

***Utilizing Lean to Significantly Increase Access  
for Adults in an Ambulatory Care Clinic at NYC  
Health + Hospitals/Kings County***

Renuka Ananthamoorthy, MD

Jenna Wood, LCAT



# Disclosures

- **No potential conflicts of interest to disclose**



## **Kings County, Behavioral Health Adult Outpatient Department (AOPD)**

The AOPD provides ambulatory, behavioral health services to the Brooklyn community. Primary referral sources include Kings County Behavioral Health Adult Inpatient Services, Comprehensive Psychiatric Emergency Program (CPEP), Partial Hospital Program, and Medical Clinics. Referrals are also accepted from outside agencies.

The clinic is open Monday through Friday from 8:00 a.m. to 6:00pm and averages 1000 visits per week.

Modalities offered include individual, family and group psychotherapy as well as medication management and assistance with concrete services. Clinical staffing is provided by a multidisciplinary group of psychiatrists, psychologists, social workers, nurses, nurse practitioners, case managers and peer counselors with assistance from administrative and clerical staff. We also serve as a teaching and training site for psychiatric residents, psychology interns, and psychology externs.



## Box 1: Reason For Action

Improving access to outpatient care is essential for:

- Laying the foundation for Managed Behavioral Healthcare and DSRIP objectives
- Serving our existing patients as well as newly insured managed care population
- Delivering a more patient-centered experience

With shifts in the current healthcare landscape, including need for integrated care and reduced inpatient length of stay, there is a growing demand for ambulatory behavioral health services. Therefore KCH BH ambulatory care needs to be equipped to receive patients in a timely manner. This requires a solid foundation, to include accurate data collection, sustainable scheduling, registration, billing, and flow processes.

***AIM:***

To maximize fill rate, reduce time to third next available appointment (TNAA), reduce no show rates. This project is initially focusing on the AOPD, WIC, and PCC. Once solidified, initiative will expand to all KCHC BH ambulatory services.

***TRIGGER:*** Patient arrives WIC for services.

***DONE:*** Patient receives appropriate intake appointment within five days.



## Box 1: Reason For Action (cont.)

- Decreased inpatient length of stay increases ambulatory demand
- Higher acuity in ambulatory care population
- Need to maintain financial viability in developing landscape
- Need to develop ability to bring patients into the appropriate level of care and move them through the continuum



## **Box 2: Current State Initial Challenges**

- **Culture Shift**
  - Improving flow means shifting away from a private practice model
  - Clinicians demonstrate a lack of trust in system's ability to support and maintain improvement initiatives (Past RIE's did not hold)
  - Poor morale contributes to high staff turnover
- **Third Next Available Appointment (TNAA) at 30 days – outside system target**
- **Lack of reliable data**
  - Data collection is manual and not validated
  - Inconsistent scheduling work flows



## Box 2: Current State (cont.)

### Kings County BH Access Metrics, August 2015

Metric	Baseline
Scheduling Accuracy	67%
TNAA	31
Fill Rate	73%
No Show	19%
Cycle Time	Not Available



## Box 2: Current State (Cont.)

### Sub-metrics

- Paper intake calendar that does not reflect true availability of AOPD intake slots. This leads to regularly missed open intake slots and unreliable calculation of TNAA
- Daily monitoring of intake calendar is absent
- Lack of direct scheduling, all internal referrals are scheduled by an RN
- Lack of trust between service areas that referrals will be appropriate
- Lack of clear referral criteria
- No double booking despite 50% intake no-show rate
- Intake slots do not meet demand

\* **Missed intake appointments:** Percent of unutilized, available intake slots per centralized intake template

\*\* **Inappropriately scheduled intakes:** Percent of intakes scheduled incorrectly per centralized intake template (ie. Entered at wrong time with a note)

\*\*\* **Ratio of TNAA tracked independently:** Ratio of weeks per month that WIC Super User independently tracks and submits accurate TNAA per centralized intake template

Metric	Baseline
Intakes scheduled by AIP	NA
Appropriate referrals from AIP	NA
Missed intake appointments*	Dec: 24% Jan: 10%
Inappropriately scheduled intakes**	Dec: 15% Jan: 5%
Ratio of TNAA tracked independently***	Dec: 0% Jan: 25%
Complete appointment requests from providers	Dec: 34% Jan: 46%
Double books assigned to providers according to SOW	Pending



## Box 3: Target State

- Data collection is automated and validated
- Consistent and effective scheduling work flows.

Metric	Baseline	Target
Scheduling Accuracy	67%	>95%
TNAA	31	<5 days
Fill Rate	73%	> 85%
No Show	19%	< 20%
Cycle Time	Not Available	< 60 minutes



## Box 3: Target State (cont.)

- **Centralized intake template**
- **Direct intake scheduling for internal services**
- **Implementation of standard scheduling processes**

\* **Missed intake appointments:** Percent of unutilized, available intake slots per centralized intake template

\*\* **Inappropriately scheduled intakes:** Percent of intakes scheduled incorrectly per centralized intake template (ie. Entered at wrong time with a note)

\*\*\* **Ratio of TNAA tracked independently:** Ratio of weeks per month that WIC Super User independently tracks and submits accurate TNAA per centralized intake template

Metric	Baseline	Target
Intakes scheduled by AIP	NA	28/month
Appropriate referrals from AIP	NA	95%
Missed intake appointments*	Dec: 24% Jan: 10%	<5%
Inappropriately scheduled intakes**	Dec: 15% Jan: 5%	0%
Ratio of TNAA tracked independently***	Dec: 0% Jan: 25%	95%
Complete appointment requests from providers	Dec: 34% Jan: 46%	95%
Double books assigned to providers according to SOW	NA	95%

## Box 4: Gap Analysis

Strengths	Weaknesses	Opportunities	Threats
Knowledge and experience about what works and what doesn't work	Manual data collection, not validated	Revise Soarian process	Managed care initiates 10/1/15
In-house clerical/billing experts	Inconsistent Soarian work flows	Standardize Soarian templates	Potential loss of reimbursement with Soarian Financials
Ability to learn from other sites effective practices	Variable Soarian template submission and tracking process	Centralized intake calendar	New scheduling processes require frequent support and intervention from leadership
TNAA reduced as result of rapid experiments	Centralized intake calendar on paper	Utilize electronic centralized intake template	
	AIP referrals are booked through WIC	Create system for AIP to book referrals directly into AOPD	



### *Phase One: Preparation*

#### Key Elements:

Creating a scheduling system that allows for accurate data collection, including scheduling procedures, staffing pattern, leadership structure.

#### Metrics:

- Intakes scheduled by AIP (*internal referrals*)
- Appropriate referrals
- Missed intake appointments (*maximizing intake scheduling*)
- Inappropriately scheduled intakes (*maximizing intake scheduling*)
- TNAA tracking (*accuracy and consistency*)
- Complete appointment requests from providers
- Double books assigned to providers according to SOW



### ***Phase One: Preparation***

#### **1A) Procedural Flow**

- Understand current clinic scheduling procedures and provider availability
  - Template review and tracking system
  - Procedures may vary in different clinic areas
- Define standardized process and roles
  - Learning from best practices
  - Includes all aspects of process, including:
    - Appointment requests
    - Appointment entry
    - Appointment completion
    - Template revision process
    - Provider/front desk/supervisor/clinic leadership roles

#### **1B) Standardize scheduling system access and privileges**

- Confirm all staff have correct Soarian access and privileges
- De-activate unnecessary providers
- Standardize activity types



### ***Phase One: Preparation***

#### **1C) Training**

- Train the trainer model – access team
- Develop system experts (clinic administrator, template manager, super-users)
- Train all involved parties in necessary tasks (schedulers and providers)

#### **1D) System Cleaning (Implementation Prep)**

- Revise all provider templates
- Revise groups for daily scrubs and oversight
- Activate standard activity types



### *Phase Two: Implementation*

#### **Key Elements:**

Implement new procedures, transition to centralized scheduling, build fill rate calculator, system maintenance. Utilize data to understand demand and target access metrics.

#### **Metrics:**

- Soarian Compliance (*accurate data*)
- TNAA (*intakes - third next available appointment*)



### ***Phase Two: Implementation***

#### **2A) Roll out new procedures and standard work**

- Scheduling procedures
- Template revision
- Generic templates (walk-in clinic)
- Consider staffing hours and coverage (front desk and providers)
- Final double book SOW
- Super User daily monitoring and oversight
- TNAA tracking and daily reports

#### **2B) Centralized Scheduling**

- Create Centralized intake calendar informed by demand data
- Centralized intake calendar training for schedulers, providers, and supervisors
- Complete transition from paper calendar to centralized intake template
- Address distribution of AIP/high risk intakes assigned to providers
- Direct scheduling from internal services
  - Clear admission and exclusion criteria
  - Identify staff responsible for direct scheduling
    - Confirm correct access
    - Training
    - Monitoring system





### ***Phase Two: Implementation***

#### **2C) Fill Rate Calculation**

- Implement Fill Rate Calculator – improved accuracy based on available/accurate data
- Create SOW for weekly update

#### **2D) Maintenance Prep**

- Create maintenance guide for template manager (Including template revisions, monthly monitoring, template deactivation as needed)
- Visual Management Board (daily & weekly metrics, communication)



### ***Phase Three: Maintenance and Continued Improvement***

#### **Key Elements:**

Daily monitoring and oversight is managed by local clinic leadership. Solid foundation allows for targeting of next access steps – continued improvement.

#### **Metrics:**

- Fill Rate
- No Show Rate



### ***Phase Three: Maintenance and Continued Improvement***

#### **3A) Maintenance**

- Access team continues to provide weekly and monthly reports to monitor and inform next improvement efforts
  - Soarian compliance
  - Clinic fill rate
  - Individual provider fill rates

#### **3B) Fill Rate & No Show Rates**

- Weekly reports inform supervision and clinic leadership
- Beginning with outliers to understand best practices and opportunities for improvement



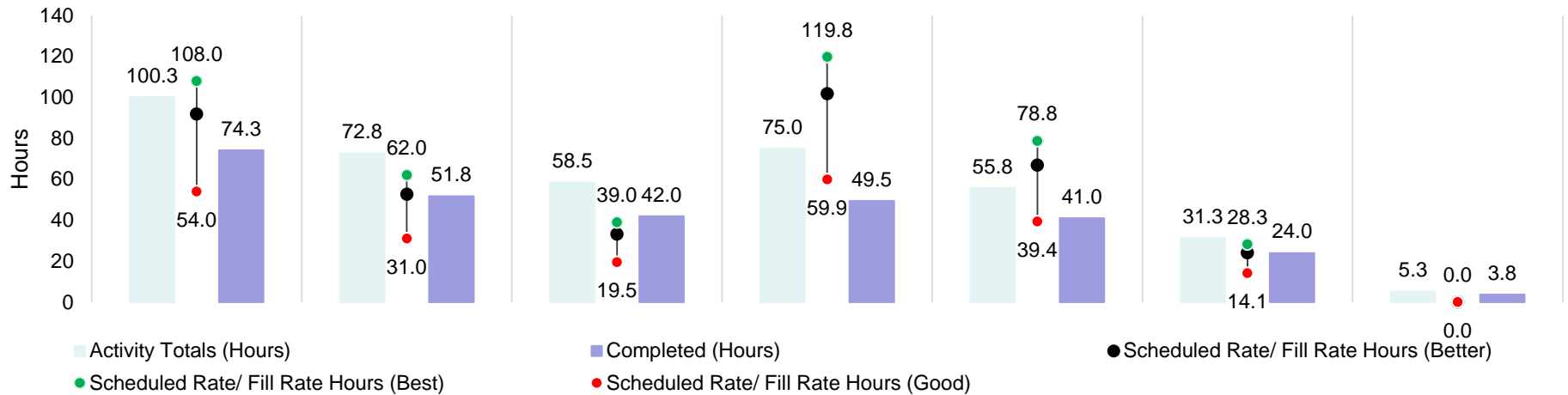
## Box 6: Rapid Experiments

Experiment	Expected Result	Actual Outcome	Follow up
Standardized appointment completion and scheduling process	Increased scheduling accuracy	Scheduling accuracy increased from 68% to 96%	Implement new scheduling procedure and finalize roles
Double booking intakes 3/days per week	Reduced TNAA	TNAA reduced to target (<5 days)	Implement double booking 5 days/week
Centralized intake calendar (paper)	Utilization of all available intake slots	Intake utilization increased from 76% to 90%	Continue with centralized intake calendar and move to Soarian

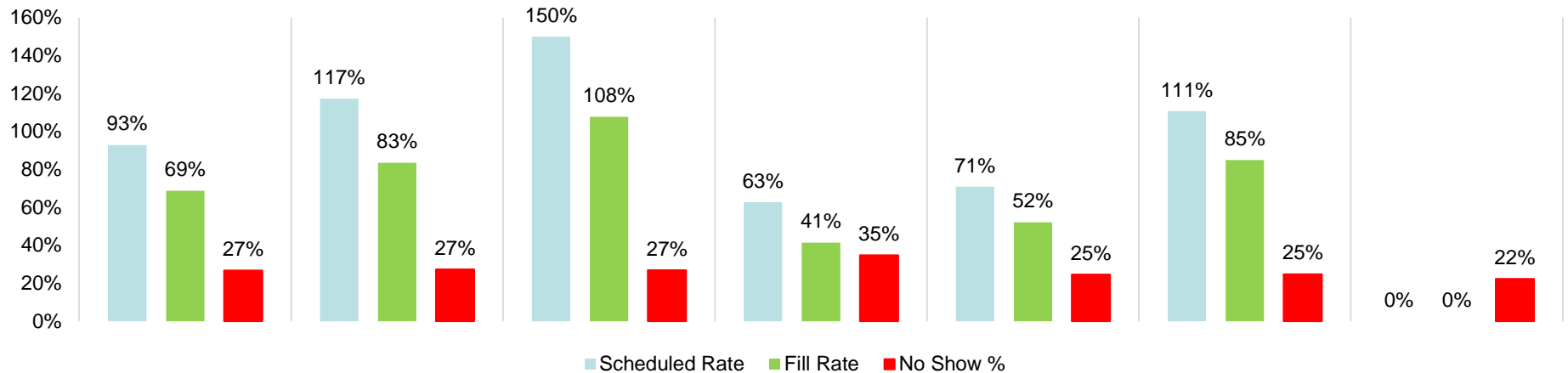


## Box 6: Rapid Experiments (cont.)

Provider Scheduled Rate and Fill Rate: July 2016



Provider Scheduled Rate, Fill Rate and No Show %: July 2016



## Box 7: Completion Plan

Phase	What	When
Phase One - Preparation		
1A	Clarify process for utilizing OPD encounter forms for multiple services in one visit is aligned with managed care changes in effect 10/1/15	9/30/15
1A	Template revision process	10/6/15
1A	Template submission – submit all provider templates with start time, end time, and activity type	10/14/15
1A	Compile centralized template Sharepoint folder with tracking	10/21/15
1A	Follow Up IM Nurse Soarian access and process clarification	10/16/15
1A	Update encounter forms (ICD-10, two provider start/end times, clarify activity types)	10/30/15
1B	Confirm all staff have correct Soarian access and privileges	9/25/15
1B	PCA Unity Access	10/9/15
1B	Fix scheduler Soarian levels	3/11/16
1C	Soarian training for OPD PCA's	9/25/15
1C	Soarian training for Super Users and Template Managers	10/9/15

## Box 7: Completion Plan (cont.)

Phase	What	When
<b>Phase One - Preparation</b>		
1D	Revise templates in Soarian	10/30/15 12/7/15
1D	Revise IM template to 10 minute slots	10/30/15
1D	Activate med/psych activity for PCC NP's	10/30/15
1D	Revise current AOPD Soarian resource templates (correct activities, rules, quotes, start/end times, blocks)	1/29/16
1D	Revise AOPD groups – de-activate unnecessary providers	1/29/16
<b>Phase Two - Implementation</b>		
2A	Revision of WIC Soarian process	10/30/15
2A	Train WIC schedulers on centralized intake template	3/4/16
2A	Revise OPD appointment request email system	3/8/16
2A	Discuss PCA rotation hours between PCC and WIC with David, Kisaan, and Mr. Hill.	3/9/16
2A	Implement generic WIC template.	3/21/16

## Box 7: Completion Plan (cont.)

Phase	What	When
<b>Phase Two – Implementation</b>		
2A	Final double book SOW	3/7/16
2A	SOW for adjusting intake template for planned provider absences (have administrator initial SR's)	3/14/16
2A	Clear SOW for scheduled provider absences and in-house coverage (rescheduling appointments, front desk process, provider communication)	4/11/16
2A	WIC/Centralized Intake Template Super-User SOW	4/18/16
2A	Template request and revision SOW roll-out	4/18/16
2B	Create Centralized Soarian intake calendar (addressed in scheduling workshop) ***	2/2/16
2B	Centralized intake template informed by data	3/3/16
2B	Clarify OMH regulations regarding treating MR patients in AOPD (include considerations for mild/moderate/severe & dual diagnosis)	3/8/16
2B	Submit meeting schedule and plan to achieve 3/16 targets	3/8/16
2B	Track number of AIP referral no-shows & reschedules to inform AIP staff identification and reschedule process	3/31/16





## Box 7: Completion Plan (cont.)

Phase	What	When
<b>Phase Two – Implementation</b>		
2B	Communicate intake calendar transition plan to providers in Monday staff meeting (standardized intake slots, roll out date)	2/29/16
2B	Centralized intake calendar training (merged with centralized scheduling workshop)	3/3/16
2B	Discuss distribution of AIP/high risk intakes assigned to providers – communicate with providers	3/7/16
2B	Update provider templates for generic intake template transition	3/11/16
2B	Track weekly updates towards 3/16 targets in AOPD leadership meeting	Weekly through 3/16/16
2B	WIC schedulers place future intakes on Soarian intake template (begin phasing out paper calendar)	3/14/16
2B	Finalize exclusion criteria and exception process for direct referrals from AIP into AOPD (include patient address, higher level of care, & MR)	3/31/16
2B	Identify AIP staff to schedule AIP referrals (interim plan until staffing permits SW supervisors to assume task).	3/31/16
2B	Complete transition from paper calendar to centralized intake template	4/18/16
2C	New fill rate calculation	10/30/15

## Box 7: Completion Plan (cont.)

Phase	What	When
<b>Phase Two – Implementation</b>		
2C	Update new fill rate calculator	1/29/16
2D	Create maintenance guide for template manager (new template submission process, monthly checks for duplicate activities, process for de-activating providers)	1/29/16
2D	Visual Management Board for WIC, 4 <sup>th</sup> floor, & 5 <sup>th</sup> floor (daily metrics, weekly metrics, communication)	4/7/16
2D	Template management and monitoring hand-off	4/25/16
<b>Phase Three – Maintenance and Continued Improvement</b>		
3A	Access team to distribute weekly provider fill rate reports	8/8/16
3B	Clinic leadership and supervisors develop strategies to target fill rate and no show rate	9/16/16



## Box 8: Confirmed State

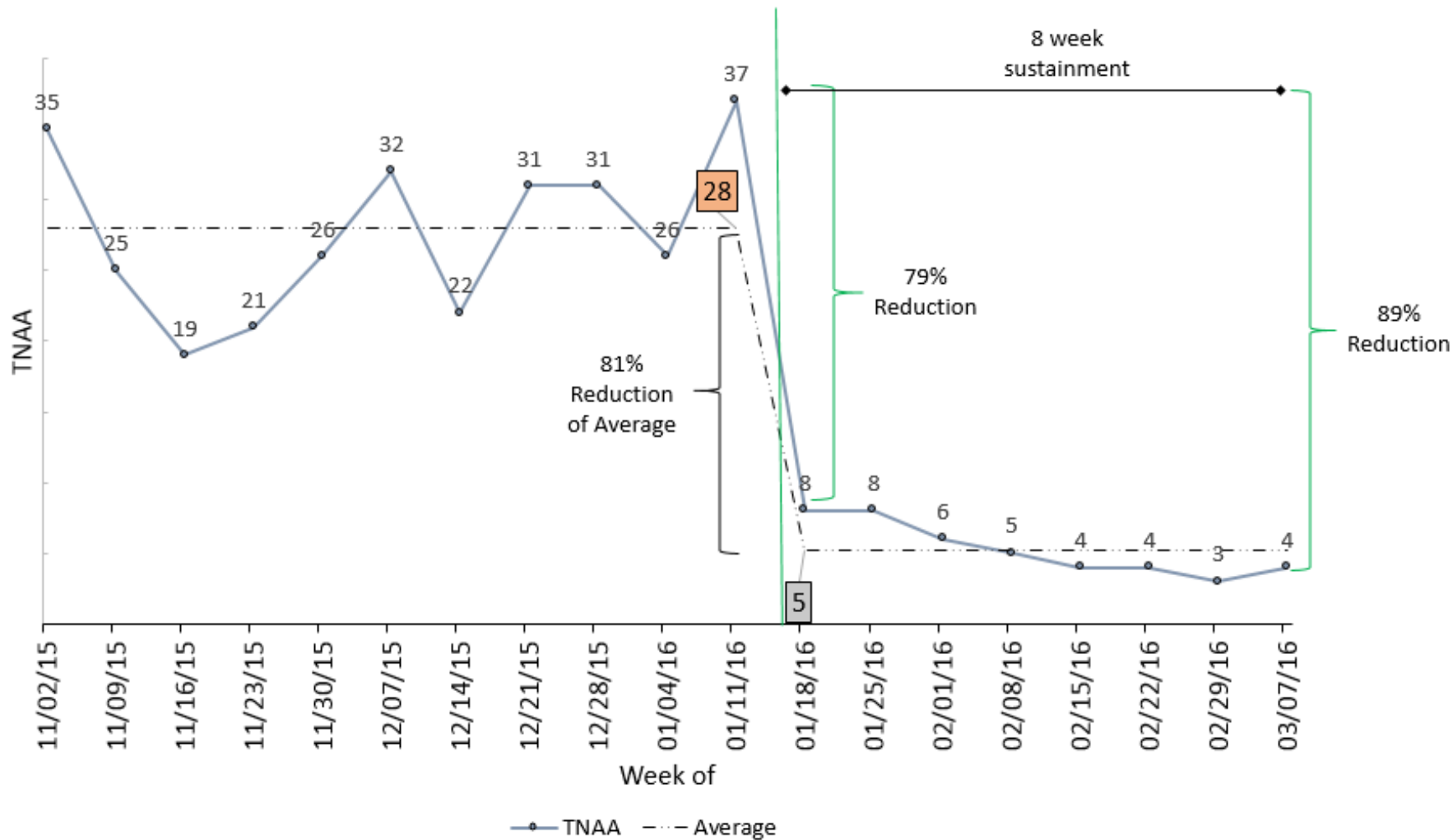
Metric	Baseline (1/16)	Target	Status		
			5/16	6/16	7/16
Intakes scheduled by AIP	NA	28/month	33	39	22
Missed Intake Appointments	Dec: 24% Jan: 10%	<5%	1%	5%	1%
Inappropriately Scheduled Intakes	Dec: 15% Jan: 5%	0%	0%	0%	0%
Ratio of TNAA tracked Independently	Dec: 0% Jan: 25%	95%	100%	100%	100%

## Box 8: Confirmed State (cont.)

Metric	Baseline	Target	Status											
			8/15	9/15	10/15	11/15	12/15	1/16	2/16	3/16	4/16	5/16	6/16	7/16
Soarian Compliance	67%	> 95%	72%	84%	98%	98%	98%	99%	97%	100%	100%	100%	99%	98%
TNAA	31	< 5 days	25	30	29	25	29	20	5	4	8	8	6	7
Fill Rate	73%	> 85%	68%	66%	73%	47%	51%	55%	62%	61%	59%	55%	53%	54%
No Show	19%	< 20%	21%	26%	28%	30%	30%	30%	28%	30%	30%	32%	30%	29%
Cycle Time	Not Available	< 60 minutes	NA	NA	NA	55	55	55	60	58	55	53	51	46

# Kings County Hospital Behavioral Health OPD: Weekly TNAA (Nov '15 - Feb '16)

Lean Intervention – Go Live



## Box 9: Insights

### Culture Shift

Access to care involves all aspects of the patient experience, from referral to discharge. Collaboration and support of every team member is essential to address this effort, including clinicians, trainees, clerical staff, supervisors, and senior leadership.

Addressing access is not a one-time intervention, but rather an ongoing approach to service delivery and design.

We must maintain the ability to analyze capacity and demand and adjust accordingly in a fluid manner.



# Next Steps

- **Sustainment**
  - Daily, weekly, and monthly data to inform individual supervision
  - Problem solving: fill rate and no show rate
- **Growth**
  - Expand access initiative to other programs



<p><b>1. REASON FOR ACTION</b></p> <p>What is the reason for this event?</p> <p>What is the burning platform?</p> <p>What is the real issue?</p>	<p><b>4. GAP ANALYSIS</b></p> <p>What is the primary root cause for the issue (this is answered by asking "WHY" five times)?</p> <p>This is what is keeping you from getting to your solution.</p> <p>Problem (or Gap)      Actionable Root Cause</p>	<p><b>7. COMPLETION PLAN</b></p> <p>There should be no more than 6 items on this list that you were unable to complete this week.</p> <p>What (action has to be performed): Who (is the person responsible): When (does it have to be completed by day or date): Where (only if this is appropriate):</p>
<p><b>2. CURRENT STATE</b></p> <p>The Initial State tells us where we stand now.</p> <p>It is a reflection of what is happening at the present time.</p> <p>It is the direct observation of something you have seen.</p>	<p><b>5. SOLUTION APPROACH</b></p> <p>These are the hypotheses and they should be very real outcomes because we will be testing them.</p> <p>If we do...      then we expect...</p> <p>Solution (Do's)      or      Expected Results</p>	<p><b>8. CONFIRMED STATE</b></p> <p>How do you know that what you have put in place is working? You have to measure it.</p> <p>For the next 30, 60, 90 days, you will measure and align your Confirm State with your Target State to be sure that you are accomplishing what you set out as your goal.</p> <p>Base      Target      Actual</p>
<p><b>3. TARGET STATE</b></p> <p>The Target is what you would like the new way or process to look like.</p> <p>How much better did we make it from the Initial State, 50, 75, 100%?</p>	<p><b>6. RAPID EXPERIMENTS</b></p> <p>This is where we will test all of the hypotheses we have developed in the Solution Approach above.</p> <p><u>Plan</u>    <u>Expected Results</u>    <u>Actual Results</u>    <u>Follow-Up</u></p>	<p><b>9. INSIGHTS</b></p> <p>Here is where you put your thoughts:</p> <ul style="list-style-type: none"> <li>- What did you learn?</li> <li>- How has it helped you see waste?</li> <li>- What helped, What hindered you?</li> <li>- What worked, what didn't work?</li> <li>- What would you change?</li> <li>- What can be done better?</li> </ul>

