Creating Operational and Safety Metrics for a Consultation-Liaison Psychiatry Service

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INTRODUCTION

Data that demonstrates productivity, value or quality in clinical practice are high priority in healthcare systems but are less developed for the field of CL Psychiatry. Recent work has focused on qualitative metrics (Kovacs et al., 2021) and service effectiveness (Wood, et al., 2014) but there is no consensus on what operational or safety metrics CL teams should track. Without reliable metrics, it can be challenging to illustrate daily CL service operations or provide quantitative data to justify expansion of staffing to hospital leadership.

PURPOSE

In response to an administrative need, our service started an ongoing collaboration with departmental leadership, administrative support staff, nursing, and medical center information technology (MCIT) to develop CL operational and safety metrics.

METHOD

After creating a spreadsheet of target metrics and agreeing on metric definitions and data sources, our workgroup met with MCIT to create and validate 15 monthly and 8 daily metrics to describe our operations (see Table 1). These metrics cluster into the following groups: clinical encounters; behavioral emergency response activations (BERTs); proactive Addiction CL service; length of stay; bedside safety huddles for patients with recent violence; behavioral acuity highlights (ex: 1:1s for suicide risk); and “CL Dwell Time.” CL Dwell Time is defined as the time from medical clearance to discharge to inpatient psychiatry for patients requiring psychiatric admission after medical stabilization. From this metric set, we selected key metrics to display on a quarterly basis to senior hospital leadership in the form of a “metrics card” to parallel our med-surg colleagues who present high reliability organization score cards (See Figure 1).

TABLE 1: List of Metrics Created

Daily Metrics	Monthly Metrics
• CL List Patient Census • New Consult Orders • # Orders for Suicide Precautions • # Orders for Elopement Precautions • Total Behavioral Emergency Response (BERT) Activations • Total CASAC SW Initial (notes) • Total CASAC SW Encounters (notes) • Number of Positive TAPS Scores	• Total New CL Consults (notes) • Total CL Encounters (notes) • Ave Time: Consult to Discharge (days) • Ave Time: Admit to Consult Order (days) • Ave LOS: Admit to Discharge (days) • % Consults Completed within 24hrs • # of Patients Transfer to Psychiatry • Average CL Dwell Time (Days) • Total Orders for Restraints • % Telemedicine v In-person • Total Number of BERT • Total CASAC SW Initial (notes) • Total CASAC SW Encounters (notes) • Number of Patients with Positive TAPS • Factors contributing to BERT activations

FIGURE 2: Staffing vs Service Demand Trends

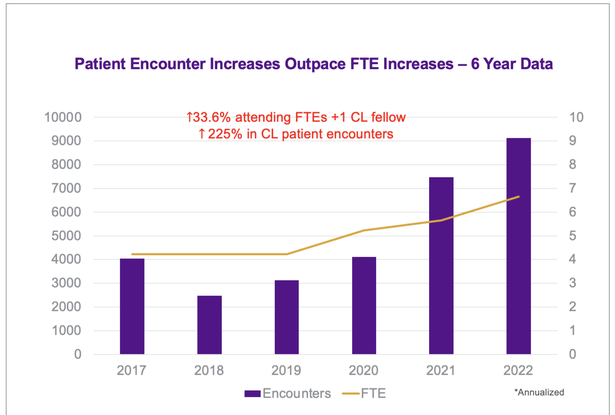

FIGURE 1: Sample Metrics Card* for Meetings with Hospital Leadership

Status Report Date: sample

Metrics

Metric	Detail	Month 1	Month 2	Month 3
CL Encounters	Consults – new / total	150 / 750	150 / 773	125 / 725
	% Seen w/in 24 hrs	90	90	90
BERTs	Total	**70**	**60**	**50**
	Daily Avg (min/max)	**3 (0/6)**	**3 (0/5)**	**2 (0/4)**
	# Unique Patients	**50**	**45**	**35**
Addiction CL	SW Encounters / Unique Patients	140/100	140/100	140/100
	% TAPs Positive	20%	25%	25%
	% Alcohol	75%	65%	70%
	% Drug	25%	35%	30%
Length of Stay (average time) days	Admission to CL Consult Order (days)	7	5	7
	CL Consult to Discharge (days)	4	3	4
	Admission to Discharge (days)	11	8	11
Safety Huddles (BERT RN lead)	Total	80	70	80
	Daily Average	2.5	2.3	2.5

Department Leadership	Name
Department Chair	Dr. A. Bee
Service Chief	Dr. C. Dee
CL, Director	Dr. E. Eff
CL, Associate Director	Dr. GH Eye
Director of Addiction CL	Dr. J. Kay
Sr Director, Nursing	L. Em, RN
BERT Nurse Manager	N. Oh, RN

Metric	Detail	Quarter 1	Quarter 2
Total Average Dwell Time	# patients	19	15
	All psychiatric discharges (median days)	4.7 days	2.2 days
CL Patients Admitted to Unit 1	# patients to Unit 1	10	5
	Dwell time (median days)	3.1 days	0.97 days
	% Unit 1 / Total	50%	33.33%
CL Patients Admitted Units 2-4	# patients to Unit 2 / Unit 3 / Unit 4	2 / 2 / 5	1 / 1 / 6
	Dwell time (median days)	6.2d / 7.5d / 6.4d	1.1d / 3.4d / 2.9d
	% of Total	10.5% / 10.5% / 26.3%	6.7% / 6.7% / 40%
Psychiatric Admission to Medicine (DC before bed avail)	# patients	1	2
	Dwell time (median days)	5.2 days	3.3 days
	% of Total	5.3%	13.33%

Acuity Highlights (Last Month)

Patients > 3 BERTs (total/month)	4
Violent Restraint Orders (total/month)	1
Suicide Prec. Orders (Ave/day)	3
Psychiatric Transfers (total/month)	6

* Sample metrics & simulated data depicted, not actual data

FIGURE 3: Factors Contributing to BERTs

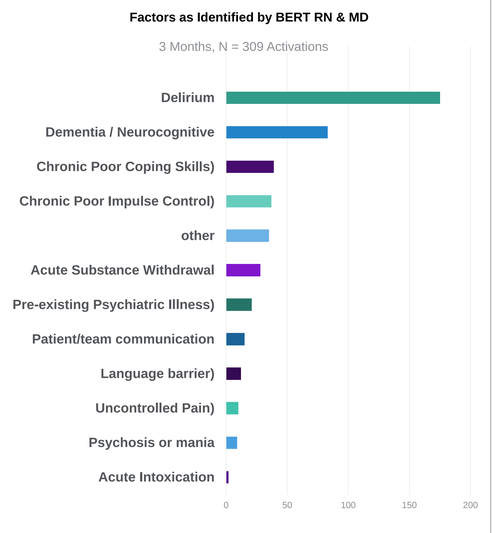

Chart courtesy of E. Fries; Data Source: BERT RN Clinical RedCAP database

KEY RESULTS

- ✓ Our CL service was requested to join the other services in presenting operational and safety data at quarterly meetings with senior hospital administration.
- ✓ These metrics allowed for study of emerging trends in general psychiatric consultation, transfers of medically cleared patients to psychiatric units, and routine CL service operations.
- ✓ We demonstrated that increasing consultation encounters outpaced service line (FTE) adjustments (Figure 2). This data was used to request and receive expansion of faculty FTE and fellowship lines.
- ✓ The metrics also allowed for deeper dives in multi-year trends in behavioral emergencies and violence in the hospital: BERT activation frequency; unique patients with BERTs; BERTs per patient; BERTs by medical unit or service; LOS for patients with highest BERT frequency; and reasons for BERT activation (Figure 3). This data led to interventions designed to reduce BERTs for specific populations and medical units.

CONCLUSIONS

The creation of comprehensive operational and clinical metrics has provided our CL team with the ability to analyze clinical, acuity, and safety trends. This data has led to improved advocacy for service needs (i.e. expansion of FTE and fellowship lines), data-informed communication with hospital leadership, stronger collaboration with BERT nursing, and identification of clinical care gaps needing quality improvement interventions. Future directions for this project may include: concordance between reason for consult and ultimate psychiatric diagnosis, BERT and CL patient demographics, and factors affecting hospital length of stay.

REFERENCES

1. Kovacs Z, Asztalos M, et al. Quality assessment of a consultation-liaison psychiatry service. BMC Psychiatry. 2021 Jun 1;21(1):281.
2. Wood R, Wand AP. The effectiveness of consultation-liaison psychiatry in the general hospital setting: a systematic review. J Psychosom Res. 2014 Mar;76(3):175-92.

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