NM-Central DuPage Hospital Behavioral Health Services Inpatient Admissions Revamp

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Background

DEFINE PHASE

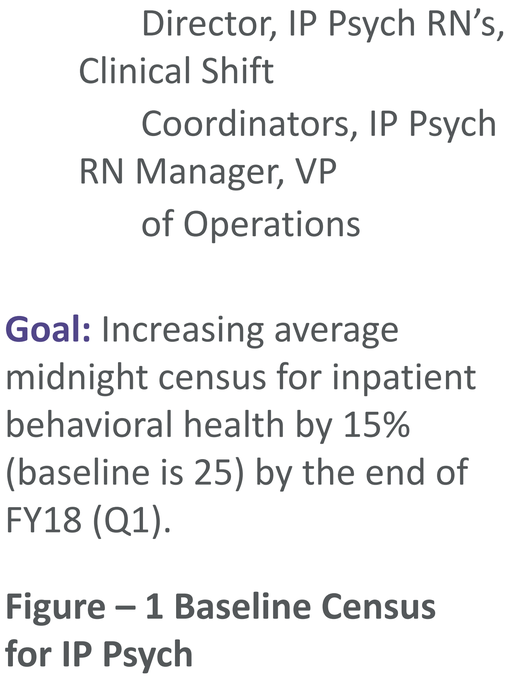
Problem: In 2015, Central DuPage Hospital increased its inpatient psychiatric bed capacity from 18-48 beds. The 30 bed expansion created workflow gaps and throughput problems which led to the department not meeting budgeted census goals of 34 patients/day. Community demand for services was not being met and operating margins were not acceptable.

Scope:

- All Inpatient Psych units (total of 48 beds) including the pediatric department
- Patients admitted from NM and non-NM hospitals and emergency departments, MD offices, and other facilities
  - Team Members: ED Case Therapists (consult team), ED Consult Team Director, IP Psych RN's, Clinical Shift Coordinators, IP Psych RN Manager, VP of Operations

Goal: Increasing average midnight census for inpatient behavioral health by 15% (baseline is 25) by the end of FY18 (Q1).

Figure – 1 Baseline Census for IP Psych



Methods

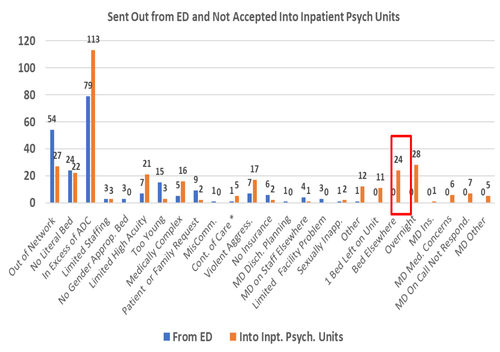
MEASURE PHASE

Current State and Baseline Metrics

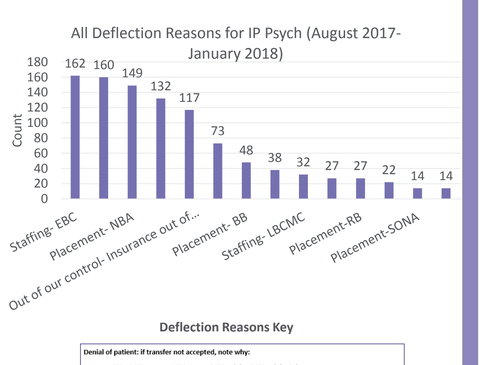
- Completion of a Current State Process Map to identify opportunities with development of an "ideal state" map
- Reviewed Voice of the Customer from the ED Case therapists updated "ideal state" workflow
- Created new categories to collect data on admission deflection reasons.
  - Impact: Went from 25 categories to 14 categories with standard definitions for the team to categorize, and fewer buckets to choose from resulting in less variability of responses

Figures – 2 Previous and New Data Tracking Categories for Deflection Reasons

Pre-Intervention



Post-Intervention



Deflection Reasons Key

Denial of patient: if transfer not accepted, note why:

Unit : □1CTR □3CTR Acute □3CTR Gero □5CTR Adult □5CTR Adol □Other

□ Staffing Barrier:
- □EBC (Exceeded Budgeted Capacity and could not recruit staff)
  - □RN or □Psych Counselor/Sitter
- □LBCNA (Less than Budgeted Capacity and could not recruit staff)
  - □RN or □Psych Counselor/Sitter
- □LBCWA (Less than Budgeted capacity with acuity issue)
  - □LBCWB(w/behavior; aggressive/violent: sexually acting out, DD, Legal issues/sex offender/criminal/ankle device)
  - □ LBCMC (medically complex: requires CSC/char
- □Placement Barrier (SUR—Specific Unit Required and):
  - □RB (Room/s blocked-and no other unit is app)
  - □BB (Bed/s blocked and no other unit app, placement issue defined as isolation)
  - □GSB (Gender Specific Bed—wrong gender bed, room switch not possible)
  - □SONA (Single Occupancy Not Available—pt requires single occupancy situation)
  - □NSA (No bed w/side rails available—pt requires side rails and none available)
  - □NBA (No bed available—every bed on unit occupied and no other unit is app)

□Out of our control
- □insurance out of network
- □Too Young

□Other: Describe

ANALYZE PHASE

Root Cause Methodology: About 50% of the deflections related to Staffing EBC (Exceeded budgeted capacity of 36 and could not recruit staff)

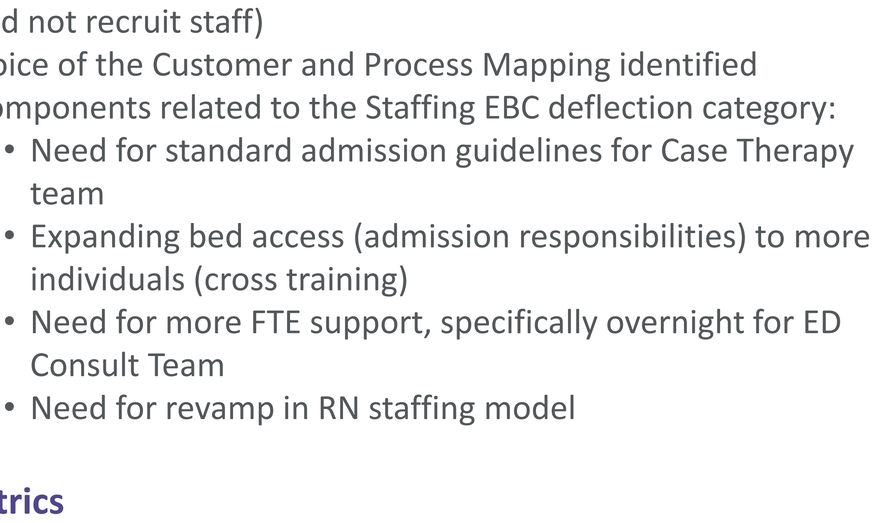
- Voice of the Customer and Process Mapping identified components related to the Staffing EBC deflection category:
  - Need for standard admission guidelines for Case Therapy team
  - Expanding bed access (admission responsibilities) to more individuals (cross training)
  - Need for more FTE support, specifically overnight for ED Consult Team
  - Need for revamp in RN staffing model

Metrics

Outcome Metrics: Midnight Average Daily Census for Inpatient Psych Units

Process Metrics: 100% ED consult team and IP Psych Clinical Shift Coordinators trained on new admission guidelines and updated communication workflow

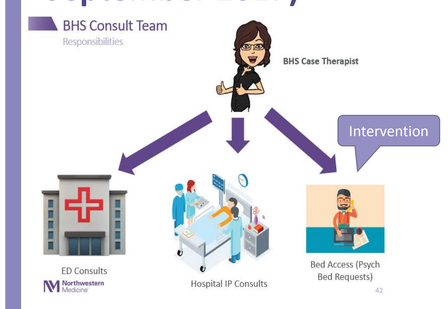
Bed Request Hurdles for Admission

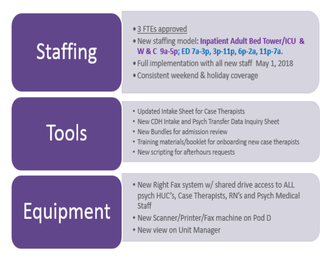


Results

IMPROVE PHASE

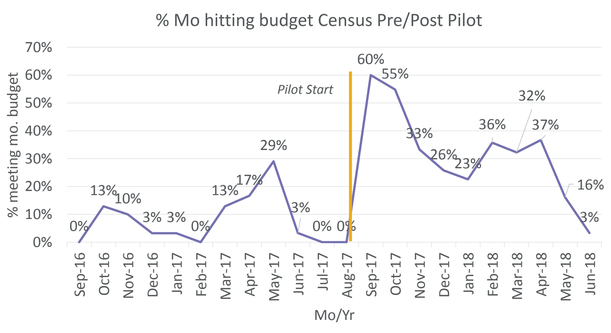
Interventions: (Soft Go-Live: August 2017; Full Go-Live: September 2017)



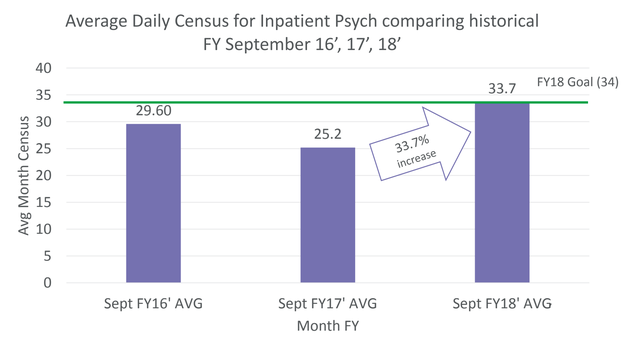


Education and Training:
1.) Trained 100% of the ED Case Therapists (Consult Team) and Clinical Shift Coordinators on new workflow and admission criteria which included a department developed bundle for review stratification
2.) Table top exercises to review IP Psych bed request scenarios by ED Consult Team and IP Psych RN's
3.) Daily Huddles for 1 month post go-live to PDCA (Plan, Do, Check, Act) any updates from feedback

Figures – 3 Pre-Post Data for IP Psych Average Daily Census



Outcome Metrics	Pre Pilot (09/16-06/17	Post Pilot (09/17-06/18)	Statistical Significance (95% confidence)?
Percent/mo hitting budgeted census of 34	9%	32%	Yes
Census Average (combined units)	28.16	32.18	Yes



Figures – 4 CDH Inpatient Psych Focus Measure Performance Improvement

CDH Inpatient Psych Focus Measures	Odds Ratio	FY18 Baseline Rank	FYTD	Rank Change
Likelihood to Recommend	-	70	75	+5
Degree staff worked together to care for you	5.0	62	64	+2
Speed of Admission Process	3.0	12	31	+19
Helpfulness of the Nurses	2.5	65	69	+4
Helpfulness of Social/Recreational Activities	1.9	53	49	-4

- All questions are higher than previous FYTD
- **Speed of Admission Process improved 19 percentile points**
- Not meeting Target, but higher than previous FY TD

Source: EDW
FYTD: Sept17-June18

CONTROL PHASE

Figures – 5 Control Plan

Control Measurement							
Metric	**Goal**	**Control Limit**	**Review Process**	**Frequency**	**Process Owner**	**Threshold for Action**	**Recommended Action Steps**
Average Daily Census for Units 1C, 3C, and 5C (monthly average)	34	29	• If below control for 3 days in a row: schedule urgent team meeting • Review at monthly ED meeting • Review with Inpatient Admissions team monthly (Dan, Jane, 1 CSC)	Weekly/ Monthly	Dan Doebler Jane Ozinga	2 month below the control limit	• Review process map with ED Case Therapy team and Psych RN's. Discuss: • Communication barriers • Throughput issues • Physician acceptance problems • If below limit send fax/call hospitals letting them know about open beds

Conclusions

The interventions completed were achieved through a multi-disciplinary team effort including the ED BHS Consult team, IP Psych clinical teams including RN's and Physicians and also a devoted executive sponsor. Next steps identified are to improve communication tools through the utilization of EPIC builds (adding and removing bed blocks and a comment field for cross unit communication) as well as a predictive model and analysis for RN staffing on 5CTR to remove potential bottlenecks of throughput. Key Learnings:

- The ED Case Therapist team had great engagement from their management team to expand their bandwidth to take on more tasks along with constant feedback and opportunities to update the workflow.
- The Executive Sponsor, VP of Operations, was an essential partner in messaging our objective and garnering support from various clinical teams.
- As Behavioral Health Services continue to be in demand more innovative, seasonal variation in workflows must be addressed so a department can easily flex as needed.
- The EMR is essential to capture data but also to be a communication tool for a department that has a long list of criteria that must be met prior to admission. ED consult teams are being tasked with bed management functions and it is essential to have appropriate technology and EMR support to garner efficient transfers.

D M A I C