychological stress is associated with the incidence of allergic diseases, hospitalization, and use of medications. The dysfunction is significantly higher in families with uncontrolled allergic children. Allergies' negatively impact the quality of life of both the patient and their caregivers. Methods The aims were to: a) determine the prevalence of psychopathology in subjects with atopic disorders, b) evaluate the caregivers'' quality of life and c) family functioning. We also aimed to correlate our findings with the number and severity of allergic attacks in the previous year and current drug use. Patients with atopic diseases aged 12 years or older who receive care at the allergy clinic from a tertiary reference hospital in Monterrey, Mexico were considered eligible. Subjects completed a sociodemographic questionnaire, MINI scale, FACES IV scale, SF-36 scale and a brief clinical examination (weight, height, current severity of disease, current medications and number of allergic attacks in the year). Results It''s worth noting that our current findings are preliminary, due to the COVID-19 pandemic. To date, 79 subjects have been enrolled: 74% of the sample (n = 96). 63 % were women, the mean age was 28 years; Had allergic rhinitis, 44% asthma, 15 % urticaria, and 5 % atopic dermatitis. The severity of the disease reported was: mild allergic rhinitis 72.45%, had at least 6 attacks/year, 64% of patients with asthma were controlled and reported an average of 6.26 attacks/year, 75% Atopic dermatitis was mild had an average of 2.25 attacks/year, while 84% of patients with urticaria reported mild severity, with 2.58 attacks/year. The mean number of medications was 2.9. It was found in the population: 14.41% past major depressive disorder, 5.24%

current depressive disorder, 5.24% obsessive compulsive disorder, 5.24% generalized anxiety disorder, 3.94% panic disorder, 3%, 94% post-traumatic stress disorder, 3.94% current suicide, 4 patients reported suicide disorder, agoraphobia, social phobia, and psychotic disorder, respectively. No other disease was identified. The majority of evaluated families were found to have healthy functioning. Most primary caregivers were parents (56.6%), while the remainder were other direct relatives. Overall quality of life was very good (68.4%), with the remainder rated as good and fair. No patients were found to have poor quality of life. Conclusions It is relevant to search for psychopathology, to evaluate family functioning and the caregiver''s quality of life in atopic patients. So far, we have found in this population a significant clinical relationship between good family functioning and good quality of life for the caregiver and well-controlled atopic patients with mild symptoms, leading us to carry out further future studies regarding these correlations.

No. 54

Reducing Aggression in Chronic Inpatient Settings Using the Broset Check List

Poster Presenter: Evaristo O. Akerele, M.D.
Co-Author: Ijeoma Jennifer Hassan, M.D.

SUMMARY:
Introduction: Aggression is a common problem in acute inpatient psychiatric units and can put both health care providers and patients at risk. Lozzino et al (2015) showed that at some stage in lifetime 75%-100% of nursing staff in acute psychiatric inpatient units have been assaulted by patients. Reducing aggression on inpatient units is of paramount importance in all Hospitals. One modality of doing this is by using Broset violence check list. The Broset is one of a few validated structured clinical instruments developed for the inpatient setting. It allows for ongoing risk assessment during inpatient hospitalization. This is a six item check list that is predictive of patients like to be violent in a 24 hour period. The items are: Confused, Irritable, Boisterous, Verbal threats, Physical threats, Attacking objects. In this study we add the BVC to an armamentarium of systems in place to manage violence. Here we discuss the use of broset in a 550 bed inpatient psychiatric hospital. Methods: Nursing staff across three shifts were trained on the use of the BVC over a 4 week period. The use of the instrument was then implement in all units. Nursing staff were instructed to assess patients two hours into each shift. Patients with a score of zero for a 72 hour period were dropped. Nurses had clear instructions on actions to take based on score. Each of the six items is scored 0 or 1. Maximum score for all items added up is 6. When Sum of scores on all six items is zero, there is no risk of violence is small. For sum of 1-2, risk of violence is moderate and preventative actions should be taken. For sum of 3-6, risk of violence is high, preventative measures should be taken and plans put in place to manage potential violence. The Compliance of staff with BVC was then assessed after two months. The data was then collected for an additional 6 months. The data for violence for Jan to Aug 2017 was then compared with those for the same period 2018. Results: Data collection on most units was above 90%. Some units tended to document primarily on paper.The incidents of violence was significantly lower in 2018 relative to 2017. T test found significance of P Conclusion: BVC is a useful to for management of inpatient violence. Its efficacy is enhanced by concomitant use of other modalities for violence reduction.

No. 55

Secure Attachment Contributes to Higher Treatment Team Working Alliance During Inpatient Treatment

Poster Presenter: Taylor Neff
Co-Author: Jessica Rohr

SUMMARY:
Background: There is evidence that suggests patient-reported working alliance with their treatment provider(s) is related to improvement in treatment outcomes1,2. Given the relational nature of establishing a working alliance3, this study examined the differences in early and discharge team working alliance (TWA) among different patient attachment styles (AS) at an inpatient psychiatric hospital, expecting that those who self-identified as having a secure AS would be more likely to have higher TWA

at both time points. Due to the possibility that men and women may be socially encouraged to form relationships in traditionally gendered ways, the extent to which gender may moderate the relationship between attachment style and working alliance was also evaluated4,5. Methods: Participants were 3334 inpatients at a psychiatric hospital (1769 male, 1637 female; mean age = 35.24, range = 18-89). The mean duration of inpatient hospitalization was 42.16 days, (range = 1-238 days). TWA was assessed at week 2 and at discharge using the Working Alliance Inventory revised for use with a team. AS was assessed using the Relationship Questionnaire; patients self-selected vignettes that most closely matched their style in relationships (secure, fearful, preoccupied or dismissive). Results: Mean TWA at week 2 for the entire sample was 66.74 (SD = 13.95, range 15-84) and at discharge was 68.00 (SD=14.15, range 12-84). Patients self-selected as either having one of four AS: secure (N=920, or 27.6%), fearful (N=1242, or 37.3%), preoccupied (N=766, or 23%), and dismissing (N=406, or 12.2%). One-way ANOVA showed significant mean differences (p<.001) on TWA at both week 2 of inpatient stay and discharge between different types of AS. Post-hoc Tukey comparison tests suggested that at both week 2 and at discharge, patients who self-identified as having a secure AS had significantly higher mean scores on TWA than those who self-identified as having fearful, preoccupied or dismissive AS (ps<.05). When gender was introduced as a moderating variable, results were similar in that both secure men and women had significantly higher TWA than all other AS at week 2 and at discharge (ps<.05) with the exception of women who identified as fearful. Fearful women were not significantly different from secure men and women on their TWA score at discharge, and they were significantly different from fearful men, preoccupied men and women, and dismissing men and women (ps<.05). Conclusion: Both men and women who report a secure AS also report higher TWA at week 2 of their inpatient treatment than any other AS, regardless of gender. However, upon the point of discharge from treatment, women who identify with a fearful AS reported similarly positive TWA as men and women who identify with a secure AS. Future research will explore the impact of this relationship on patient outcomes.

No. 56

Association Between Religion and Spirituality and the Presenting Symptom in Psychosis

Poster Presenter: Yasir Masood, M.D.
Co-Author: Sohail Amar Nibras, M.D.

SUMMARY:

Objective: To highlight the significance of religion in psychosis and its treatment to enhance resilience and promote healing. To promote clinician''s understanding of the association between religion and psychosis to help foster recovery and a better health care model. Background: Religion and spirituality plays an integral part in the human life impacting physical and mental health. However, there has been little understanding on the importance of religion and faith in schizophrenia as therapeutic mechanism for achieving positive clinical outcomes and treatment compliance. A religious background has been associated with a higher rate of religious delusions1,2,3. According to some studies people experiencing severe psychotic symptoms are more likely to have religious activities and beliefs4. Compared to that reduced level of symptoms have been noticed with regular religious activity5. According to existing data, religious beliefs instills hope and meaning into the life for some people, while it induces irrational tendencies among for others. Methods: Literature review was performed via searches in various data-bases (PubMed, MEDLINE, Ebsco and ProQuest) over a decade (January 2010 to December 2019). Following keywords were used: hallucinations, delusions, schizophrenia, psychosis, self-monitoring, religion, and spirituality. Results: Delusions and hallucinations with religious content are categorized as those with religious and supernatural themes with patients giving a direct reference of voices from religious figures (God, Devil, and Prophet) or of paranormal references (black magic, demons and ghosts)6. Religious coping utilizes religious beliefs for problem solving to avert the negative consequences of life7 stresses and is associated with better psychological well-being8. Participation in spiritual practices is associated with better social well-being in patients presenting with psychosis. However, coping mechanism associated with negative religious beliefs

has adverse health related outcomes impacting standard of living. One in three people with schizophrenia have comorbid substance that exacerbates psychosis; many religions forbid substance use which is a protective role. The significance of analyzing spirituality and religiosity is crucial in understanding the person's needs and struggles as whole. Hence, the clinicians may need to consider their own religious bias that may result in minimizing or pathologizing of a patient religiosity. Conclusion: The dense association between religion in psychosis and its awareness is a work in progress. The growing evidence suggests that religion influences the type and intensity of psychopathology. Religion and religious practices influence social integration, risk of suicide attempts, substance use and provide effective method of coping with the illness. Our results suggest that the complex relationship between religion and schizophrenia requires a highly sensitive approach to each unique story.

No. 57

r/MedicalSchool: A Qualitative Analysis of Online Peer-to-Peer Discussions About Depression in Medical Students

Poster Presenter: Michael Hoggard, M.P.H.

SUMMARY:

Objective: Medical students experience significantly higher rates of depression than the general population, but it is often underdiagnosed and treated. Reddit, an online discussion forum, contains a unique community of medical school students in the r/MedicalSchool subreddit – a discussion forum with over 300 thousand members where medical students can communicate with other current or previous medical students. Because of the perceived degree of anonymity and foundation of shared experiences, many medical students with depression post on the forum seeking advice. This study seeks to analyze the themes of these discussions. **Methods**: The r/MedicalSchool subreddit was searched for terms related to depression, compiled from the DSM-5 diagnostic criteria for Major Depressive Disorder, from Dec 1, 2018 to Dec 1, 2020. Identified posts and their associated comments were then screened for relevance. The applicable posts and comments were then coded using ATLAS.ti to conduct a thematic analysis. **Results**: Thematic analysis identified five themes. Theme one, Advice, consisted of questions related to taking medical leaves of absence, academic struggles, and the professional impact of a diagnosis of depression as a future physician. Theme two, Disillusionment, ranged from disillusionment with the state of medical education to disillusionment with a career in the medical field completely. There was a prominent spike in posts related to the former starting in March 2020 after many schools implemented online learning and with the latter among students in their first major clinical year. Theme three, Testimonials and Resources, were often shared by previous medical students, who are now residents or attending physicians. The fourth theme, Humor, fostered a sense of community among students with depression through the use of humor. Theme five, Loneliness, was a common theme throughout the entire time frame, but posts related to its contribution to depression also began to rise in March 2020. **Conclusion**: Posts related to depression are common in the online medical school community. For many students, this is their first experience with depression. r/MedicalSchool has great potential to reach medical students with depression because of the perceived degree of anonymity on the part of the student who posts the question and because of the shared experiences of many other members of the community, particularly in terms of being able to practice as a physician. Making sure that safe, accurate information and resources are shared in the community has the potential to help medical students to seek appropriate treatment. The change to online learning has contributed to disillusionment and feelings of loneliness among medical students. These findings highlight common information gaps keeping students from seeking treatment, such as the lack of knowledge about professional impacts and available resources, and the specific needs of medical students during these uncertain times.

No. 58

A Case of Hyperparathyroidism and Post Traumatic Stress Disorder

Poster Presenter: David Jensen, D.O.

SUMMARY:
Psychiatric symptoms are well-established sequelae of hypercalcemia and hyperparathyroidism. Studies have shown decreases in depression, psychosis, and anxiety-related symptom severity following parathyroidectomy in patients with primary hyperparathyroidism. There does not appear to be focused literature on the topic of trauma-related disorders with hyperparathyroidism. Here is presented a case report of a marked reduction in symptoms of post-traumatic stress disorder following parathyroidectomy with retrospective chronological correlation of elevated calcium levels and trauma-related symptoms. The patient is a male combat veteran of the Army who served in Vietnam during 1968-1969 working as a radio/telephone operator. Shortly after his return from combat he recalls experiencing emotional numbing, symptoms of depression and easy irritability that largely improved in the following decade and remained subclinical until 2008, when he underwent prostatectomy for prostate cancer. Following this, he developed symptoms consistent with PTSD and major depressive disorder that prompted referral to mental health services at the VA medical center. He began psychotherapy for post-traumatic stress disorder treatment with sertraline. Over the next several years, additional medications were used with little response in his symptoms. Sleep apnea was diagnosed and treated with CPAP in 2012 with continual difficulty sleeping despite PAP and pharmacotherapy with several classes of medication. In 2018 and 2019, he had laboratory testing finding elevated ionized calcium in the setting of recurrent renal stones, and after diagnostic verification with elevated intact parathyroid hormone levels and technetium-labeled CT scan revealing increased parathyroid uptake, he underwent surgical removal of parathyroid adenoma in August 2019. Veteran noted incidental rapid improvement of his trauma-related symptoms and depression following the surgery, despite typical annual worsening during this time of year due to the anniversary of military trauma. Review of laboratory data revealed gradually elevated calcium blood levels dating back to 2007, which coincided with the worsening of his symptoms. In the subsequent year, gradual deprescribing has been successful, allowing a reduction in dose of venlafaxine from 220mg to 150 mg daily, discontinuation of buspirone, reduction of trazodone from 250 mg nightly to 50 mg only used as needed with increase in prazosin from 4 mg to 6 mg. Melatonin is his only other psychotropic medication currently. This case suggests a potential implication of trauma-related symptoms and disorders presenting as a manifestation of neuropsychiatric sequelae of hyperparathyroidism, which so far is established for many other psychiatric syndromes. This underscores the importance of careful evaluation of medical diagnoses as impacting psychiatric disorders.

No. 59

Thought Suppression as a Medium to Relieve the Psyche From Neuroticism: A Way Through and Beyond Meditation

Poster Presenter: Raju Bhattarai, M.D.

SUMMARY:
Humans are conditioned to think constantly about the things related to daily life. Thinking-too-much, an idiom of distress, is associated with neuroticism, and several meditation techniques are under research for addressing this state. Most of the meditation methods work by replacing the mundane thought content with the pre-determined material, e.g., visualization & imagery or distraction with activities like chanting, focus on breath, etc. In the author''s experience with meditation, rather than the replacement or manipulation of the content of thought, limiting the action of thinking itself, could be more beneficial. It prevents the exhaustion brought on the psyche by over-thinking, which could aggravate the neurotic manifestations. Conscious Stoppage of Thinking (CST) learned as a primary goal can be followed conveniently as compared to specific meditation techniques. Method: Existing literature was reviewed with keywords: ''meditation'', mechanism, thinking, thought regulation. The pertinence of the role of thinking and thoughts with regard to the solution for neuroticism & anxiety in the context of meditation was reviewed. Results: Most meditation techniques operate by adopting some act of focus eg breathing, chanting, which in psychic terms can be seen as conscious displacement (vs. displacement as an unconscious defense). Very few studies mentioned the

description of thinking as a tool for reaching equanimity. None of the studies directly emphasized stopping of thinking as a primary approach or goal in the context of meditation. Feasibility and the methods for CST were discussed based on the author''s personal experience of Buddhist meditation: Vipassana.

No. 60

A Step-Wise Approach to Developing a Wellness Program for Psychiatry Residents and Fellows

Poster Presenter: Nina T. Ballone, M.D.
Lead Author: Meghan O'Rourke, D.O.
Co-Author: Madeleine Anne Becker, M.D., M.A.

SUMMARY:

Background: Many studies have demonstrated a large number of residents/fellows may experience burnout. If left untreated, burnout has been associated with poor work performance and declining mental health. More attention is being paid to wellness, as evidenced by the ACGME updated requirements in 2017 to address burnout. With the added stressors of a hospital closure and global pandemic, the need to develop a wellness program for our psychiatry trainees was imperative. Our objective was to identify areas for improvement within our program followed by a review of literature evaluating effective and evidence based approaches to improving resident wellness. Methods: We collected qualitative feedback on rotations and system issues throughout the program by an online questionnaire then appointed liaisons from each class to collect feedback via in-person question sessions. We pooled these responses and extracted issues related to wellness and burnout to develop an outline for addressing the entire program and specific to each PGY level. We did a comprehensive literature review utilizing PubMed. Search terms included combinations of “burnout”, “well-being”, “wellness”, “residency”, “residents”, “physicians”, “program”, “curriculum”, “education”. Results: Feedback was received from 34 psychiatry residents during the academic year 2019-20. Results showed dissatisfaction with educational content of didactics including concern that faculty are not engaged, faculty are not creating an environment of inquiry, sense a lack of cohesion among residency classes/fellows, and desire more of a focus on wellness. Based on our literature review, interventions that were dedicated with input from both faculty and trainees targeted on health and coping skills showed improvement in wellness and a decrease in burnout. Topics identified within the wellness curriculum included physical, mental, educational, social, financial and lifestyle wellness. Discussion: Based on these findings, interventions will be development of monthly didactics that include a session that either aims to improve cohesion, support, and trust among trainees or includes experiential/practical education. In addition, we plan to hold monthly events outside of work hours funded by the department to further promote cohesion and improve overall morale. Conclusion: Burnout is common during residency/fellowship and, if untreated, can have negative effects on work performance as well as emotional well-being. Available evidence suggests that having a dedicated program targeting various areas of wellness improves overall resident/fellow well-being. Based on this framework, individual input from trainees is imperative to address the specific needs of a training program. These interventions should help build the sense of community between our residents/fellows, create more useful and engaging education, and make trainees feel more appreciated, all of which should improve wellness and performance.

No. 61
WITHDRAWN

No. 62

Establishing Connections During the Pandemic: The Importance of Mentorship Relationships in an Academic Program

Poster Presenter: Sarah Helland, M.D., M.P.H.
Co-Authors: Ariel Leonardo Penaranda, M.D., Amber Khan, Ana Rodriguez Ozdoba, M.D.

SUMMARY:

Background Mentoring relationships in academic medicine have shown many long-term benefits such as an increase in self-assessed confidence in academic roles, success in research, and desire to enter academic medicine (Sambunjak, 2006). These

relationships in the workplace can also provide a sense of support and connectedness and improve the culture between employees and their institutions. During these unprecedented times of the COVID-19 pandemic, developing and maintaining mentorship relationships was deemed essential for the continued connectedness of trainees and faculty/alumni from our psychiatry department. Methods To address this gap during a time of quarantine, telehealth and remote learning, we developed a mentorship program to join all interested existing residents with senior faculty or alumni. We aim to describe how we developed a mentorship program driven by resident feedback after administering a needs assessment survey. Several studies have found that the matching of residents and mentors is not beneficial (Soklaridis 2015), and that relationships are more likely to succeed if mentee chooses the mentor (Sciutto 2014); thus our mentorship program paired mentees with mentors based on their selections and whatever factors were important to that resident. Results Results from 35 resident surveys were analyzed and 71% of residents wanted to choose their own mentor. Factors to consider when pairing were ranked in order of importance; results included research interests 66% and residency alum 57%. A two-month post-survey indicated successful matching with 55% use of video. There was overall satisfaction: "It's been very helpful to have a little extra personal and career guidance at this time of transition, and while trying to manage high stress on a global scale." Conclusion Incorporating residents, faculty and alumni in the development of a mentorship program is essential for its continued success and sense of connection in a Department.

No. 63

Mental Health on the Frontlines: A Study of Residents and Fellows at SUNY Downstate Health Sciences University During the Covid-19 Pandemic

Poster Presenter: Patrick Warren Arthur, M.D.
Co-Authors: Ahmed Al-Katib, Michael Myers, M.D., Mohamed Wagdy Mohamed Elsayed, M.D., Michele Pato, M.D.

SUMMARY:
Background: COVID-19 (C19) emerged in China in December of 2019. It spread quickly, first reaching the USA in January of 20201. New York City was one of the earliest and most affected areas in the world. On March 28th, SUNY Downstate Health Sciences University was declared a C19 only facility; accepting only patients who were C19 positive or under suspicion. As frontline workers, residents and fellows (R+F) are an integral part of the C19 response. With limited resources and scientific data, they encountered significant stress in the workplace. Burnout and symptoms of depression are higher in residents and frontline doctors compared to the general population 2,3. Our study aimed at screening for symptoms of depression, anxiety, panic disorder, PTSD and burnout in R+F during the pandemic. Methods: We sent an anonymous cross-sectional online survey to all R+F at SUNY Downstate during the period of October – November 2020 which included questions about demographics, C19 exposure, Generalized Anxiety Disorder 7-items (GAD-7), Patient Health Questionnaire-2 (PHQ-2), and screening questions for panic disorder (SQPD), post-traumatic stress disorder questions (PTSDq), burnout symptoms, and questions about working in the pandemic. Data was analyzed using SPSS 27. Results: Of 1003 possible R+F, the survey received 135 valid responses (13.4% response rate). The gender response ratio was 43.2% male and 56.8% female (compared to the gender ratio for all R+F which is 56% male and 44% female). The survey was completed by R+F in 29 specialties and in PGY 1-6. R+F reported a significant loss of patients, with 16% losing more than 10 patients (n=16), and 26.5% losing between 1-10 patients (n=26). Loss of at least 1 family member or friend to C19 was found in 9.28% (n=9) Loss of at least 1 colleague was found in 27.55% (n=27). Of the R+F, 30.2% reported on the SQPD (n=29) and 34.74% experienced a traumatic event related to C19 (n=33); of those, 57.58% (n=19) reported positive PTSDq. On the GAD7, 8.3% of R+F reported severe symptoms (n=8), 12.5% moderate (n=12), and 21.9% mild, while 16.7% of R+F scored 3 or greater on the PHQ2 (n=16). A Mann Whitney-U Test found that women scored significantly higher on the GAD7 (p=0.03). There was a statistically significant difference in C19 related trauma between groups who lost more patients to C19 than those

who lost fewer (p=0.007). Conclusion: Our results indicate that mood and anxiety symptoms were prevalent among R+F at SUNY Downstate during the C19 pandemic. Female gender was related to increased scores on GAD7. Moreover, R+F who lost patients due to C19 were at a higher risk of experiencing trauma. Limitations include a relatively low response rate, self-selection of participants (though the uncoerced nature of responses may indicate veracity), a disproportionate number of female responses, and a variable response among specialties, though there were over 10 respondents for internal medicine and psychiatry programs.

No. 64

Predictors of USMLE Step 1 score

Poster Presenter: Katy Garcia
Lead Author: Yasin Taha Ibrahim, M.D.
Co-Authors: Winnie Wu, Regina Baronia, M.D.

SUMMARY:

Introduction: Residency program directors have ranked the United States Medical License Examination (USMLE) Step 1 as the most important factor in determining a residency applicant's competitiveness. Thus, medical students strive to attain the highest possible score. In this review, we attempt to identify which factors can predict performance on USMLE Step 1. Methods: We conducted a systematic literature search on PubMed, Web of Science, Scopus and ERIC. The key words used were "USMLE", "Step-1", "score", "success" and "predictors." The search included articles published within the last 15 years (2005-2019), with the most recent article published on May 22, 2019. Studies that did not focus on Step 1 outcome or medical students in the United States were excluded. Results: Our initial literature search yielded 275 articles which were then narrowed down to 39 articles. Analysis from articles meeting the inclusion criteria demonstrated that predictors of USMLE Step 1 score can be divided into unmodifiable and modifiable factors. Unmodifiable factors include gender, MCAT score, preclinical grades and NBME/CBSE scores. Modifiable factors include taking USMLE Step 1 within two months of completing preclinical courses, using anxiety as a motivating force, number of multiple choice questions completed and number of unique Anki cards seen. Interestingly, neither utilizing commercial preparatory courses nor unique Firecracker flashcards seen were associated with a higher Step 1 score. Additionally, increased number of study days was associated with increased performance for average achieving students but not for students who received straight As in preclinical courses. Conclusions: Our review suggests that while MCAT score, gender and preclinical grades are predictors of USMLE Step 1 performance, there are also several modifiable factors which are strongly associated with a higher score. Specifically, medical students should focus on increasing the number of multiple choice questions completed and unique Anki cards seen.

No. 65

Psychosocial Impact on Psychiatry Residents Treating Patients With COVID-19: A Qualitative Study

Poster Presenter: Marusa O. Obele, M.B.B.S., M.P.H.
Co-Authors: Allison Parrill, B.Sc., Samaan Mahmoudzadeh, B.S., Sivaranjani Ayyanar, M.B.B.S., Ijendu Peace Korie, M.D.

SUMMARY:

Background: Healthcare providers currently face unprecedented challenges in light of the SARS-CoV-2 pandemic. Previous research assessed post-traumatic stress symptoms in healthcare workers affected by the SARS epidemic in Canada (1-4), Hong Kong (5, 6), Taiwan (7, 8), Singapore (9) and China (10). SARS-CoV-2 represents a public health crisis with possible negative impacts on patient care, professionalism, physician's care and safety, and healthcare systems. The psychosocial impact of residents requires assessment due to the large-scale of the SARS-CoV-2 pandemic compared to the SARS-CoV pandemic of 2003. Physician distress influences higher job turnover and dissatisfaction resulting in decreased productivity, absenteeism, premature retirement and interpersonal relationship difficulties (11-14). Objective: We aim to explore the experiences of psychiatry residents caring for patients during SARS-CoV-2 pandemic on a medical unit. We seek to understand the aspects of psychiatry training that impacted their experiences

during the SARS-CoV-2 pandemic. Methods: Semi-structured interviews were conducted with psychiatry residents deployed to internal medicine to care for Covid-19 patients for greater than or equal to two weeks within a New York community hospital. The interviews were recorded on a password protected digital voice recorder, transcribed verbatim and analyzed thematically. Coding and themes were developed by three researchers. Results: We interviewed male and female residents from postgraduate years 1 through 4. Interviews lasted approximately 30 minutes. The residents described shared emotions such as fear, anxiety, uncertainty, unpreparedness and difficulty coping with high patient mortality rate. Many residents expressed concern for their viral exposure and consequent transmission to loved ones, and insufficient personal protective equipment. Administration unpreparedness, improper resource allocation and lack of clear guidelines negatively affected their deployment caring for Covid-19 patients. Multiple residents voiced feeling unprepared in their assignment, and that their skills would have been more appropriately used in addressing the mental health burden of the pandemic on patients and families. Residents also described the benefits of processing emotions during supportive group sessions with their program director. Conclusion: Psychiatry residents described the challenges of caring for Covid-19 patients, and impact on their training. Increasing preparedness based on current pandemic experiences will decrease psychosocial strain of healthcare providers in future crises.

No. 66

30-Day Readmission Rate and Length of Stay: Oral Versus LAI Antipsychotic Use in Patients With Schizophrenia or Schizoaffective Disorder

Poster Presenter: Sara Khan
Lead Author: Jordan Craig Calabrese, D.O.
Co-Authors: Sindhura Kompella, M.D., Shivani Kaushal

SUMMARY:

Background: Antipsychotic medications are invaluable to help individuals with psychotic disorders lead fulfilling lives. Medication adherence is an important consideration in this crucial intervention. Successfully sustained maintenance of antipsychotic treatment has been shown to reduce the risk of relapse in patients with schizophrenia, but these patients are also particularly susceptible to medication nonadherence1. While rates of medication nonadherence in patients with schizophrenia vary, rates as high as 71% have been reported in large-scale studies2. It is crucial to remove barriers and better understand the factors, such as mode of administration, that affect nonadherence rates in this vulnerable patient population. **Methods**: This retrospective study looked into HCA Corporate Databank for 30-day readmission rate and length of stay for oral vs. oral/long-acting injectable (LAI) antipsychotic use in patients with either Schizophrenia or Schizoaffective disorders. Variables such as age, gender, ethnicity, insurance vs. no insurance, DSM 5 Diagnosis of Schizophrenia or Schizoaffective disorders, and oral vs. oral and IV antipsychotics were studied in the population. Readmission encounters due to other illnesses were excluded. Ages were between 18-65 years. Logistic regression model was used to understand effects of oral vs. oral and LAI antipsychotics on 30-day readmission rate and length of stay in patients with Schizophrenia or Schizoaffective disorder. **Results**: Total number of patients with Schizophrenia or Schizoaffective disorder with use of either oral or both oral and LAI antipsychotics was N=1817. 30-day readmission rate was significant for patients who were prescribed only oral medications in the group with either Schizophrenia or Schizoaffective disorder (<0.0001) OR: 1.115-1.850. Length of stay was also significant in the oral only group vs. oral/LAI antipsychotic group (p<0.0009) OR: -1.731. **Discussion**: Patients with new onset psychosis or chronic psychosis benefitted from use of long acting injectable in comparison to oral medications due to improvement in medication adherence3. Our study focuses on understanding how 30-day readmission rate and length of stay are affected with use of only oral vs oral and LAI antipsychotics. Patients who received only oral antipsychotics were 1.115-1.850 times more likely to experience 30-day readmission as opposed to those who received both oral and LAI antipsychotics. Conversely, those who received only oral medications had a length of stay that was 1.731

days shorter on average compared to patients taking oral and LAI antipsychotics. Length of stay may be increased due to chronicity/severity of illness, pharmacokinetics of medications, induction rates of medications within diverse population groups, and other factors that must be further interpreted4. Nevertheless, this study shows that LAI antipsychotics were superior in comparison to oral medications alone in reducing 30-day readmission rate.

No. 67

A Case of Levamisole-Induced Psychosis

Poster Presenter: Nina Parikh, D.O.

SUMMARY:

Levamisole is an antihelmintic drug which was once used to treat parasitic worm infections in humans, but now is used in veterinary medicine and also with cocaine to enhance its effect. It is believed that Levamisole enhances dopamine activity through various mechanisms. In this specific case, we will discuss how a 36 year old female, with no past psychiatric history, presented to the hospital for altered mental status (AMS) after use of Levamisole. Patient presented as combative and aggressive on admission to the hospital. Throughout her hospitalization, patient endorsed many symptoms of psychosis. Although patient refused to start any psychotropic medications, the treating team was interested in initiating low dose antipsychotic treatment. Towards the end of her hospitalization, patient's psychotic and mood symptoms did seem to resolve prior to her discharge. Patient's presenting psychiatric symptoms were attributed to her use of Levamisole given lack of psychiatric history in the patient and lack of any other potential etiologies for her symptoms at the time. The purpose of this case study is to highlight the effects of this antihelmintic drug and to discuss potential modes of therapeutic treatment, as there is not much literature on the subject. It is important for discussion so that providers can be diligent when collecting each patient's unique history and provide proper education to their patients regarding potential effects of drugs/medications, specifically Levamisole in this case.

No. 68

A Combination of Olanzapine and Samidorphan in Adults With Schizophrenia and Bipolar I Disorder: Overview of Clinical Data

Poster Presenter: Leslie L. Citrome, M.D., M.P.H.

Co-Author: David McDonnell

SUMMARY:

Objectives: Olanzapine effectively treats schizophrenia and bipolar I disorder (BD-I); however, its use is hindered by significant weight gain. A combination of olanzapine and samidorphan (OLZ/SAM) is in development to provide the efficacy of olanzapine while mitigating olanzapine-associated weight gain through opioid-receptor blockade. Here, we summarize OLZ/SAM clinical data. Methods: The OLZ/SAM development program consists of 18 phase 1−3 clinical studies evaluating antipsychotic and weight mitigation efficacy of OLZ/SAM, along with pharmacokinetics, safety, and tolerability. Safety evaluation also included metabolic laboratory assessments. Results: OLZ/SAM significantly improved symptoms of schizophrenia (measured by Positive and Negative Syndrome Scale) vs placebo; improvements were similar to that observed with olanzapine vs placebo. OLZ/SAM resulted in significantly less weight gain than olanzapine. Additionally, 2 long-term phase 3 extension studies confirmed the durability of antipsychotic effect, as well as stabilization of weight and metabolic parameters in those continuing treatment. Supporting the potential use of OLZ/SAM in BD-I, OLZ/SAM or olanzapine resulted in bioequivalent olanzapine plasma concentrations, and OLZ/SAM did not affect lithium or valproate pharmacokinetics. OLZ/SAM treatment had no clinically relevant effects on ECG parameters (including QTc interval). OLZ/SAM and olanzapine safety were similar, except for reduced weight gain with OLZ/SAM; no additional safety risks were identified. As OLZ/SAM contains the opioid antagonist samidorphan, it is associated with potential risks, such as precipitated withdrawal, inadequate analgesia, and risk of overdose (eg, by trying to "overcome" the opioid blockade) in patients using opioids; these were not observed in studies of OLZ/SAM, as opioid use and dependence were exclusionary criteria for clinical trial enrollment. Conclusion: Data across 18 OLZ/SAM studies in >1600 subjects support an

antipsychotic efficacy and safety profile for OLZ/SAM that is similar to olanzapine, with significantly less weight gain than olanzapine. OLZ/SAM is a potential new treatment for schizophrenia and BD-I patients needing efficacious long-term treatment with reduced risk of weight gain.

No. 69

A Novel Rapidly Effective Treatment of Agitation for Schizophrenia With the Oral Dissolving Film BXCL501

Poster Presenter: Leslie L. Citrome, M.D., M.P.H.
Co-Authors: John Lauriello, M.D., Robert Risinger, John H. Krystal, M.D.

SUMMARY:

Background: Acute agitation can occur in patients with schizophrenia, and is often encountered in emergency departments and inpatient units. Treatment includes injectable antipsychotics or benzodiazepines. BXCL501 is an oral dissolving film for sublingual or buccal use of dexmedetomidine, a highly selective alpha-2a receptor agonist. SERENITY I evaluated the efficacy, safety, and tolerability of BXCL501 in patients with acute agitation associated with schizophrenia. **Methods**: This was a Phase 3, randomized, placebo-controlled study. Patients aged 18-75 years with a diagnosis of schizophrenia, schizoaffective or schizophreniform disorder were eligible if they had a total score of ≥14 on the 5 items of the PANSS-Excited Component (PEC) scale at screening and baseline, with a score ≥4 on at least 1 of the 5 PEC items. Patients were randomized 1:1:1 to a single dose of BXCL501 120 µg, 180 µg or placebo. The primary endpoint was mean change from baseline in the PEC total score at 2 hours. Secondary endpoints were the earliest time of an effect on agitation, PEC response (≥40% reduction from baseline), improvement at 2 hours by Clinical Global Impression-Improvement Scale (CGI-I), and calming using the Agitation and Calmness Evaluation Scale (ACES). **Results**: Of 380 randomized patients, 372 (97.9%) completed the study. Baseline characteristics were similar across groups; median age was 45.6 years, 63% were male, and mean PEC total score was 17.6. LS Mean change from baseline to 120 minutes for the PEC total score was -4.8, -8.5, and -10.3 for placebo, BXCL501 120 µg, and 180 µg, respectively (LSM difference -3.7 and -5.5, p<0.0001 vs. placebo). At 1 and 2 hours post dose, significant (p<0.0001) improvement in the CGI-I was observed with BXCL501 120 µg and 180 µg vs. placebo. At 2 hours, PEC response rates were 89.6%, 80.6%, and 47.6% with BXCL501 180 µg, 120 µg and placebo (p<0.0001 vs. placebo). At 2 hours, significant improvement in ACES scores was observed with BXCL501 120 µg and 180 µg vs. placebo (LSM difference: 1.6 and 2.6, respectively, p<0.0001). Significant (p<0.05) improvements were observed with BXCL501 vs. placebo as early as 20 minutes on the PEC. The incidence of adverse events (AE) was 39.5%, 37.3%, and 15.1% with BXCL501 120 µg, 180 µg, and placebo groups. All AEs were mild or moderate, and the most common with BXCL501 were somnolence, dizziness, dry mouth, hypotension, orthostatic hypotension, hypoaesthesia, and paresthesia. No drug-related severe or serious AEs occurred. **Conclusion**: BXCL501 demonstrated rapid, robust and clinically meaningful efficacy in the vast majority of patients sustained for at least 2 hours and represents a novel, versatile, non-invasive and well tolerated treatment of agitation with potentially better patient outcomes.
Funded by BioXcel Therapeutics.

No. 70

A Systematic Literature Review of Schizophrenia Clinical Practice Guidelines: Recommendations on Acute and Maintenance Antipsychotic Treatment

Poster Presenter: Christoph U. Correll, M.D.
Co-Authors: Charmi Patel, Amber Martin, Rebecca Goulding, Edward Kim

SUMMARY:

Background: Many clinical practice guidelines (CPGs) on the treatment of schizophrenia have recently been updated. We conducted a systematic literature review (SLR) to understand the current recommendations on the pharmacological management with antipsychotics (AP) for the acute and maintenance phases of schizophrenia. Methods: Systematic searches were conducted in MEDLINE and Embase as well as guideline body websites to identify English-language CPGs on schizophrenia published from January 1, 2004–December 19, 2019. The SLR was conducted following PRISMA

guidelines,1 using dual-independent screening. Data were captured from each included guideline by a single reviewer with validation by a second reviewer. The AGREE II tool2 was used to assess the quality and reporting of CPGs. Results: The SLR identified 19 CPGs3-25 on the treatment of schizophrenia (US=7, UK=3, international=3, Australia/New Zealand=1, Canada=1, France=1, Italy=1, Poland=1, Singapore=1). Seventeen CPGs provided treatment recommendations for patients with first episode schizophrenia. While CPGs were inconsistent regarding the preferred AP for a first schizophrenia episode, there was strong consensus on using AP monotherapy. Most CPGs recommended switching to a different monotherapy if the initial antipsychotic was not effective or not well tolerated after an adequate AP trial. The recommendations on duration of AP therapy after a first schizophrenia episode varied across CPGs, ranging from 6-12 months to ≥2 years, and 2 CPGs did not recommend a specific length of therapy. Twelve CPGs reporting on treatment of multi-episode schizophrenia noted that the considerations guiding the choice of AP for subsequent episodes were similar to those for a first episode, factoring in prior patient treatment response, adverse effect patterns, and adherence. Fourteen CPGs discussed maintenance therapy. Of these, four recommended keeping patients on the same AP at the same dose on which they had achieved remission. Four others recommended maintenance therapy at the lowest effective dose, and one suggested that patients remain on the same AP that provided remission, without commenting on the dose. Most CPGs (9/14, 64%) made no recommendations on the appropriate duration of maintenance therapy, noting instead that each patient should be considered individually. Three CPGs recommended maintenance treatment for between 2-6 years and one CPG recommended maintenance therapy for ≥6 years for patients with multiple episodes. Conclusions: Current schizophrenia CPGs consistently recommend AP monotherapy as the treatment of choice for patients with a first schizophrenia episode and all guidelines stated that a different single AP should be tried if the first is ineffective or intolerable. By contrast, there was much less consensus regarding maintenance therapy. This inconsistency is likely based on insufficient longer-term data and conflicting results in meta-analysis on this topic.

No. 71

AFFINITY-1: Phase 1 Study to Evaluate the Safety, Tolerability, Pharmacokinetics, and Effects on Neurophysiological Biomarkers of CAD-9303 (NMDA PAM)

Poster Presenter: Christopher Kenney, M.D.
Co-Authors: Timothy Piser, Ph.D., David Walling, Ph.D., Edward Christian, Ph.D.

SUMMARY:

Background: N-methyl-D-aspartate (NMDA) receptor hypofunction is hypothesized as a cause of schizophrenia. Specifically, patients with schizophrenia are thought to suffer from reduced expression and/or reduced function of cerebrocortical and sub-cortical NMDA receptors relative to healthy controls. CAD-9303 is a selective NMDA receptor positive allosteric modulator (PAM), which has demonstrated reversal of impairments in object memory and in the electroencephalogram/event related potential (EEG/ERP) biomarker mismatch negativity caused by NMDA receptor antagonists in nonclinical studies. Methods: The study consists of single ascending dose (SAD) cohorts that are randomized, double-blind, and placebo-controlled to assess the safety, tolerability, and pharmacokinetics of CAD-9303. The effects of a single dose of CAD-9303 are being explored on pharmaco-EEG/ERPs, cognitive function (Brief Assessment of Cognition in Schizophrenia), and psychiatric signs/symptoms (PANSS, CGI). The first SAD cohort was completed in healthy volunteer subjects. The remaining cohorts have been conducted in participants with schizophrenia. All SAD cohorts are comprised of 8 subjects; 6 subjects are administered CAD-9303, and 2 subjects are administered matching placebo. Seven SAD cohorts have been completed to date ranging from low to high doses. Results: There have been no deaths, no serious adverse events, and no dropouts due to adverse events. A total of 8 treatment emergent adverse events (TEAEs) were reported in 8 subjects: somnolence (n=2), postural orthostatic tachycardia syndrome (n=1), diarrhea (n=1), euphoric mood (n=1), insomnia (n=1), dizziness (n=1) and dyspepsia

(n=1). All TEAEs were mild. Dose proportional increases in exposure were observed. Medium to high doses provide exposures above the target effective concentration based on nonclinical pharmacology. Pharmaco-EEG data suggests CAD-9303 increases delta power predominantly in the frontal lobes bilaterally. Conclusions: CAD-9303 is an NMDA PAM under development to treat the residual symptoms of schizophrenia. Single doses have been well tolerated and yielded dose proportional increases in exposure. Preliminary pharmaco-EEG data suggests evidence of target engagement based on increased delta power in the frontal lobes bilaterally. Additional clinical data including PANSS, BACS and CGI is currently under review.

No. 72

Alternate Injection Site (Back of Upper Arm) for Monthly Long-Acting Risperidone Injections of RBP-7000

Poster Presenter: Sunita Shinde
Lead Author: David Walling, Ph.D.
Co-Authors: Celine Laffont, Jahnavi Kharidia

SUMMARY:
Background: Patients switched from oral medications to longer-acting injectable antipsychotics experience significantly reduced hospitalization rates and improved health-related quality of life. RBP-7000 is an extended-release formulation of risperidone for monthly treatment of schizophrenia in adults and has been approved for subcutaneous (SC) injection in the abdominal region. Given the chronic nature of schizophrenia and different patient preferences, an alternate injection site may provide additional flexibility for treatment administration. We present the results of a clinical study evaluating the pharmacokinetics, efficacy, safety and tolerability of RBP-7000 administration at an alternate injection site. **Methods**: This open-label study was conducted in patients with clinically stable schizophrenia taking 5-6 mg oral risperidone daily. Following stabilization on 6 mg oral risperidone (3 mg twice daily), subjects received 3 monthly injections of 180 mg RBP-7000 in the abdominal region followed by a fourth injection of 180 mg RBP-7000 in the back of the upper arm. Each dose of RBP-7000 was administered as two 90-mg SC injections. Serial blood samples were taken to assess plasma exposure to risperidone, 9-hydroxyrisperidone, and total active moiety throughout the study. Steady-state plasma exposures were compared between Injection 3 (abdomen) and Injection 4 (back of upper arm) for each analyte. Clinical efficacy assessments included Positive and Negative Syndrome Scale and Clinical Global Impression Scale. Safety assessments included adverse events and local injection-site tolerability assessments such as pain, tenderness, erythema, and swelling. **Results**: Twenty-five subjects participated in the study and 16 subjects received all 4 doses of RBP-7000. Administration of RBP-7000 in the back of the upper arm provided similar average plasma concentration compared with injection in the abdomen for the total active moiety (43.7 ng/mL vs 44.0 ng/mL, respectively). Other pharmacokinetic parameters (maximum and minimum plasma concentrations) were comparable between the 2 injection sites. Clinical efficacy measures remained stable between injection sites. There were no clinically meaningful differences in patterns of injection site gradings between the back of the upper arm and the abdomen. In the majority of subjects, after each dose in either the abdomen or the back of the upper arm, injection site pain, tenderness, and erythema resolved to severity 0 by 3 hours post-dose for those who reported mild grading injection site tolerability assessments 10 minutes post-dose. **Conclusion**: Administration of 180 mg RBP-7000 in the back of the upper arm showed comparable pharmacokinetics compared with injection in the abdominal region with no clinically meaningful differences in safety or efficacy measures, supporting the back of the upper arm as an alternative injection site.

No. 73

Assessing Expert Consensus Around Progression and Mitigation of Cognitive Decline Following Onset of Schizophrenia Disease: A Delphi Method Study

Poster Presenter: Marlon Graf, Ph.D.
Co-Authors: Meaghan Roach, M.P.H., Pamela Baker, Pharm.D., Jacquelyn W. Chou, M.P.P., John Michael Kane, M.D.

SUMMARY:
Background: Relationships between schizophrenia, uncontrolled psychosis and cognitive functioning remain unresolved in the academic literature. A thorough understanding of these relationships could inform optimal patient management. **Objective**: Assess expert consensus on the relationships between uncontrolled psychosis, schizophrenia and cognitive functioning. **Methods**: We conducted a three-round modified Delphi process with clinical and research experts in the field of schizophrenia. Rounds consisted of 1) completion of an online questionnaire; 2) discussion of aggregated results from Round 1 via online forum; and 3) opportunity to revise Round 1 questionnaire responses following Round 2 interactions. Questions elicited ratings, rankings, and uncertainty estimates on the relationships between uncontrolled psychosis, onset of psychotic symptoms, relapse, and cognition. Consensus was determined when at least 70% of panelists (i.e. 8 out of 11 panelists) were within one standard deviation of the median group estimate during Round 3. **Results**: Eleven experts in the field of schizophrenia participated in the Delphi process (89% ≥20 years' experience in schizophrenia). Nine experts (82%) agreed that the most important factor affecting cognitive decline over time after onset of symptoms was cumulative duration of psychosis, followed by severity, length and number of relapses. Experts estimated that cognitive decline was steepest in the first year following initial onset of psychotic symptoms (median=30% decline from normal cognitive function; SD=28.8). However, experts also noted that average time between initial onset of psychotic symptoms and treatment initiation for schizophrenia was between 50-80 weeks (median=65 weeks, SD=45.2). Experts agreed that the ability to recover cognitive functioning was greatest within the first two years following initial onset of psychosis (median=60% likelihood of recovery, SD=25.4), and recovery ability steadily declined over time. They further agreed that pharmacological intervention had a greater impact on cognitive recovery within the first five years following onset of psychotic symptoms than later in the disease state (median=40% proportion of recovery attributable to pharmacological intervention <5 years after onset of psychosis, median=20% afterwards), and 100% of the experts ranked dosage as the most important factor influencing the relationship between neuroleptic and anticholinergic drugs and cognitive functioning. **Conclusions**: Using the Delphi method, a panel of experts in schizophrenia provided insight into the complex relationships between schizophrenia, uncontrolled psychosis, and cognition. Most of the experts agreed that the impact of psychosis on cognition appears to be strongest at earlier disease stages. These findings suggest that early initiation of treatment can mitigate cognitive impairment among patients with schizophrenia. **Sponsorship**: This study was supported by Janssen Scientific Affairs, LLC.

No. 74

Association of Depressive Symptoms With Cognitive Impairment in Patients With Never-Treated First-Episode Schizophrenia

Poster Presenter: Stefanie Cavalcanti, M.D.
Co-Author: Hanjing Wu, M.D.

SUMMARY:
Background Depressive symptoms and cognitive dysfunction are common in patients with schizophrenia (SCZ). Cognitive impairment has been found in patients with depressive disorder; however, there is little research about the relationship between depressive symptoms and cognitive impairment in SCZ. **Aim**: The goal of this study was to examine whether and how the depressive symptoms were correlated with cognitive impairment in patients with never-treated first episode (NTFE) SCZ. **Methods** Repeatable Battery for the Assessment of Neuropsychological Status (RBANS) was performed in 79 NTFE patients and 80 healthy controls (matched by sex, age and education level) to assess cognitive function. For all patients, the 17-item Hamilton Depression Rating Scale (HAMD-17) was used to evaluate depressive symptoms, and the Positive and Negative Syndrome Scale (PANSS) was used to evaluate psychopathological symptoms. **Results**: significantly correlated with attention, PANSS total and PANSS general psychopathology scores (all $p < 0.05$). In addition, multiple regression analysis identified education (beta=0.31, t=2.79, p=0.01) 39 patients (49.4%) met the criteria for comorbid depressive symptoms, with a total score of HAMD-17 ≥ 8 . The

RBANS total and the four index scores in the patients were significantly lower than those in the healthy controls. Further, patients with depressive symptoms scored lower than those without depressive symptoms in the following parameters: attention index, PANSS general psychopathology and total scores (all $p<0.05$). Correlation analysis revealed that the HAMD total score was and HAMD-17 score (beta=-0.33, t=-2.53, p=0.01) as the contributors to attention, with $R2=0.23$.
Conclusions: Our results suggest that the rate of depressive symptoms in FEND SCZ is high, which is correlated with its cognitive impairment, especially attention and psychopathology.

No. 75
Autoscopic Hallucinations in a Patient With Schizophrenia: A Case Report
Poster Presenter: Ganeya Gajaram
Co-Authors: Sukhjeet Sangha, Dung Nguyen, Tiffiney Lake

SUMMARY:
Autoscopic hallucinations are a rare phenomena with a handful of cases reported in patients with comorbidities and only one in a patient with Schizophrenia. This case report discusses a 25-year old African American female with a past medical history of Schizoaffective disorder who presented to the Psychiatric Emergency Department with auditory and visual hallucinations. The auditory hallucinations began at the age of 18 years. Her first visual hallucination occurred while she was in a college class at age 19. She describes the visual hallucination as being vivid and in color and preceded by an urge to do something after which she would see herself performing the action. Examples of these hallucinations include, seeing herself throw coffee at someone and one of the more common visual hallucinations, spitting on someone. The visions last less than a second and stated she was fully conscious and aware during the episode. She noted visual hallucinations were more frequent when she is anxious and occurs approximately 3-5 times daily. The patient was interviewed on three separate occasions, her medical chart was consulted, a head computed tomography (CT) was performed, her serum and urine laboratory values were monitored. The patient denied any history of neurological and psychiatric diseases like epileptic seizures, near death experiences, meningitis, space-occupying lesions, brain tumors, migraine, delirium, posttraumatic brain lesions, multiple sclerosis, anxiety, sleep disturbances, substance use, alcohol withdrawal, medication side effect, infectious diseases like typhus, and altered psychological states which have been reported to cause autoscopic hallucinations. Her head CT was normal and her laboratory values were unremarkable. This case report contributes to the literature on autoscopic hallucinations in patients with Schizophrenia.

No. 76
BDNF and NGF Levels in First-Episode Schizophrenia: What's Their Role in the Prevention of Relapse?
Poster Presenter: Miguel Bernardo, M.D.

SUMMARY:
Biomarkers identified for first-episode psychosis might allow for an early second episode prevention, more accurate prognosis, and individualised interventions. Brain-derived neurotrophic factor (BDNF) and nerve growth factor (NGF) are suggested to be likely candidate biomarkers for diagnosis and treatment evaluation in psychosis. The aims of the present study were to examine the levels of both serum BDNF and NGF in first-episode schizophrenia patients in remission as potential biological predictors of relapse and to study the associations between these neurotrophins and the symptomatology severity of this sample through 3 years of follow-up or until relapse. 69 first-episode schizophrenia patients in clinical remission recruited within the 2EPs Project were included in this study. Diagnoses were ascertained using the Structured Clinical Interview for DSM-IV-TR. Symptom severity was assessed on the Marder PANSS Factor Scores. Serum levels of BDNF and NGF were measured using enzyme-linked immunosorbent assay at enrollment and at 3-year follow-up or at the time of the relapse. Serum BDNF and NGF did not differ significantly over time. Receiver Operating Characteristic (ROC) curve analysis indicated that neither BDNF nor NGF were significant predictors of relapse. Besides, BDNF levels showed significant correlations with positive (r=-

0.30,p=0.013) and negative symptoms (r=-0.32, p=0.010), whereas NGF only showed significant correlation with negative symptoms (r=-0.35, p=0.004). In all of the analyses, lower levels of the neurotrophins correlated with higher symptom severity. Findings did not support a role for serum BDNF nor NGF as biomarkers of relapse in first-episode schizophrenia patients. Nevertheless, significant correlations were found between plasma levels of both neurotrophins and symptom severity at baseline visit and at 3-year follow-up, indicating that BDNF and NGF could be useful biomarkers of the underlying illness traits.

No. 77

Challenges in Treating Tardive Dyskinesia: Assessing the Impact of Virtual Medical Education

Poster Presenter: Cecilia Peterson
Co-Authors: Amanda Glazar, Chirag Shah, Pharm.D., Prakash S. Masand, M.D., Michael Lemon

SUMMARY:

Introduction Tardive Dyskinesia (TD) refers to abnormal, involuntary, choreoathetoid movements of the tongue, lips, face, trunk, and extremities and is associated with long-term exposure to dopamine-blocking agents, such as antipsychotic medications. The movements are disfiguring and can bring unwanted attention to affected individuals. When severe, especially if the respiratory muscles are affected, the movements can be disabling, limit activity, and reduce quality of life. The prevalence is 7.2% in individuals on newer antipsychotics who have never been exposed to older neuroleptics. Until recently, there were no effective treatments for TD. In recent years, many new treatments have been investigated, including valbenazine, deutetrabenazine, and branched chain amino acids. A virtual broadcast was developed to assess the ability of continuing medical education (CME) to improve awareness of the recognition and treatment of TD among psychiatrists. Methods The virtual broadcasts (May 9, 2020 & August 13, 2020) consisted of a two-hour, live-streamed discussion between two expert faculty. Impact of the activity was assessed by comparing learners' responses to four identical questions presented before and directly after activity participation. A follow-up survey was sent to all learners six-weeks post-activity to measure performance in practice changes. A chi-square test identified significant differences between pre- and post-assessment responses while a Cohen's d test calculated the effect size of the virtual broadcast. Results Activity participation resulted in a noticeable educational effect among learners (n=1,159; d=2.57, P<.001). The following areas showed significant (P <0.05) pre- vs post-educational improvements: recognition of movements in patients with TD, differential diagnosis of TD, rate of TD in SGA exposed patients, treatment options for TD (on and off-label), and treatment of TD using VMAT2 inhibitors. Additionally, 54% of learners reported a change in practice performance as a result of the education, including utilizing a standard scale to evaluate movement disorders and educate patients and family members about potential for TD and how to recognize symptoms. Conclusions The results indicated that a CME-certified two-hour virtual broadcast was effective at improving knowledge among learners for the recognition and treatment of TD. This knowledge also resulted in positive changes in practice performance post-activity. However, despite significant educational improvements in these key areas, there remains an opportunity to educate on appropriate evidence-supported TD treatment strategies. Although, recommendations from APA guidelines suggesting there is a lack of evidence supporting changes to antipsychotic dosing and evidence suggesting anticholinergic use may exacerbate dyskinesias, these treatment options continue to be used inappropriately in the management of TD.

No. 78

Characteristics of Hispanics Referred to Coordinated Specialty Care for First Episode of Psychosis and Factors Associated With Enrollment

Poster Presenter: Mauricio Tohen, M.D., D.P.H., M.B.A.
Lead Author: Bess R. Friedman, M.Sc.
Co-Authors: Annette Crisanti, Ph.D., Danielle Duran

SUMMARY:

Background: The Early Program provides Coordinated Specialty Care (CSC) services to young

adults in New Mexico, aged 15-30 years who have experienced a First Episode of Psychosis (FEP) within the past year. The first objective of this research was to examine referral sources, demographics, and clinical and socio-environmental characteristics among Hispanics referred to, or enrolled in, the Early Program compared to other racial/ethnic groups. The second objective was to explore which factors (demographic, clinical and socio-environmental) were associated with eligible referrals enrolling into the Early Program. Methods: A retrospective review was conducted on all individuals referred to the Early program over a two-year period. Extracted data included referral sources, demographics and clinical characteristics. Zip code-level data from publicly available sources were cross-referenced with each record. Non-parametric tests and appropriate secondary analysis were used to determine significant differences across racial/ethnic groups referred to or enrolled in the Early program. A random forest model was used to determine which factors or interacting factors were associated with eligible referrals enrolling in services. Results: Compared to non-Hispanic whites, Hispanic individuals were more likely to be referred from inpatient or outpatient mental health providers and not from other sources within the community (OR=0.30(0.13, 0.68), p=0.004). In addition, Hispanic referrals were more likely to live in areas with higher rates of Spanish spoken in the home (MdD=7.41(1.13, 9.15), p=0.012). The Random Forest model identified that Hispanics or non-Hispanic whites were more likely to enroll compared to other minorities (OR=4.97(1.82, 13.55), p=0.0009) and (OR=4.42(1.52, 12.87), p=0.006), respectively. Finally, a significant interaction emerged in classifying enrollment. Despite Hispanic referrals living in areas with higher rates of Spanish spoke in the home, compared to non-Hispanic whites and other minorities, eligible Hispanics were 2.4 times more likely to be enrolled if living in areas with a lower prevalence of Spanish speaking (p=0.025). Discussion: Results suggest a need for community outreach and psychoeducation targeting Spanish-speaking communities to increase referrals directly from community sources. Further work is needed to better understand the pathways to care for Hispanic individuals and how primary language affects referral processes and enrollment rates for different race/ethnicity groups. The Early Program has an opportunity to contribute to knowledge of FEP in Hispanic youth that otherwise is underrepresented by nationwide clinical and implementation research. Continued exploration of factors associated with referral and enrollment processes for the growing Hispanic ethnic group in the US can help to inform CSC program development.

No. 79

Clinical Outcome Assessment Instruments in Schizophrenia: A Scoping Review

Poster Presenter: Leslie L. Citrome, M.D., M.P.H.
Co-Authors: Marko Mychaskiw, Alma Cortez, Elizaveta Sopina, Sameer Kotak

SUMMARY:

Background: Schizophrenia is a chronic and severe mental disorder characterized by disturbances in thought, perception, and behavior. Because of the disorder's complexity, it can be difficult to establish the effectiveness of a treatment, underscoring the need for appropriate outcome measures. Patient-reported outcomes (PROs) and use of minimally clinical important differences (MCIDs) have gained traction as a way of evaluating treatments; however, the extent of their application in schizophrenia is unknown. A scoping review was conducted to investigate the outcome measures used in schizophrenia and the availability of associated MCIDs. Methods: The review focused on four key databases (PubMed®, Embase, APA PsycInfo®, and International Society for Pharmacoeconomics and Outcomes Research [ISPOR; through Value in Health]) to assess a large variety of studies of interest published in or after 2010. Additional secondary sources (ClinicalTrials.gov, PROLABELS™, and FDA.gov) were also reviewed. Outcome measures identified in the scoping review were organized by type (3 categories: PROs, clinician-reported outcomes [ClinROs], and observer-reported outcomes [ObsROs]), by focus (3 categories: generic, mental health, schizophrenia), and by domain (5 categories: quality of life [QoL]/health-related quality of life [HRQoL], treatment-related, emotional/psychological well-being, symptomatic, and need for care). Results: A total of 131 studies were included in the scoping review. The review

identified 59 outcome measures (35 PROs, 24 ClinROs/ObsROs). Among the 35 PROs, there were 9 generic (all QoL/HRQoL); 15 mental health (6 emotional/psychological well-being, 4 QoL/HRQoL, 4 treatment-related, and 1 need for care); and 11 schizophrenia-specific (8 QoL/HRQoL, 1 treatment-related, 1 emotional/psychological well-being, and 1 symptomatic) outcome measures. Among the 24 ClinROs/ObsROs, there were 10 mental health (3 QoL/HRQoL, 3 emotional/psychological well-being, 2 treatment-related, and 2 symptomatic) and 14 schizophrenia-specific (11 symptomatic, 2 emotional/psychological well-being, and 1 treatment-related) outcome measures. MCIDs were reported for 9/59 identified outcome measures. Of these 9 outcome measures, 2 were PROs (both generic) and 7 were ClinROs/ObsROs (3 mental health–specific and 4 schizophrenia-specific). None of the schizophrenia drugs approved in the past decade included a PRO endpoint in the package insert. Conclusion: This review provides a comprehensive overview of the outcome measures used in schizophrenia over the past 10 years. Results highlight the heterogeneity of existing measures and a growing interest in PROs in schizophrenia. The finding that none of the schizophrenia-specific PROs had MCID values estimated suggests a significant gap in knowledge and opportunity for future research. This study was supported by Teva Pharmaceutical Industries.

No. 80

Creating Developmentally Informed Inpatient Psychiatric Care for Transitional Age Youth (TAY) With Early Psychotic Disorders

Poster Presenter: Hyun Jung Kim, M.D.
Co-Authors: Timothy C. Van Deusen, M.D., Cynthia Wilson, M.D., Hun Millard, M.D., Susan Gail Parke, M.D.

SUMMARY:

Background: Approximately 100,000 adolescents and young adults in the US experience first-episode psychosis annually. Psychosis often begins in the late teens to mid-twenties a period known as the transitional age youth (TAY) years. The TAY period is a critical window for psychosocial development. Treatment of early psychotic disorders in TAY requires special consideration of their developmental stage and clinical needs. The purpose of this presentation is to explain the basic developmental framework for inpatient psychiatric care for TAY with early psychotic disorders. Methods: The authors will describe the unique developmental considerations for TAY with early psychotic disorders and provide a list of practice recommendations to advance the quality of inpatient care by utilizing clinical vignettes. Results: Attendees will gain a greater understanding of the unique developmental challenges in TAY with early psychotic disorders and learn how to care for this population by using a developmentally informed framework in the acute inpatient setting. Practice recommendations to advance the quality of inpatient care for TAY with early psychotic disorders: Biopsychosocial formulation as a useful tool for informing developmentally informed diagnostic assessments. Building effective therapeutic alliances and collaborative care approaches remain as priorities throughout their inpatient care (i.e. Open dialogue). Perform thorough medical workup to rule out treatable underlying non-psychiatric conditions (i.e. APA guidelines). Initiation of low dose antipsychotics and slowly titrate to prevent unnecessary adverse reactions (i.e. EPS, NMS). Individual therapy can be helpful to improve treatment outcomes (i.e. CBT, ACT, supportive therapy). Family involvement is crucial to improve treatment outcomes (i.e. family support group, NAMI). Consider involving consultation services if indicated (i.e. spirituality, nutrition, internal medicine, neurology, college liaison) Promote developmentally appropriate adjunctive therapies (i.e. gym/fitness, dance, yoga, video games, music, art). Provide staff education to create and maintain a developmentally informed milieu (i.e. staff meetings, case conferences). Cultivate developmentally informed policies for an attuned inpatient environment (i.e. room assignment for LGBTQs, access to cell phones, tablets and computer devices, gym equipment). Attention to systems of care (i.e. school, child protective services, law enforcement, social and vocational services) Conclusions: As a field, psychiatry should be prepared to recognize and address the unique developmental needs in TAY with early psychotic disorders and maximize

opportunities to advance the quality of clinical care in the inpatient setting.

No. 81
Delusional Parasitosis: Antipsychotics to Treat "Bugging"

Poster Presenter: Archana Rao Adikey, M.D.
Co-Authors: Ilan Kerman, M.D., Ph.D., Anita S. Kablinger, M.D.

SUMMARY:

Delusional Parasitosis --antipsychotics to treat "Bugging" Adikey, A1, Kerman, IA2,3, Kablinger, AS1 1Department of Psychiatry and Behavioral Medicine, Virginia Tech Carilion Clinic, Roanoke, VA 2Behavioral Health Service Line, Veterans Affairs Pittsburgh Health System, Pittsburgh, PA 3School of Neuroscience, Virginia Tech, Blacksburg, VA   Delusional parasitosis is a mono-hypochondriacal presentation where the patient holds a strong belief of being infested with bugs. The patients have poor insight about the ongoing illness and as they experience somatic symptoms, they approach the dermatologists initially. After ruling out the medical, physical, neuroimaging possibilities of the symptoms, patients are referred to psychiatrists. In this case report, we will discuss the literature review of antipsychotics for the treatment of primary delusional parasitosis. A 41-year-old female patient with no significant past psychiatric history presented to the ER due to the paranoid behavior of being infested with bed bugs. Her chief complaint was a non-bizarre fear of bug infestation. The patient was initially on involuntary temporary detention, but later she agreed to be voluntarily admitted to the inpatient unit and was treated for Delusional parasitosis. The family history was significant for bipolar disorder and schizophrenia. The patient showed a partial response to risperidone, with improved self-care such as attending her ADL's. Residual symptoms included fear of infestation with bugs, which prompted frequent requests for changes of linens and trash bags in her room. While currently available psychotropic medications have limited efficacy in the treatment of delusional disorders, this patient responded within 4-5 days of initiation of risperidone 2 mg every night. Within two weeks of her discharge from the hospital, the patient stopped taking the medication. Consequently, her symptoms reappeared, and the patient was re-admitted to the inpatient psychiatric unit. A review of the literature showed that the patients of different ages, races, and genders with similar presentations responded well to second generation antipsychotics, including risperidone and olanzapine, as well as pimozide, a first-generation antipsychotic. Relapse rates were high due to medication non-compliance or loss of follow-up. More studies are required to understand the role of adjunctive treatments, the efficacy of first and second-generation antipsychotic drugs, along a possible role for the long-acting injectable formulations in this difficult-to-treat disorder.

No. 82
WITHDRAWN

No. 83
Do the Same Factors Influence Functioning Throughout Schizophrenia?

Poster Presenter: Clara Martínez-Cao
Co-Authors: Ainoa García Fernández, Mercedes Valtueña García, Julio Bobes, Maria Garcia-Portilla

SUMMARY:

Introduction Schizophrenia is characterised by negative, positive, affective, and cognitive symptoms responsible for severe impairments in functioning. In the last years, studies have identified demographic1, clinical2 and cognitive3 factors associated with worse functioning. However, few studies have analysed the association of this factors with functioning in patients according to their length of illness. Objective To investigate differences in the relationship between functioning, cognition and clinical characteristic in schizophrenia patients, according to their length of illness. Method Secondary analysis of a cross-sectional and naturalistic study. Sample:189 patients with Schizophrenia (F20), aged 18-72 under maintenance treatment. Assessments: an ad hoc questionnaire for collecting demographic and clinical information; psychopathology: PANSS, CDS, CGI-S, CAINS; functioning:PSP; cognition: MATRICS. Statistical analysis: student-t test, ANOVA and Pearson correlation. Length of illness was classified in three

groups: Recent Onset (RO) (<5 years), Intermediate Group (IG) (5-10 years) and Chronic Illness (CI) (>10 years). Results Mean age(SD): 39.5(13.54); men: 63.5%. There were no significant differences between the three groups in functioning [RO=55.71(18.06); IG=55.88(16.79); CI=48.69(16.75)]. Attending to clinical variables, positive and negative symptoms [Motivation and Pleasure (M&P), Expression (E), and Global Negative Symptoms (GNS)] impact on functioning. Specifically, positive symptoms, M&P and GNS impact on functioning in the three groups, but the impact of these symptoms decrease with more years of length of illness. However, Expression and the number of antipsychotics have a greater effect in the IG (r:-0.638, p<0.001; r:-0.582, p<0.001 respectively). In addition, depressive symptoms only were associated with worse functioning in the first two groups (RO r:-0.512, p<0.001; IG r:-0.461, p=0.002). On the other hand, cognitive abilities such as speed of processing, attention, working memory, social cognition, verbal and visual learning showed a stronger relationship with functioning in RO. However, functioning in the IG only was associated with attention, verbal learning and social cognition (r:0.364, p=0.018; r:0.391, p=0.010; r:0.316, p=0.039), having non-impact cognition on the group with more than 10 years of illness. Finally, the use of benzodiazepines was negatively associated with functioning in patients with RO and CI (t: 3.047, p=0.003; t: 2.362, p=0.022, respectively) while the use of antidepressants was associated with worse functioning in the first two groups (RO t:2.577, p=0.012; IG t:2.358, p=0.023, respectively). Conclusions The factors associated with functioning differs according to the length of illness, in the first stages cognition, positive, negative and depressive symptoms play the greatest role in functioning, however, with the progression of the disease negative symptoms mainly influence in their functioning.

No. 84

Does the Time of Drug Administration Alter the Adverse Event Risk of Lurasidone?

Poster Presenter: Katsuhiko Hagi, Ph.D.
Co-Authors: Tadashi Nosaka, Andrei A. Pikalov, M.D., Ph.D.

SUMMARY:

Objective: Lurasidone is orally administered once daily during or immediately after a meal, but the relationship between the time of administration and the risk of adverse events is unclear. The purpose of this study was to examine whether there is a difference in the risk of adverse events between lurasidone administration at breakfast and at dinner in the treatment of adult schizophrenia. Methods: Randomized placebo-controlled trials (RCTs) of lurasidone in adults with acute exacerbation of schizophrenia were analysed for the incidence of akathisia, somnolence, and nausea. We compared the risk of each adverse event and the risk differences (RDs) for each lurasidone dose versus placebo in patients taking lurasidone with breakfast (AM dosing group) and those taking lurasidone with dinner (PM dosing group). Results: Nine RCTs were included in the analysis (six RCTs with AM dosing and three RCTs with PM dosing). In the AM dosing group, lurasidone doses of 20, 40, 80, and 120 mg/day were evaluated, and in the PM dosing group, lurasidone doses of 20, 40, 80, and 160 mg/day were evaluated. The risk of akathisia increased in a dose-dependent manner in AM dosing group, this tendency, however, was not observed in PM dosing group. In addition, RD tended to be larger in AM dosing group than in PM dosing group at the same dose [AM dosing group: 20 mg/day=-4.1%, no significantly different from placebo (ns); 40 mg/day=7.1%, p<0.001; 80 mg/day=9.1%, p<0.001; 120 mg/day=20.3%, p<0.001, PM dosing group: 20 mg/day=3.2%, ns; 40 mg/day=2.3%, ns; 80 mg/day=8,7%, p<0.001; 160 mg/day=6.5%, p<0.01]. Similarly, the risk of somnolence increased in a dose-dependent manner in AM dosing group, however, this tendency was not clearly observed in PM dosing group. RD tended to be larger in AM dosing group than in PM dosing group at the same dose (AM dosing group: 20 mg/day=0.1%, ns; 40 mg/day=3.6%, p<0.05; 80 mg/day=4.9%, p<0.01; 120 mg/day=9.3%, p<0.001, DN dosing group: 20 mg/day=-0.4%, ns; 40 mg/day=2.8%, p<0.05: 80 mg/day=0.2%, ns; 160 mg/day=5.8%, p<0.05). Regarding the risk of nausea, there was no clear dose-dependent trend, and RD was similar between BF and DN dosing group (AM dosing group: 20 mg/day=0.2% ns; 40 mg/day=3.8%, p<0.05; 80 mg/day=3.8%, ns; 120 mg/day=6.6%, ns, PM dosing group: 20 mg/day=-1.6%, ns; 40 mg/day=-

1.7%, ns; 80 mg/day=5.5%, p<0.01; 160 mg/day=2.8%, ns). Conclusion: The risk of adverse events in the treatment of schizophrenia with lurasidone can vary depending on the timing of administration. In particular, for akathisia and somnolence, the incidence risks were reduced when lurasidone was administered in PM. Unlike with AM administration, the dose-dependence in the risks of these adverse events were not observed in lurasidone PM administration. The timing of lurasidone administration could be considered in effort to minimize potential adverse events.

No. 85

ECT Utilization in the Treatment of Catatonic Patients in the United States: A Nationwide In-Patient Sample Analysis

Poster Presenter: Chintan Trivedi
Co-Authors: Geetha Manikkara, Mingxu Zhang, Shailesh Jain, M.D.

SUMMARY:

Introduction Electroconvulsive therapy (ECT) is an effective treatment of many psychiatric conditions including catatonia [1, 2]. The primary objective was to evaluate patients and hospital characteristics in catatonia treated with ECT vs. catatonia not treated with ECT. We also study the trends of ECT utilization in catatonia patients over the years for patients and hospital characteristics. Methods Patient data (2002-2017) with the primary diagnosis of catatonia and use of ECT were obtained from the Nationwide Inpatient Sample [3] Patient and hospital-level characteristics were compared between the catatonia patients with and without ECT treatments. Multivariate analysis was performed. In addition, trends of ECT utilization in catatonia patients were evaluated. Results ECT was performed in 2017 (8.3%) patients with the primary diagnosis of catatonia (n=24311). The average age of all catatonia patient was 43.1 years, 38% patients were white, and 52.1% male. Patients receiving ECT were 2 year older (45 vs 43 years, p < 0.001). Conclusions ECT is an underutilized modality for catatonia treatment in the US. White catatonic female patients are most likely to get ECT treatment at an urban large bed hospital. There is an upward trend in the use of ECT.

No. 86

Effects of SEP-363856, a Novel TAAR1 Agonist, on Negative Symptoms in Schizophrenia: Results Across an Acute Study and a 6-Month Extension Study

Poster Presenter: Courtney Zeni, Ph.D.
Lead Author: Heather Dworak
Co-Authors: Seth Hopkins, Ph.D., Yan Li, Kenneth Koblan

SUMMARY:

Background: SEP-363856 is a novel trace amine receptor 1 (TAAR1) agonist with serotonin 5-HT1A activity that has demonstrated efficacy in animal models of psychosis. In a double-blind, placebo-controlled study, SEP-363856 was efficacious in the treatment of patients with an acute exacerbation of schizophrenia as measured by the Positive and Negative Syndrome Scale (PANSS) total score at Week 4 with a safety and tolerability profile similar to placebo. The current analyses examined the effects of SEP-363856 on negative symptoms in the initial double-blind study, followed by the subsequent 6-month open-label extension study. Methods: Patients with an acute exacerbation of schizophrenia were randomized, double-blind, to 4 weeks of flexible-dose treatment with SEP-363856 (50 or 75 mg; n=120) or placebo (n=125). Four-week study completers continued into an open-label extension study which involved 26 weeks of treatment with flexible doses (25/50/75 mg/d) of SEP-363856. Prespecified measures evaluating negative symptoms included the Brief Negative Symptom Scale (BNSS) total and factor scores (blunted affect, alogia, avolition, anhedonia, asociality, distress), PANSS negative subscale score, Marder PANSS negative symptom factor, and the Uncorrelated PANSS Score Matrix (UPSM) transformation of the PANSS scale comprising UPSM-PANSS negative-apathy/avolition (UPSM-NAA) and negative-deficit of expression (UPSM-NDE) factors. Results: In the initial 4-week double-blind study, treatment with SEP-363856 (vs. placebo) showed significant week 4 improvement in negative symptoms as assessed by the BNSS total score (effect size [ES], 0.48), and BNSS subscale scores for blunted affect (ES, 0.51), avolition (ES, 0.42), anhedonia (ES, 0.39), asociality (ES, 0.47), alogia (ES, 0.32), and distress (ES, 0.13); as well as on the

Marder PANSS negative symptom factor (ES, 0.46), and the UPSM-DE (ES, 0.32) and UPSM-NAA (ES, 0.32) factors. In the open-label extension study, treatment with SEP-363856 was associated with additional mean improvement, from open-label baseline to Week 26 (observed/LOCF), on the BNSS total score (-11.3/ -8.0); the PANSS negative subscale score (-5.2/-3.5); the Marder PANSS negative symptom factor (-5.3/ -3.5); and the UPSM-DE (-0.5/-0.3) and UPSM-NAA (-0.4/-0.3) factors. Discussion: Short-term treatment with SEP-363856 was associated with significant and robust improvement relative to placebo in negative symptoms of schizophrenia as assessed by multiple measures. Continued improvement in negative symptoms was observed during 26 weeks of additional open-label treatment with SEP-363856. These results suggest that agonism at the TAAR1 receptor by SEP-363856 can treat both positive and negative symptoms in schizophrenia without incurring adverse effects on movement, prolactin, weight, and metabolic parameters associated with first and second generation antipsychotic drugs. These findings will need to be confirmed in future controlled studies.

No. 87

Efficacy of Lumateperone (ITI-007) in Depression Symptoms Associated With Schizophrenia

Poster Presenter: Robert Davis
Co-Authors: Suresh Durgam, Jason Huo, Sharon Mates, Roger McIntyre, M.D.

SUMMARY:

Background: Depression symptoms are commonly associated with schizophrenia and are linked to poorer patient outcomes, including increased risk of relapse and suicidality, worse functioning, and decreased quality of life. Lumateperone (lumateperone tosylate, ITI-007) is a mechanistically novel agent for the treatment of schizophrenia that simultaneously modulates serotonin, dopamine, and glutamate neurotransmission. This mechanism of action may confer beneficial effects in treating depression symptoms associated with schizophrenia. The efficacy, safety, and tolerability of lumateperone in schizophrenia was established in randomized, placebo-controlled studies. An open-label study (Study 303) in stable schizophrenia patients switched from prior antipsychotic treatment to 1 year of lumateperone 42 mg further supported the long-term effectiveness and safety of lumateperone. This post hoc analysis of Study 303 evaluated the effects of lumateperone 42 mg across the range of depression symptoms in stable patients with schizophrenia. **Methods**: Depression symptoms were assessed using the Calgary Depression Scale for Schizophrenia (CDSS). This scale comprises 9 items scored 0 (absent) to 3 (severe). Analyses were conducted in patients with moderate-to-severe depression symptoms (CDSS≥6) at baseline. Mean change from baseline was analyzed with a paired t-test. Additional evaluations included subgroup analysis based on concurrent antidepressant use. **Results**: The overall population comprised 602 stable schizophrenia patients. Of these, 80 patients had moderate-to-severe depression symptoms (CDSS score ≥6) with a mean CDSS score of 7.6 (range 6–16). At the end of treatment (EOT) mean change from baseline was −4.9 (P<.0001); mean CDSS score was 2.2. In patients with CDSS score ≥6 at baseline, 50% responded by EOT. Depression (Item 1) and Early Awakening (Item 7) were the most prominent symptoms at baseline (mean scores 1.5 and 1.1, respectively); Suicide (Item 8) was the least severe (0.1). At Day 75 (earliest on-treatment assessment), all CDSS items showed significant improvement (P<.05 to P<.0001) from baseline. The magnitude of improvement for all items increased from Day 75 to EOT (Day 368). The largest improvements were for Item 1 (Depression) and Item 2 (Hopelessness, change from baseline=−0.8 and −0.7, respectively); 4 CDSS items showed marked improvements (−0.6) including Item 3 (Self Depreciation), Item 5 (Pathological Guilt), Item 6 (Morning Depression), and Item 7. Significant and comparable improvements in CDSS score were seen in patients with and without concomitant antidepressant treatment (mean change from baseline to Day 368=−5.3 and −4.7, respectively; both P<.0001). **Conclusion**: In stable schizophrenia patients with moderate-to-severe depression, lumateperone 42 mg significantly improved a broad range of depression symptoms. Depression symptoms were significantly improved regardless of concurrent antidepressant use. These results support the benefits of lumateperone, as monotherapy or

adjunctive therapy, in treating depression symptoms associated with schizophrenia.

No. 88
Exploring the Relationship Between Congenital Rubella Syndrome and Early-Onset Schizophrenia: A Case Study
Poster Presenter: Caitlyn Dolores Fitzgerald, M.D.

SUMMARY:
Exploring the Relationship Between Congenital Rubella Syndrome and Early-Onset Schizophrenia: A Case Study Caitlyn Fitzgerald, MD, Michael T. Compton, MD, MPH, Jesus Ortiz, MD Congenital rubella syndrome (CRS) occurs when an unvaccinated woman contracts the rubella virus during pregnancy, typically during the first trimester. Affected infants often present with a classic triad of sensorineural hearing loss, ocular abnormalities, and congenital heart defects, and often times, with some degree of intellectual and/or developmental delay. Although there are several studies exploring the relationship between CRS in relation to degree of social and functional disability, very little has been published in regards to its relationship with childhood-onset schizophrenia (COS). In this report, we discuss the case of a patient with CRS and COS whose psychotic symptoms first presented at 9 years. Initial symptoms included auditory hallucinations, violent outbursts, and low level functioning. While attempts were made to address his psychosocial functioning and aggression, his psychotic symptoms were not targeted until he was 14 years old. At that time, inpatient services were utilized and he was admitted to a state hospital. Currently, the patient continues to require institutionalized care. While current numbers of CRS are low in the United States, it should not be overlooked as the condition continues to affect developing nations and may make a re-emergence with the current anti-vaccination movement. In addition to addressing the physical disabilities associated with CRS, we hope to highlight the importance of instituting early psychosis screening and appropriate mental health care in CRS. With earlier treatment, there is a possibility of negating further decompensation and hopefully the need for long-term institutionalization.

No. 89
Healthcare Resource Utilization and Costs Pre-/Post-Long-Acting Injectable Antipsychotic Use in Commercially Insured Young Adults With Schizophrenia
Poster Presenter: Jacqueline Pesa, Ph.D., M.Ed., M.P.H.
Co-Authors: Alex Z. Fu, Ph.D., Susan Lakey, Pharm.D., M.P.H., Carmela Benson

SUMMARY:
Background: Improvements in adherence and clinical and economic outcomes have been found among patients with schizophrenia treated with long-acting injectable antipsychotics (LAIs) vs oral antipsychotics. Given limited research on the burden associated with younger patients with schizophrenia enrolled in commercial plans, this study examined the patient journey and disease burden before and after initiation of LAIs in commercially insured young adults with schizophrenia. **Methods**: This retrospective observational cohort study used IBM MarketScan Commercial Claims and Encounters Database, 1/1/2008-12/31/2019. Patients with ≥1 inpatient or ≥2 outpatient claims with diagnosis for schizophrenia (ICD-9-CM: 295.xx; ICD-10-CM: F20.x, F21.x, F25.x) were identified; date of first diagnosis observed was index date. Patients were aged 18-35 years at index date, with continuous enrollment ≥1-year baseline (without schizophrenia diagnosis) and ≥1-year follow-up, with ≥1 LAI during follow-up. A pre-post analysis was conducted with paired t-tests to compare relapse (defined as hospitalization or emergency department visit), healthcare resource utilization, and costs before (from index date to LAI initiation) and after LAI initiation (to end of follow-up). Outcomes were measured Per-Patient-Per-Month (PPPM), which was calculated as costs or number of events within a specific period divided by duration of that period in months. **Results**: We identified 2222 patients who initiated LAIs after index schizophrenia diagnosis (mean age=22.9, 70.4% male), with 1421 (64.0%) initiating LAIs after evidence of post-index oral antipsychotic treatment. Remaining 36.0% initiated LAIs as their index treatment. Average time from index date to LAI initiation was 433.1 days (median 243), and from LAI

initiation to end of follow up was 744.0 days (median 630). 60.5% initiated LAIs in the inpatient setting. PPPM relapse event rate was 0.109 before LAI initiation, and 0.073 after LAI initiation ($p<0.0001$). All-cause direct medical costs (excluding medication), medication costs, and total costs (with medication) were $4587, $311, and $4898 PPPM before and $2535, $542, and $3078 PPPM after LAI initiation, respectively. Schizophrenia-related medical cost, medication cost, and total cost were $2819, $118, and $2937 PPPM before and $977, $298, and $1275 PPPM after LAI initiation. All these cost numbers were statistically significantly different ($P<0.0001$) from before to after LAI initiation. **Conclusion**: In commercially insured young adults with schizophrenia, use of LAIs was associated with decreased relapse event rate vs the period before LAI initiation, resulting in reductions in total costs. Although medication costs increased in the post LAI period, the cost increase was more than offset by the decreased costs associated with total care. This study demonstrated that LAI treatment for young adults with schizophrenia is associated with significant cost savings to commercial payers.

No. 90

Impact of Possible Tardive Dyskinesia (TD) on Physical Ability, Social Functioning, and Overall Health in Patients Aware of Their TD Status

Poster Presenter: Stanley N. Caroff, M.D.
Co-Authors: Paul Lewis, Ph.D., Morgan Bron, Pharm.D., Ericha Franey, Ph.D., Rahul Dhanda, Ph.D.

SUMMARY:

Background: Tardive dyskinesia (TD) is a persistent and potentially disabling movement disorder associated with exposure to antipsychotics and other dopamine receptor blocking agents. Objective: Data from the real-world RE-KINECT study were analyzed to better understand the impact of TD on wellbeing and health state in patients who are aware of their TD. Methods: RE-KINECT included 204 adults with ≥3 months of antipsychotic exposure, ≥1 psychiatric disorder, and abnormal movements confirmed by a clinician as possible TD. Analyses of baseline data were conducted in 82 patients with possible TD who subsequently completed ≥2 postbaseline visits and were aware of their symptoms, with patient-reported assessments as follows: impact of possible TD ("none", "some", or "a lot") on physical abilities; the Sheehan Disability Scale (SDS: range, 0 to 30 [maximum disruption]); and the EQ-5D 5-Level visual analog scale (EQ-5D-5L VAS: range, 0 to 100 [best possible health]). Results: Of the 82 RE-KINECT patients who were aware of their possible TD, self-reported impact of TD on physical activities was as follows: talking (none=62.2%, some=28.0%, a lot=9.8%); eating (none=65.9%, some=26.8%, a lot=7.3%); breathing (none=90.2%, some=8.6%, a lot=1.2%). SDS total scores indicated increased impairment in social function (mean scores by impact): talking (none=10.5, some=11.7, a lot=15.9); eating (none=11.4, some=9.6, a lot=15.3); breathing (none=11.4, some=8.4, a lot=26.1). EQ-5D-5L VAS scores indicated poor overall health (mean scores by impact): talking (none=71.4, some=72.9, a lot=54.6); eating (none=71.1, some=73.5, a lot=48.6); breathing (none=70.8, some=65.7, a lot=39.9). Based on responses from all 82 aware patients, mental health ranked highest as the most worrisome condition, followed by movement disorders. Mental health and movement disorders required the most time to manage. Conclusions: Results from the RE-KINECT study show the potential impact of possible TD on overall wellbeing. In patients who were aware of their possible TD, greater negative impact on physical abilities ("some" or "a lot" versus "none") was associated with greater functional impairment and diminished overall health. Mental health and movement disorder comorbidities were the most worrisome categories and required most time management. The results indicate the importance of asking patients how TD affects their daily lives and monitoring treatment in areas of most concern.

No. 91

Improvements in Patient-Centered Outcome Measures With Long-Term Deutetrabenazine Treatment Among Patients With Tardive Dyskinesia

Poster Presenter: Robert A. Hauser
Co-Authors: Hadas Barkay, Nayla Chaijale, Amanda Wilhelm

SUMMARY:
Background: Tardive dyskinesia (TD) is a potentially serious hyperkinetic movement disorder that commonly arises from prolonged use of dopamine-receptor antagonists. Clinical manifestations of TD involve involuntary movements that are typically stereotypic, choreiform, or dystonic, and can significantly impair a patient's quality of life. Deutetrabenazine (DTBZ) is a vesicular monoamine transporter 2 (VMAT2) inhibitor approved for the treatment of TD in adults, based on results from two pivotal 12-week studies (ARM-TD and AIM-TD). In the completed 3-year open-label extension (OLE) study (SD-809-C-20), DTBZ was associated with sustained improvements in Abnormal Involuntary Movement Scale (AIMS) scores and was generally well tolerated with long-term use in patients with TD. This analysis assessed the effects of DTBZ treatment on patient-centered outcome measures in the OLE study. Methods: Patients who completed ARM-TD or AIM-TD were eligible to participate in the single-arm, OLE study. DTBZ was administered using a response-driven dosing regimen, titrating up to a maximum total daily dose of 48 mg/day based on dyskinesia control and tolerability. Patient-centric outcomes included the percentage of patients achieving treatment success (defined as "much improved" or "very much improved") on the Patient Global Impression of Change (PGIC), change from baseline in the patient-reported Modified Craniocervical Dystonia Questionnaire (mCDQ-24) score (assessed up to Week 106), and changes from baseline in AIMS items 8, 9, 10, which are clinician-rated global judgments of the overall severity of abnormal movements, the incapacitation due to abnormal movements, and the patient's awareness of abnormal movements, respectively. Results: 343 patients enrolled in the OLE study, with 6 patients excluded from all analyses (baseline, n=337; Week 6, n=322; Week 15, n=305; Week 54, n=249; Week 106, n=192; Week 145, n=160). More than half of the patients achieved PGIC treatment success at Week 6, and the proportion increased over time from 54% at Weeks 6 and 15 to 61% at Week 54, 64% at Week 106, and 63% at Week 145. According to the mCDQ-24 score, patients demonstrated improvement in quality of life at Week 6 (mean change±SE from baseline: –3.2±0.68) that continued throughout the study (Week 15, –5.0±0.70; Week 54, –5.0±0.89; Week 106, –5.2±1.11). Patients also experienced improvements from baseline in AIMS items 8, 9, and 10, which were sustained through Week 145 (mean change±SE: –1.3±0.07 for item 8, –1.3±0.08 for item 9, and –1.3±0.09 for item 10). Conclusions: Long-term DTBZ treatment was associated with continued improvement in TD symptoms and patient-focused outcome measures, including PGIC, mCDQ-24 score, and AIMS items 8, 9, and 10. These results suggest that DTBZ treatment improves TD disease burden associated with patient's quality of life.

No. 92

Increased Risk of Cardiometabolic Conditions Associated With Antipsychotics Use: A Nationally Representative Cohort Study

Poster Presenter: Rezaul Khandker
Co-Authors: Ellen Thiel, Farid Chekani

SUMMARY:
Objective: Most antipsychotics (APs) have evidence of metabolic side effects and have been associated with increased incidence of cardiometabolic conditions. Our objective was to measure the incidence of cardiometabolic conditions among schizophrenia patients initiating antipsychotics and assess the hypothesis that adherence to antipsychotics is associated with an increased risk of cardiometabolic conditions. Methods: A retrospective observational study was conducted using administrative claims data the IBM® MarketScan Multi-State Medicaid Database. Patients with at lease on medical claim with a diagnosis for schizophrenia and newly initiating AP therapy between 1/1/11-6/30/16 were included in the study. Baseline patient characteristics were assessed in the 12 months prior to the AP initiation. The number of patients with at least one diagnosis for a cardiometabolic condition in the 24-months following AP initiation was measured among those who did not have such diagnoses in the baseline period (i.e. newly diagnosed). Patients with a medication possession ratio of >0.8 (medication on-hand for 80% of the follow-up) were deemed adherent to the initiated AP. Adherent patients were compared to non-adherent patients in terms of the proportion newly diagnosed with cardiometabolic conditions in the 24-month follow-up period.

Results: A total of 8,748 schizophrenia patients were identified as new initiators of APs. The cohort was 58% male and had an average age of 39.9 years. When assessed during the 12-month baseline period, dyslipidemia was prevalent in 20% of the cohort (n=1,770); cardiovascular disease/events, 14% (n=1,192); obesity, 12% (n=1,041); type 2 diabetes, 16% (n=1,386). In the 24-months following AP initiation for those without baseline history, incidence of dyslipidemia was 18% (n=1,253); cardiovascular disease/events, 20% (n=1,477); obesity, 14% (n=1,087); type 2 diabetes, 9% (n=628). The 32% of patients who were adherent to therapy were more likely to be newly diagnosed with dyslipidemia compared to the 68% of patients who were non-adherent (26% vs. 15%, $p<0.001$). Conclusions: There is clear unmet need for AP users regarding cardiometabolic risk factors. Cardiometabolic conditions can be developed during the early stages of AP therapy. Schizophrenia patients have to balance these adverse outcomes against control of their disease. This study was funded by Merck Sharp & Dohme Corp., a subsidiary of Merck & Co., Inc., Kenilworth, NJ, USA.

No. 93

Inpatient Psychiatric Hospitalization Rates in Adults With Schizophrenia: A Phase 3b Open-Label Study of a Digital Medicine System

Poster Presenter: Corey Fowler
Co-Authors: Taisa Skubiak, Jonathan Knights, Hui Fang, Elan Cohen

SUMMARY:

Ensuring medication adherence is a major challenge in patients with schizophrenia.1 The digital medicine system (DMS), comprised of aripiprazole tablets embedded with an ingestible event-marker sensor, wearable sensor patches, and a smartphone application, is indicated for the treatment of adults with schizophrenia or bipolar disorder I (with or without lithium or valproate), and as adjunct treatment for adults with major depressive disorder.2 Patients can track their treatment ingestion data via a smartphone application, while investigators, clinicians, and caregivers can track these data using separate Web-based dashboards. In a prior phase 2 study of patients with schizophrenia, most subjects found the DMS to be satisfactory and helpful in managing their condition.3 However, it is not known whether the DMS affects the increased utilization of healthcare frequently observed in patients with schizophrenia.4 Therefore, we conducted a phase 3b, open-label, prospective, clinical trial in patients with schizophrenia (aged 18–65 years and with at least 1 inpatient psychiatric hospitalization in the past 48 months) to determine if the DMS reduced psychiatric hospitalization rates. Eligible patients had been prescribed oral standard-of-care (SOC) antipsychotics for the previous 6 months (retrospective phase) and then switched to the DMS (months 1–3 of the prospective phase). For prospective months 4–6, patients were maintained on the DMS or reverted to SOC for follow-up based on the investigator's discretion. The primary endpoint was the rate of inpatient psychiatric hospitalizations during prospective months 1–3, when all patients used the DMS, vs retrospective months 1–3, when patients used oral SOC antipsychotics. Safety endpoints included adverse events (AEs) related to the medication or patch (e.g., skin irritation) and the Columbia Suicide Severity Rating Scale was used to assess changes in suicidal ideation from baseline. Out of 277 enrolled patients, 113 patients were included in the modified intent-to-treat (mITT) population (median age 49 years; 61.1% male). The inpatient psychiatric hospitalization rate for patients in the mITT population using the DMS in prospective months 1–3 (0%) was significantly reduced vs the same population taking oral SOC in retrospective months 1–3 (9.7%; P=0.001). The dermal patch was well-tolerated, with mild skin irritation (the single type of AE recorded) from the adhesive at the patch placement site impacting 7.6% (21/277) of patients. No patients reported severe skin irritation, other treatment-emergent AEs, or changes in suicide risk. We conclude that, compared with oral SOC therapy, the DMS may reduce inpatient psychiatric hospitalization rates among adults with schizophrenia. By giving providers objective ingestion data to inform timely and appropriate treatment decisions, the DMS may reduce healthcare utilization among patients with schizophrenia.

No. 94

Inpatients With Depression: Examining the Impact of Comorbid Psychosis on Sleep Disturbance and Nightmare Severity

Poster Presenter: Danna V. Ramirez

SUMMARY:

Psychotic depression is a subtype of unipolar depression that is characterized by the presence of delusions and/or hallucinations in addition to depressive symptoms including; anhedonia, loss of interest, and psychomotor retardation (Ostergaard et al., 2013). Sleep disorders are very common in patients with psychosis including that it may be predictive of the onset and maintenance of paranoid ideas and poor quality of life (Sheaves et al., 2015). Nightmares have also been examined among patients with psychosis and results show that nightmares are more common in individuals with psychosis relative to healthy controls. The frequency and distress of nightmares have been associated with paranoid thoughts, hallucinations, and negative symptoms (Kammerer et al., 2020). The current study examined the differences in sleep disturbance and nightmare severity among two groups: inpatients with depression without a psychotic spectrum disorder versus inpatients with depression with a psychotic spectrum disorder. 231 adult psychiatric inpatients ranging from 18 to 65 years of age (M = 29.60, SD = 11.42) participated. All participants in the present study received a diagnosis of a depressive disorder according to the Structured Clinical Interview for DSM-5 Research Version (SCID-5-RV; First, Williams, Karg, & Spitzer, 2015). Patient groups were matched using Propensity Score Matching (PSM). Patients receiving a diagnosis of a psychotic spectrum disorder and a diagnosis of a depressive disorder were matched against the larger pool of patients who only received a diagnosis of a depressive disorder. Patients were matched on age, gender, depression severity (PHQ-9 admission score), and anxiety severity (GAD-7 score at admission) to control for potential confounds. The depressive disorder and psychotic spectrum disorder group had 117 participants and the depressive disorder only group had 114 participants. One-way analyses of variance (ANOVAs) were conducted to determine if there were significant differences in sleep disturbance and nightmare severity between patient groups at admission. Results revealed there was a significant difference in sleep disturbance at admission [$F(1,178) = 5.73$, $p = .018$] such that patients with only a depressive disorder reported greater sleep disturbance (M = 4.66, SD = 1.86) than patients with both a depressive disorder and a psychotic spectrum disorder (M = 4.00, SD = 1.78). There was no difference between groups with regard to nightmare severity [$F(1,93) = 0.63$, $p = .430$]. Our results demonstrated that there are differences in sleep disturbance between inpatients with depression with psychosis and depression without psychosis. It is possible that prior sleep disturbance differences found between healthy controls and patients with psychosis were due to comorbid symptoms/diagnoses within the group with psychosis rather than specific to psychosis. Future research is needed to elucidate these relationships.

No. 95

Is the Diagnosis Postpartum Psychosis or Depression With Psychosis? A Case Report

Poster Presenter: Yam R. Giri, M.B.B.S.
Co-Authors: Nisrin Ayed, Sreedevi Damodar, M.D., Allison Parrill, B.Sc.

SUMMARY:

Background: Postpartum psychosis is a potentially severe psychiatric illness during the postpartum period requiring immediate management for the safety of mother and baby. The estimated prevalence is 1-2 out of 1000 females in the peripartum period. Timely management is important to prevent catastrophic outcomes such as infanticide and suicide [1]. Treatment should include in-patient care in a high-level psychiatric facility to ensure the safety of mother and infant [2]. Case: We present a 39-year-old female with a past psychiatric history of depression, non-compliant with prescribed Fluoxetine 60 mg daily for three months. At presentation, the patient was four months post-partum and her prodrome included paranoid delusions that began approximately one month after her son's birth. The patient’s symptoms exacerbated a week prior to admission, and she could not take care of herself or her infant. The paranoid delusion that her husband trying to poison her food and hurt her child impeded her ability to effectively parent.

On evaluation, the patient was guarded, evasive, responded to internal stimuli, and exhibited disorganized behavior. Her mood was depressed, and her affect was constricted and labile. She denied suicide and homicide ideations. Psychosis was more prominent than depressive mood on presentation. We made the provisional diagnosis of postpartum psychosis with the postpartum onset and depressed mood. She was started on Paroxetine 60 mg daily for depressive mood, Mirtazapine 15 mg at bedtime for insomnia. For psychosis, Haloperidol 5 mg twice daily was started, Benztropine 1 mg daily for extrapyramidal side effects prevention. Haloperidol was titrated up to 15 mg daily. Haloperidol Decanoate 100 mg intramuscular was administered prior to discharge for compliance. After two weeks of treatment in the hospital, psychosis improved, and the mood returned to normal. She was discharged on Haloperidol, Benztropine, Paroxetine, and Mirtazapine when psychiatrically stable. Conclusion: Although there is a low rate of postpartum psychosis the possibility of serious negative outcomes makes this diagnosis a significant psychiatric concern [4]. Antipsychotics should be started, and psychoeducation provided to the patient and family [2]. The clinician should work with the family, discussing the risks and benefits of breastfeeding and postpartum treatment. Patients with a history of postpartum depression should be screened for the possibility of relapse [3]. In summary, postpartum psychosis is a serious psychiatric illness and needs immediate treatment, management, and close follow-up for a period of at least one year.

No. 96

Long-Term Deutetrabenazine Treatment Is Associated With Sustained Improvements in Quality of Life in Patients With Tardive Dyskinesia

Poster Presenter: Karen Anderson, M.D.
Co-Authors: Hadas Barkay, Nayla Chaijale, Jessica Alexander

SUMMARY:

Background: Prolonged use of dopamine-receptor antagonists can result in the development of tardive dyskinesia (TD), which is a potentially debilitating hyperkinetic movement disorder. Clinical manifestations of TD involve involuntary movements that are typically stereotypic, choreiform, or dystonic, and can significantly impair a patient's quality of life. Deutetrabenazine (DTBZ) is a vesicular monoamine transporter 2 (VMAT2) inhibitor that was approved for the treatment of tardive dyskinesia (TD) in adults based on results from two 12-week pivotal studies (ARM-TD and AIM-TD). The 3-year open-label extension (OLE) study (SD-809-C-20) investigating the long-term efficacy and safety of DTBZ in patients with TD was recently completed. This analysis investigated the effects of DTBZ on patients' quality of life in the OLE study using the Modified Craniocervical Dystonia Questionnaire (mCDQ-24) score, which is a disease-specific quality of life questionnaire originally developed for use in patients with craniocervical dystonia that was adjusted to focus directly on the impact of TD. Methods: TD patients who completed ARM-TD or AIM-TD were eligible to enroll in the single-arm OLE study. DTBZ was administered using a response-driven dosing regimen, titrating up to a maximum total daily dose of 48 mg/day based on dyskinesia control and tolerability. This analysis assessed improvement in patients' quality of life through evaluating the mean change±SE from baseline in mCDQ-24 total score and the stigma, pain, activities of daily living (ADL), emotional, and social subdomain scores through Week 106. Results: 343 patients enrolled in the OLE study, with 6 patients excluded from all analyses. Mean±SD baseline mCDQ-24 score was 29.2±18.96. Improvements in the mean mCDQ-24 total score from baseline were observed at Week 6 (first on-treatment assessment; –3.2±0.68) and were sustained through Week 106 (Week 15, –5.0±0.70; Week 54, –5.0±0.89; Week 106, –5.2±1.11). Decreases in the mCDQ-24 stigma subdomain score were observed at Week 6 (–3.8±0.97), Week 15 (–6.7±1.06), Week 54 (–7.4±1.21), and Week 106 (–8.5±1.56). Improvements in the mCDQ-24 pain subdomain score were also observed at Week 6 (–6.1±1.02), Week 15 (–7.8±1.07), Week 54 (–7.2±1.18), and Week 106 (–7.0±1.64). Similarly, decreases in mCDQ-24 ADL subdomain score were seen at Week 6 (–2.7±0.85), Week 15 (–4.9±0.87), Week 54 (–5.2±1.15), and Week 106 (–5.8±1.29). Small decreases from baseline were observed in the mCDQ-24 emotional subdomain score (range: –2.9±0.90 to –1.0±1.43)

and social subdomain score (range: –4.4±0.97 to –2.6±0.88) over 106 weeks. Conclusions: Long-term DTBZ treatment resulted in sustained improvements in quality of life, as measured by the mCDQ-24 total score and the stigma, pain, ADL, emotional, and social subdomain scores. These data suggest that DTBZ treatment may improve multiple aspects of quality of life among TD patients, which may have meaningful impacts on patients' well-being.

No. 97

Long-Term Safety of Deutetrabenazine in Patients With Tardive Dyskinesia: Results From the Completed, 3-Year Open-Label Extension Study

Poster Presenter: Hubert H. Fernandez, M.D.
Co-Authors: Karen Anderson, M.D., Maria Chen, M.D., Ph.D., Mark Forrest Gordon, M.D.

SUMMARY:

Background: Tardive dyskinesia (TD) is a potentially serious involuntary hyperkinetic movement disorder. The vesicular monoamine transporter 2 (VMAT2) inhibitor deutetrabenazine (DTBZ) was approved for the treatment of TD in adults based on results from the 12-week pivotal studies (ARM-TD and AIM-TD). Rates of overall adverse events (AEs) and discontinuations associated with DTBZ were low in ARM-TD and AIM-TD. This analysis evaluated the long-term safety of DTBZ in the completed 3-year open-label extension (OLE) study (SD-809-C-20) in patients with TD. **Methods**: This open-label, single-arm study enrolled TD patients who completed ARM-TD or AIM-TD. DTBZ was administered using a response-driven dosing regimen, titrating up to a maximum total daily dose of 48 mg/day based on dyskinesia control and tolerability. The study comprised a 6-week titration period and a long-term maintenance phase, as well as a double-blind, randomized withdrawal period. Safety measures included incidence of any AEs, serious AEs (SAEs), and AEs leading to withdrawal, dose reduction, or dose suspension, as well as the most common AEs (≥4%). Since differences in incidence rates may be related to different durations of observation, exposure-adjusted incidence rates (EAIRs; incidence/patient-years) were used to calculate AE frequencies. **Results**: 343 patients enrolled in the OLE study, with 6 patients excluded from all analyses. There were 723 patient-years of exposure in the safety population. Mean±SE treatment duration was 783.6±24.03 days, with 253 (75%) of patients receiving DTBZ for ≥54 weeks, 203 (60%) for ≥106 weeks, and 170 (50%) for ≥145 weeks. Mean±SE total daily dose was 38.7±0.66 mg at Week 54, 39.3±0.75 mg at Week 106, and 39.4±0.83 mg at Week 145. A total of 269 (79.8%) patients reported ≥1 AE during the study, and AEs considered by the investigator to be treatment related (definitely, probably, or possibly related to study drug) were reported in 154 (45.7%) patients. EAIRs were 1.22 for any AE, 0.09 for SAEs, 0.34 for treatment-related AEs, 0.06 for AEs leading to withdrawal, 0.05 for AEs leading to dose suspension, and 0.09 for AEs leading to dose reduction. The most common AEs (EAIRs) were anxiety (0.06), depression (0.05), somnolence (0.05), weight decreased (0.05), and urinary tract infection (0.05). EAIRs were generally higher for AEs reported during titration (<6 weeks) versus maintenance (≥15 weeks) among patients who received prior placebo or DTBZ. Some differences in the most frequent AEs during titration were seen between prior treatment groups, but these typically resolved over time. There were 8 deaths reported during the study, none of which was considered to be related to study drug. **Conclusions**: Long-term DTBZ treatment was well tolerated in patients with TD, as demonstrated by low EAIRs for most AEs. In addition, EAIRs for AEs were generally higher during titration and lower during maintenance. No new safety signals were identified.

No. 98

Lurasidone in Adolescents and Young Adults With Schizophrenia: Pooled Analysis of Double-Blind, Placebo-Controlled 6-Week Studies

Poster Presenter: Michael Tocco, Ph.D.
Lead Author: Fabrizio Calisti
Co-Authors: Isabella Costamagna, Chuanchieh Hsu, Andrei A. Pikalov, M.D., Ph.D.

SUMMARY:

Background: Onset of schizophrenia commonly occurs during late adolescence or early adulthood and is often characterized by greater illness severity, chronicity, and functional impairment with a less favorable prognosis than later onset

schizophrenia.1,2 The aim of this pooled post-hoc analysis was to evaluate the efficacy and safety of lurasidone3 in the treatment of an acute exacerbation of schizophrenia in adolescents and young adults. **Methods**: The 6 pooled studies in this analysis used similar study designs and outcome measures. Patients (ages 13-25 years) were randomized to 6 weeks of double-blind, placebo-controlled treatment with once-daily lurasidone in fixed doses of 40 mg, 80 mg, 120 mg, or 160 mg. The primary efficacy endpoint was week 6 change in the Positive and Negative Syndrome Scale (PANSS) total score; secondary efficacy endpoints included week 6 change in the Clinical Global Impression, Severity scale (CGI-S), and the PANSS positive and negative subscales; and week 6 responder rates defined as ≥20% reduction in PANSS total score. Change scores were evaluated using mixed-model repeated-measures (MMRM) analysis; responder rates were analyzed using a logistic model. **Results**: The safety population consisted of 537 patients (69.8% male; mean age, 18.1 years; mean baseline PANSS total score, 95.75); 82.6% of patients completed the studies. Treatment with lurasidone was significant at all doses (P<0.001) for change in the PANSS total score at Week 6 endpoint, with higher effect sizes (ES) at higher doses (40 mg, 0.53; 80 mg, 0.57; 120 mg, 0.67; 160 mg, 1.35). Significance was also observed at all doses for change in the CGI-S with medium to large effect sizes (40 mg, 0.51; 80 mg, 0.49; 120 mg, 0.57; 160 mg, 1.75). Treatment with lurasidone was significant at all doses on the PANSS positive subscale (P<0.001); and was significant (P<0.001) on all but the 120 mg dose on the PANSS negative subscale. Responder rates were significant for lurasidone 40 mg (NNT=5), 80 mg (NNT=5), and 160 mg (NNT=3), but not for lurasidone 120 mg (NNT=6). For lurasidone (combined doses), 3 adverse events occurred with a frequency ≥5% (nausea, 13.5%; somnolence, 12.1%; akathisia, 10.1%); 4.8% of patients discontinued due to an adverse event. At LOCF-endpoint, 3.6% of patients had weight gain ≥7%, and 1.5% had weight loss ≥7%. For lurasidone (combined doses), minimal median changes were observed at endpoint in metabolic lab values (cholesterol, -2.0 mg/dL; triglycerides and glucose, 0.0 mg/dL). **Discussion**: In adolescents and young adults with schizophrenia, treatment with lurasidone in doses of 40-160 mg/d was a safe, well-tolerated, and effective treatment. Short-term treatment with lurasidone was associated with minimal effects on weight and metabolic parameters. Supported by Funding from Angelini Pharma S.p.A. and Sunovion Pharmaceuticals Inc.

No. 99

MACA Induced Psychosis

Poster Presenter: Sachidanand R. Peteru, M.D.
Co-Author: Amanda Varughese, M.D.

SUMMARY:

As dietary supplements have gained popularity throughout the years, its use has increased. It is often used to improve mood, mental function, depressive symptoms, and reduce anxiety. These supplements are obtained over the counter thereby bypassing physician supervision and they do not require US FDA approval which raises safety concerns. As a result it is difficult to assess and evaluate the benefits of such supplements as it is lacking in comprehensive research and risk-benefit profiles. The increasing popularity of dietary supplements requires thorough investigation into effects of supplement use among the psychiatric patient population. We present a case of a 37 year old female who was using MACA powder and had a 3 month history of psychotic symptoms that caused impairment in functioning that eventually led to involuntary hospitalization. To the best of our knowledge, there are no reported cases of MACA induced psychosis. Maca (lepidium meyenii) is a plant from the brassica (mustard) family and Lepidium genus. It has become widely prevalent in the US and is imported from Peru. There are many claims for MACA but the most popular claims are that it is a natural supplement to improve energy, enhance nutrition, and improve sexual dysfunction/fertility/libido. It can be stored for many years and boiled to make juice or powdered to mix into drinks. There have been a few randomized clinical trials showing the efficacy of MACA on sexual dysfunction as well as increasing sperm count and motility. Ms. M is a 37 year old Haitian female that was admitted to an involuntary psychiatric unit after exhibiting symptoms of psychosis. Patient left house to go travelling without any plans. Family filed a missing person report with authorities and found

patient in airport six days later wandering, disheveled and internally pre-occupied. While she was missing, family discovered MACA powder in her room which they endorsed she was using for the past few weeks. Upon presentation to CPEP, patient was very paranoid, agitated, disheveled, and refusing to speak with staff. She continued to be uncooperative and hostile toward staff while on inpatient unit claiming she was kidnapped and brought to hospital against her will. As per family, patient has a similar episode two years ago exhibiting symptoms or paranoia and psychosis in the context of MACA use. At that time she was diagnosed with Schizophrenia and taken to court for medication over objection. She won the case at that time and has been non-compliant with medications and treatment since. Family reports that prior to previous hospitalization she was using MACA powder for one month however they did not think anything of it because it was purchased in a health store and advertised as a nutritional supplement.

No. 100
New-Onset Psychosis and Catatonia With Residual Cognitive Impairment in a Covid-19 Patient
Poster Presenter: Ryan Shota
Co-Author: Davin Agustines, D.O.

SUMMARY:
Mrs. X, a 60-year-old Hispanic female with no previous psychiatric history was hospitalized and treated for COVID-19 over 11 days. One week after hospital discharge, she began to develop insomnia accompanied by a fear of eating and drinking which slowly worsened to delusional proportions. This progressed to abnormal verbal and motor behavior over the next few weeks until her family brought her back to the hospital 53 days after the initial hospital discharge. Mrs. X was initially worked up for delirium secondary to urinary tract infection. However, her psychotic symptoms continued to worsen and she was admitted to the inpatient psychiatric unit after she became severely agitated to the point of requiring restraints. On her second week of psychiatric hospitalization Mrs. X developed symptoms of catatonia with posturing, negativism, and mutism. Mrs. X was treated with olanzapine and lorazepam, requiring a total of 47 days in the inpatient psychiatric unit in order for her catatonia and psychosis to resolve. Mrs. X still demonstrated residual signs of significant cognitive impairment and diminished executive functioning capability when she returned home with her family. Although there have been reports of various COVID-19 neuropsychiatric manifestations, to our knowledge there has not been a case of psychosis with catatonia development directly following hospital discharge after a successful COVID-19 treatment. Patients with COVID-19 should be followed and screened for the emergence of psychotic and catatonic features to better establish any potential connections of COVID-19 with neuropsychiatric manifestations, as well as followed to assess for long-term cognitive impairments.

No. 101
Nursing Home Quality and Serious Mental Illness in Working-Age Adults
Poster Presenter: Julie Hugunin
Co-Authors: Christine Ulbricht, Kate Lapane, Jonggyu Baek, Robin Clark

SUMMARY:
Background: In the United States, an estimated 2% of people with serious mental illness (SMI) reside in nursing homes, many of whom likely have the functional capacity to live in less restrictive environments. The most recent estimates, from 2005, indicate that those less than 65 years of age account for nearly half of all persons with SMI admitted to nursing homes.2 Little is known about the quality of nursing homes in which people with SMI reside, particularly among non-elderly adults. We examined the association of nursing home quality and working-age nursing home residents with SMI. Research design: This cross-sectional study used the national Minimum Dataset 3.0 and Nursing Home Compare files from 2015. We estimated adjusted odds ratios (aOR) and 95% confidence intervals (CI) from a binary multi-level model to describe the odds that a newly admitted working-age resident had SMI, by the quality of nursing home in which the resident resided. **Subjects**: There were 343,783 working-age adults (22-64 years) newly admitted to a nursing home in 2015 (n=14,307 facilities). **Measures**: SMI (i.e., schizophrenia,

bipolar, and other psychotic disorders), health inspection quality rating (1 (low quality) to 5(high quality)), and other sociodemographic and clinical covariates. **Results**: Of all newly admitted working-age residents to a nursing home, 15.5% had a diagnosis of SMI. Slightly more than half (55.3%) of working-age residents with SMI were admitted to 1- or 2-star nursing homes. Furthermore, the odds of a newly-admitted working-age resident having SMI was lowest among high quality nursing homes (measured by the health inspection star rating), as compared to poor quality nursing homes (aOR 5-star rating versus 1-star rating: 0.77; 95% CI: 0.72 – 0.82). This association remained after adjusting for individual- and facility-level factors. **Conclusions**: Our findings show that a disparity in nursing home quality may exist for working-age residents with SMI as compared to those without SMI. Persons with SMI are a marginalized population with experts calling for SMI to be designated as a health disparity. Other disenfranchised groups such as racial/ethnic minorities, individuals with low education status, and those dually eligible for Medicare/Medicaid tend to reside in lower quality nursing homes. Our results show that working-age residents with SMI are an additional group at risk for poor quality nursing home care. Existing policies to protect those with SMI consider institutionalization the last resort, to be used only if integrated community-based services are not a viable alternative. Our results show that a substantial number of working-age adults with SMI are receiving care in nursing homes, and these nursing homes are more likely to be low-quality. Moving forward, a commitment to providing high quality care to persons with SMI is needed to confront the decades of mistreatment and poor outcomes experienced by this population.

No. 102
Online CME on Schizophrenia Results in Clinical Practice Changes
Poster Presenter: Piyali Chatterjee

SUMMARY:
Introduction: Schizophrenia is a severe chronic illness and a leading causes of disability.[1] Treatment goals include targeting symptoms, preventing relapse, and increasing societal function.[2-3] An online CME activity consisting of a video panel discussion with synchronized slides was designed to educate clinicians on the use of assessment tools to evaluate schizophrenia symptoms, optimize treatment strategies and medication selection. We assessed learners' reported practice changes as a result of their participation in CME. Methods: A Planned Change Assessment® (PCA) with analysis was conducted with online learners. A 2-item questionnaire composed of an intent-to-change question with a list of possible intended changes and a barriers-to-change question with a list of possible barriers that may inhibit implementation of changes was administered immediately after participation in the activity. The follow-up survey assessed actual practice changes made by participants and any barriers encountered. The online CME initiative launched on December 17, 2018, and participant results were collected through May 29, 2019.[4] Results: A total of 805 psychiatrists completed the intent-to-change questionnaire. The majority of psychiatrists practice in the community or private practice setting (75%). As many as 25% of psychiatrists reported that >20% of their patients have symptoms and/or side effects that are not being managed adequately. Based on self-report of patients with schizophrenia managed per week, at least 5,288 patients may be affected by clinicians' learnings gained by participation in this activity. Intended/Actual Changes: The most frequently noted intended changes were: tailoring current treatments for schizophrenia, balancing safety/tolerability, efficacy, and adherence (47%); assess disease status and positive, negative, and cognitive symptoms of schizophrenia at every visit using evidence-based scales (43%); and get familiarized with emerging treatments and how they work in the context of mechanism of disease to optimize management of schizophrenia (43%). The follow-up survey was completed by 68 psychiatrists. The most frequently reported actual changes were: tailoring current treatments for schizophrenia, balancing safety/tolerability, efficacy, and adherence, and diagnosing schizophrenia according to DSM-5 criteria. Barriers to Change: The top perceived barriers to change were: patients do not adhere to treatment because of side effects or cognitive issues (37%); I prefer to trial a medication for longer than 2 weeks before switching (32%) and

cost/ lack of access prevent me from recommending nonpharmacological interventions (27%). The same barriers were noted as interfering with practice changes in the follow-up survey. Conclusion: An online CME video panel discussion with synchronized slides on the assessment and treatment of patients with schizophrenia resulted in desirable changes in clinical practice.

No. 103

Patterns of Improvement in Tardive Dyskinesia: Post-Hoc Analysis of a Long-Term Study With Valbenazine (KINECT 4)

Poster Presenter: Chirag Shah, Pharm.D.
Lead Author: Christoph U. Correll, M.D.
Co-Authors: Tara Carmack, M.S., Leslie Lundt, M.D.

SUMMARY:
Background: Valbenazine is approved for treating tardive dyskinesia (TD), a persistent and potentially disabling movement disorder associated with prolonged antipsychotic exposure. In clinical trials, valbenazine efficacy was based on mean changes from baseline in Abnormal Involuntary Movement Scale (AIMS) total score. However, since these overall changes do not necessarily reflect patients' individual experiences, AIMS data from KINECT 4 (NCT02405091) were analyzed post hoc to characterize different patterns of TD improvement. Methods: Adults with schizophrenia/schizoaffective disorder or mood disorder and TD received open-label valbenazine (40 or 80 mg, once-daily) for up to 48 weeks. Descriptive analyses were conducted in participants receiving study drug and having ≥1 post-baseline AIMS assessment. Based on the minimal clinically important difference (MCID) for AIMS total score, the proportion of participants with a ≥2-point decrease (improvement) or ≥2-point increase (worsening) were analyzed by study visit (Weeks 4, 8, 12, 24, 36, 48). Based on the MCID for clinically meaningful response and protocol-defined response (≥30% and ≥50% AIMS total score improvement from baseline, respectively), patients were categorized as follows: "early and sustained strong response" (≥50% improvement by Wk4 through Wk48/last visit); "early and sustained response" (≥30% improvement by Wk4 through Wk48/last visit); "early response" (≥30% improvement at Wk4 and Wk48/last visit); "delayed response" (≥30% improvement at Wk8 and Wk48/last visit); "late response" (≥30% improvement at Wk12 or later and Wk48/last visit); "poor/no response" (none of the 5 response groups). Based on Schooler-Kane criteria for TD, "remission" was defined as absence of TD (i.e. score of 2 ["mild"] in ≤1 AIMS item and all other item scores ≤1) at last available study visit or at last 2 visits ("sustained remission"). Results: Analyses included 158 patients. The percentage of patients with ≥2-point improvement in AIMS total score increased over time: Wk4 (57.0%), Wk8 (78.5%), Wk12 (84.1%), Wk24 (95.1%), Wk36 (97.2%), and Wk48 (97.1%). Three (2.9%) patients had ≥2-point worsening at Wk48. Patients met the different response criteria as follows: early and sustained strong response (10.8%), early and sustained response (14.6%), early response (3.2%), delayed response (29.1%), late response (27.8%). 23 (14.6%) patients had poor/no response. 98 (62.0%) patients met the criteria for remission and 76 (48.1%) for sustained remission. Conclusions: Patterns of improvement may vary, but robust and long-term TD improvements can be expected with once-daily valbenazine. Patients with a response within 4 weeks may be likely to maintain that response throughout treatment. Others may require 8 or more weeks of treatment before experiencing a response, but with long-term outcomes that are comparable to "early responders". Some patients may achieve TD remission within 1 year of valbenazine treatment.

No. 104

Pilot Study of Interplay of Cardio-Vascular Risks, Neurocognition and Motor Deficits in Schizophrenia: Post-Hoc Analysis of Ginsena-115 Study

Poster Presenter: Mariwan Husni, M.D.
Co-Authors: Shatha Alkatib, M.P.H., M.S., Simon S. Chiu, M.D., Ph.D.

SUMMARY:
Introduction: Spontaneous extrapyramidal motor signs (sEPS): bradykinesia, muscle rigidity and dyskinesia were first described in 4% -11% drug-naïve patients diagnosed as schizophrenia: a chronic psychotic disorder with positive and negative symptoms . Neuroleptic-induced Parkinsonism (NIP),

and Tardive Dyskinesia (TD) account for major adverse events of 1st generation of antipsychotics (FGA). Little is known regarding clinical correlates of 2nd Generation of Antipsychotics (SGA) in NIP in schizophrenia.Objective of our study in schizophrenia patients is to examine : 1)whether SGA results in benign NIP; 2) whether cardio-metabolic risks and cognitive deficits are correlated with NIP in schizophrenia, 3) whether insulin resistance underlies NIP. **Method**: We conducted a post-hoc analysis of the NIP from the cohort of schizophrenia subjects at baseline prior to participating in the RCT trial of Ginsana-115 as adjunct treatment of schizophrenia. We used Simpson Angus scale (SAS) for EPS and the Abnormal involuntary Scale (AIMS) for dyskinesia. Insulin resistance (IR) was indexed with Homeostasis assessment model: HOMA ,Framingham risk score (FRS) for cardio-vascular risk estimates and standardized neurocognitive test battery: Neurocog@ for neurocognition assessment. **Results**: In our sample (n = 44; mean age: 38 yrs , male/female:29/15) the subjects were treated with SGA We conducted Spearman linear regression on correlates of SAS scores. The baseline SAS scores (mean =4.2 SD=3.9) correlated separately and significantly with log-IR (r=44,p=0.007) and FRS scores (r=0.60, p<0.001) independent of Body mass index (BMI). NIP severity was related to higher insulin resistance, while elevated cardiovascular risks were linked with more severe NIP. Higher SAS scores correlated significantly at P < 0.05 level with impaired neuropsychological performance on composite neurocognitive index and selected cognitive domains of visual perception, executive reasoning, spatial processing, abstraction and flexibility , and psycho-motor performance. AIMS scores correlated significantly with FRS scores (r-0.36, p =0.039) and memory (r=0.32, p=0.037). **Conclusion**: We demonstrate for the first time that NIP is related to cognitive impairment. and insulin resistance in the cohort of schizophrenia at risk of diabetes. We have highlight the link between modifiable cardio-vascular risks and EPS cluster. The finding that NIP exhibits dysregulated insulin signaling is consistent with previous studies on mpaired IR in Schizophrenia. Further studies of cross-talks of metaboic and cardiovascular signaling pathways and neuro-cognition deficits in schizophrenia may shed insights of neurobiological footprints of schizophrenia and open novel therapeutic approaches targetng insulin signaling in reducing the risk of motor system and cognitive impairment in both treatment resistant and first episode schizophrenia. Financially Supported by Stanley Medical Research Institute, MD, USA

No. 105

Psychosis as a Sequel After Mild Traumatic Brain Injury (Post-Concussion): A Case Report

Poster Presenter: Yam R. Giri, M.B.B.S.

SUMMARY:

BACKGROUND: Traumatic brain injury can increase the risk of psychosis. [1] This case report is about mild TBI that later may be associated with development with psychosis. CASE: 19 y/r old single Caucasian female, unemployed, domiciled with parents, with a recent TBI (concussion) status post car accident 4 weeks ago, with a history of depression and anxiety, was on Zoloft brought to ER activated by her friend as she posted on social media that she wants to hurt herself. She denied suicidal intent and plan. Denied past suicidal attempt. She also threatened to hurt her family, acted aggressively at home, acted bizarrely, and refused to live in the house. On presentation, she was paranoid that her brother and mother were against her and wanted to hurt her. She says she did not feel comfortable around her brother as he used substances. She exhibited thought disorganization, the mood was “anxious and sad”, affect was labile. Before admission she was living in a hotel for 7 days. She is afraid of her brother due to his substance abuse. She said that her father is her best friend, but she is afraid of him too but would not elaborate. She denies any kind of abuse by family. Reported she was raped 2 years ago by her boyfriend. Denied symptoms of PTSD and mania. She reported poor sleep and appetite. As per her father she had head trauma in a car accident a month ago. She had a brief loss of consciousness, was taken to ER, CT Scan of the head, and MRI of the brain was found normal. She possibly had a concussion. No past seizure was reported. Since then, her behavior started changing, became increasingly paranoid towards family, the mood was “angry and irritable”. Last 2 weeks she

became more paranoid, threatened family members, and acted irrationally. She had a history of depression and anxiety for the last 2 years was taking Sertraline 100 mg daily. She smoked marijuana on daily basis for the last 5 years about a blunt per day. Lab findings and imaging were normal. Neurology consults cleared her. After admission, she was started on Olanzapine and titrated up to 15 mg daily that resolved her psychosis. Clonazepam was tapered off before discharge (given for insomnia and anxiety). She agreed to go back to her family home upon discharge. Differential diagnosis was post-traumatic brain injury (TBI) psychosis, anxiety, and depression unspecified, and marijuana use disorder. History of TIB a month ago (concussion). CONCLUSION: Clinicians should be aware of psychosis that may occur after the traumatic brain injury. Furthermore, depression, anxiety, and personality changes may occur after TBI. Post-TBI psychosis can also manifest after 4-5 years and is reported in up to about 20 % of cases. [2]. Psychopharmacology and psychotherapy should be provided, and the patient should be followed as an outpatient. Further research is needed to examine the susceptibility of psychosis after TBI and find an effective treatment for post TBI psychosis.

No. 106

Psychosocial Functioning in First-Episode Psychoses: Cannabis Users Versus Non-Users

Poster Presenter: Miguel Bernardo, M.D.

SUMMARY:

Impairments in a broad range of cognitive domains have been consistently reported in some individuals with first-episode psychosis (FEP). The literature suggests that cognitive dysfunction is associated with prominent functional impairment. Thus, functional and cognitive impairment are a defining feature of psychotic disorders. A range of factors has been shown to influence functioning, including negative symptoms, cannabis use, cognitive performance and cognitive reserve (CR) (Mezquida et al., 2017; Amoretti et al., 2018). A recent study explore the possible mediating effects of CR on the relationship between cognitive performance or negative symptoms and functional outcome (Amoretti et al., 2020) but there are no studies analyzing whether there are differences in the impact of cognitive reserve between cannabis users and non-users. The sample of this study came from a multicentre, naturalistic and longitudinal project PEPs Project (Bernardo et al., 2013, 2019). For the current study we only included patients who belonged to the non-affective psychotic disorder diagnostic category and who were 18 years old or over. The mediation analyses were performed according to the principles of Baron and Kenny (Baron & Kenny, 1986). The overall functional outcome was assessed by means of the Functioning Assessment Short Test (FAST). A global cognition index (GCI) was obtained from the different cognitive domains (attention, executive functions, verbal memory and working memory). CR was entered in a path analysis model as potential mediators between negative symptoms or GCI and functioning in cannabis users and non-users. A total of 211 non-affective FEP patients were enrolled in this study. At two-year follow-up 139 patients were re-evaluated. The remainder of the sample dropped out of the study, mostly due to a loss of follow-up or refusal of re-evaluation. Eighty percent of cannabis consumers were male. There were no differences between groups in terms of negative symptoms ($p=0.345$) and GCI ($p=0.573$). Cannabis users were younger ($p=0.022$) and showed higher positive symptoms ($p=0.015$). In cannabis users, the relationship between negative symptoms or GCI and functioning was not mediated by CR at baseline neither at follow-up. In non-users, at baseline the relationship between negative symptoms or GCI and functioning was not mediated by CR. However, CR mediated the relationship between negative symptoms ($p=0.009$) and GCI ($p=0.002$) assessed at baseline and functioning at 2-years follow-up. Our results showed that CR plays a differential role in the outcome of psychoses according to cannabis users and non-users. In particular, CR mediated the relationship between cognition and negative symptoms and functioning at follow-up in non-users. Based on these results, we consider that in non-cannabis users the implementation of early interventions centered on CR stimulation, could be beneficial to preventing or reducing the impact of illness.

No. 107

RBP-7000 Monthly Risperidone Injection (180 Mg) Following Switch From Daily Oral Risperidone (6 Mg) in Stable Schizophrenic Patients

Poster Presenter: David Walling, Ph.D.
Co-Authors: Jahnavi Kharidia, Sunita Shinde, Malcolm Young

SUMMARY:

Background: Patients switched from oral medications to longer-acting injectable antipsychotics experience significantly reduced hospitalization rates and improved health-related quality of life. RBP-7000 is a monthly extended-release subcutaneous (SC) injectable suspension (90 and 120 mg) for the treatment of schizophrenia. This study assessed the safety, tolerability, pharmacokinetics, and efficacy of 180 mg RBP-7000 in patients with clinically stable schizophrenia. **Methods**: Twenty-five clinically stable patients with schizophrenia receiving either 5 or 6 mg of oral risperidone daily were stabilized for 5 days on 6 mg (3 mg twice daily) oral risperidone. Twenty-three received at least 1 injection and 16 received 3 monthly injections of 180 mg RBP-7000 (two 90-mg SC injections) in the abdominal region. The primary endpoint was the comparison of steady-state average plasma concentration (Cavg (ss)) of the total active moiety (risperidone + 9-hydroxyrisperidone) between oral and SC administrations. Clinical symptom assessments included Positive and Negative Syndrome Scale (PANSS), PANSS subscales, and Clinical Global Impression Scale (CGI-S) following stable oral dosing and switch to SC monthly RBP-7000. Safety assessments included adverse events and local injection site tolerability. **Results**: Steady-state was achieved by the end of the second dosing interval for RBP-7000 for risperidone, 9-hydroxyrisperidone, and total active moiety. Consistent with previous studies, plasma concentrations after Injection 1 approached steady-state levels. Similar Cavg (ss) of the total active moiety was achieved after a stable oral risperidone dose of 6 mg and the third monthly injection of 180 mg RBP-7000 (oral risperidone: 43.7 ng/mL; RBP-7000: 44.0 ng/mL). The maximum total active moiety level was slightly higher after RBP-7000 administration (70.6 ng/mL) compared with oral risperidone given as 3 mg twice daily (62.3 ng/mL). All clinical symptom assessments remained stable throughout the study. The mean changes from before first injection to end of study in clinical symptoms were 1.6, -0.8, 1.1, and 1.3 for PANSS total, positive, negative, and General Psychopathology scales, respectively, with no changes in CGI-S scores. RBP-7000 was considered safe and well tolerated with no unexpected safety findings. **Conclusion**: Monthly injections of 180 mg RBP-7000 administered as 2 SC injections of 90 mg provided similar average plasma concentration of the total active moiety compared with 6 mg/day oral risperidone given as 3 mg twice daily. All clinical symptoms assessments remained stable throughout the study prior to and after the switch from oral risperidone. Overall, the safety profile of 180 mg RBP-7000 was consistent with the established safety profile of RBP-7000 at lower doses and other risperidone products.

No. 108

Real-World Outcomes Associated With Cognitive Impairment Among Patients With Schizophrenia

Poster Presenter: Aditi Kadakia
Co-Authors: Qi Fan, Jason Shepherd, Hollie Bailey, Carole Dembek

SUMMARY:

Objectives: To investigate the association between cognitive impairment and hospitalizations, quality of life and satisfaction with life among patients with schizophrenia. **Methods**: A point-in-time survey was conducted between July and October 2019 via the Adelphi Schizophrenia Disease Specific Programme™ across the United States of America. Participating psychiatrists consulting in real-world clinical practice provided information on their next 10 consulting schizophrenia patients aged > 18 years. These patients were invited to complete a patient self-completion form (PSC) on a voluntary basis. Patients were stratified as mild or severe based on the level of cognitive impairment reported by their psychiatrist (normal, mild=mild; moderate, severe, very severe=severe). Multiple regression analysis was used to model the association between cognitive impairment and outcomes, adjusting for characteristics, age, gender, BMI, education, housing circumstances, employment, insurance type,

comorbidities and comedications. **Results**: Data were provided by 124 psychiatrists for 651 mildly and 484 severely impaired patients with schizophrenia; PSCs were completed by 349 mildly and 206 severely impaired patients. Severe cognitive impairment was associated with increased odds of hospitalization due to schizophrenia relapse since diagnosis (2.10 odds ratio (OR), $p=0.004$) and within 12 months prior to survey completion (1.95 OR, $p<0.001$) compared to mild impairment. Moreover, patients with severe cognitive impairment had poorer quality of life according to the EuroQoL 5-dimension (EQ-5D) Health Index (-0.085 coefficient, $p<0.001$) and EQ-5D Visual Analogue Scale (-6.24 coefficient, $p=0.041$) compared to patients with mild cognitive impairment. Severe cognitive impairment was also associated with lower overall life satisfaction according to the Quality of Life Enjoyment and Satisfaction Questionnaire (-8.13 coefficient, $p=0.006$) compared to mild cognitive impairment. **Conclusion**: An increase in cognitive impairment severity in patients with schizophrenia was significantly associated with increased hospitalizations due to relapse. Patients with severe cognitive impairment had significantly lower quality of life and overall satisfaction with life compared to patients with mild cognitive impairment.