Implementation of a Standardized Order Set for Psychotic Patients Boarding in the Psychiatric Emergency Services Area

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Introduction

There are more than 450 million people living with mental illness worldwide, with only one psychiatrist and 16.4 mental health beds per 100,000 population (World Health Organization [WHO], 2018). Changes within the U.S. healthcare system, with the closing of state psychiatric facilities and a decline in outpatient resources, have left many patients with no option other than the emergency department (ED) when in mental distress or crisis (Kutscher, 2013; Nolan et al., 2015). Approximately 1 in 8 ED visits is for a patient with a mental health disorder (Weiss et al., 2016). A consequence of this is the need to admit acutely ill patients to the scarcely available inpatient psychiatric beds – resulting in the practice of ED boarding. Currently there is a lack of defined boarding practices, resulting in psychiatric patients receiving substandard care (Nolan et al., 2015).

Purpose and Aims

Determine if the implementation of a standardized order set improves the care of boarding psychotic patients, decrease inpatient length of stay (LOS), and improve ED throughput.

1. Resolution of two target psychiatric symptoms from ED presentation to final disposition
2. Decrease inpatient LOS and, ultimately, PES LOS

Methods

Design: Pre- and post-intervention design that used quantitative descriptive statistics
Setting: Level I trauma center located within a Mid-Atlantic urban, academic hospital
Sample: Adult patients that presented to the PES with active psychosis due to a primary psychiatric illness and required inpatient admission.

References

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- World Health Organization. (2018). Mental Health Atlas 2017. Retrieved from http://apps.who.int/iris/bitstream/handle/10665/272735/9789241514019-eng.pdf?ua=1.

Intervention

Standardized order set implemented immediately following the decision to admit to begin treatment.

PES- Acute Psychosis Boarding Orders

Scales
- ☐ Mini-Mental Scale

Nursing Intervention
- ☐ Notify Provider / House Officer

Standing Neuroleptics
- ☐ Standing Haldol (default 5mg daily)
- ☐ Standing Zyprexa Zydis (default 5mg qhs)
- ☐ Standing Risperdal M-Tab (default 1mg daily)

PRN Behavioral Medications
- ☐ PRN Ativan (default 2mg daily PRN)
- ☐ PRN Risperdal M-Tab (default 1mg once PRN)
- ☐ PRN Haldol (default 5mg once PRN)
- ☐ PRN Zyprexa Zydis (default 5mg once PRN)

Nicotine Replacement
- ☐ Nicotine replacement order panel

Extrapyramidal Symptoms
- ☐ Benadryl Injection (default 50mg IM once PRN)
- ☐ Standing Cogentin (default 1mg daily)

Cardiac Studies
- ☐ ECG 12 Lead

Target symptoms: sleep, energy/concentration, panic attacks, paranoia, appetite, anxiety, delusions, racing thoughts, suicidal ideation, suicide plan, homicidal ideation, hallucinations, cognition, and recent aggressive behavior

Sample Characteristics

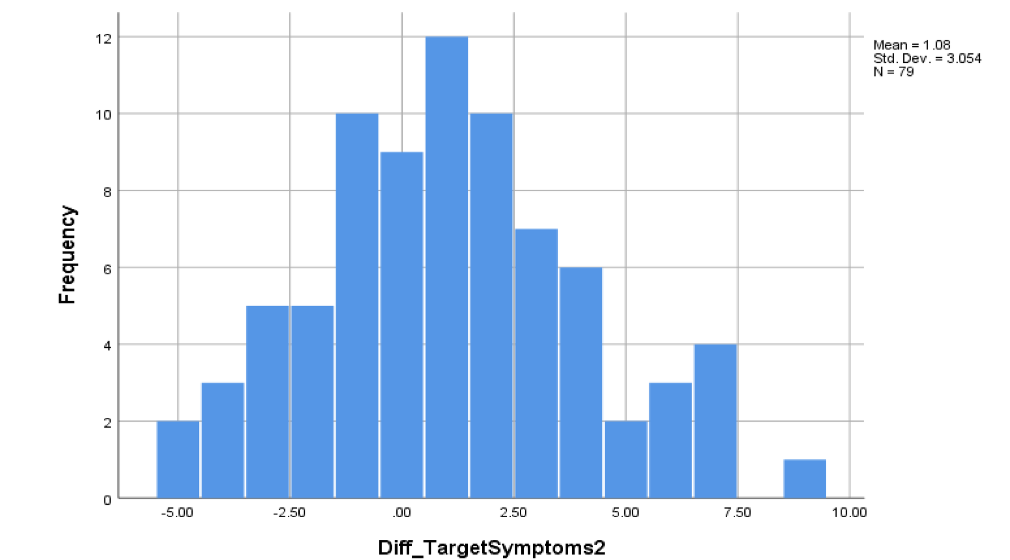
A total of 79 patients between October 13, 2019 to January 13, 2020 met inclusion criteria. Forty-nine(62%) patients were admitted to the study site's hospital. The most common diagnoses were schizophrenia and schizoaffective disorder.

Demographic characteristics	(N = 79)
Age, mean (SD)	39.62 (15.26)
Sex, n (%)	
Male	47 (59.5)
Female	32 (40.5)
Race, n (%)	
African American	62 (78.5)
Caucasian	11 (13.9)
Asian	1 (1.3)
Hispanic	1 (1.3)
Other	4 (5.1)
PES diagnosis, n (%)	
Schizophrenia	33 (41.8)
Schizoaffective disorder	20 (25.3)
Bipolar disorder	19 (24.1)
Major depressive disorder	3 (3.8)
Unspecified psychotic disorder	3 (3.8)
Delusional disorder	1 (1.3)
Final Disposition, n (%)	
Admission to hospital	49 (62.0)
Transfer to another facility	24 (30.4)
Discharged from ED	6 (7.6)

Results

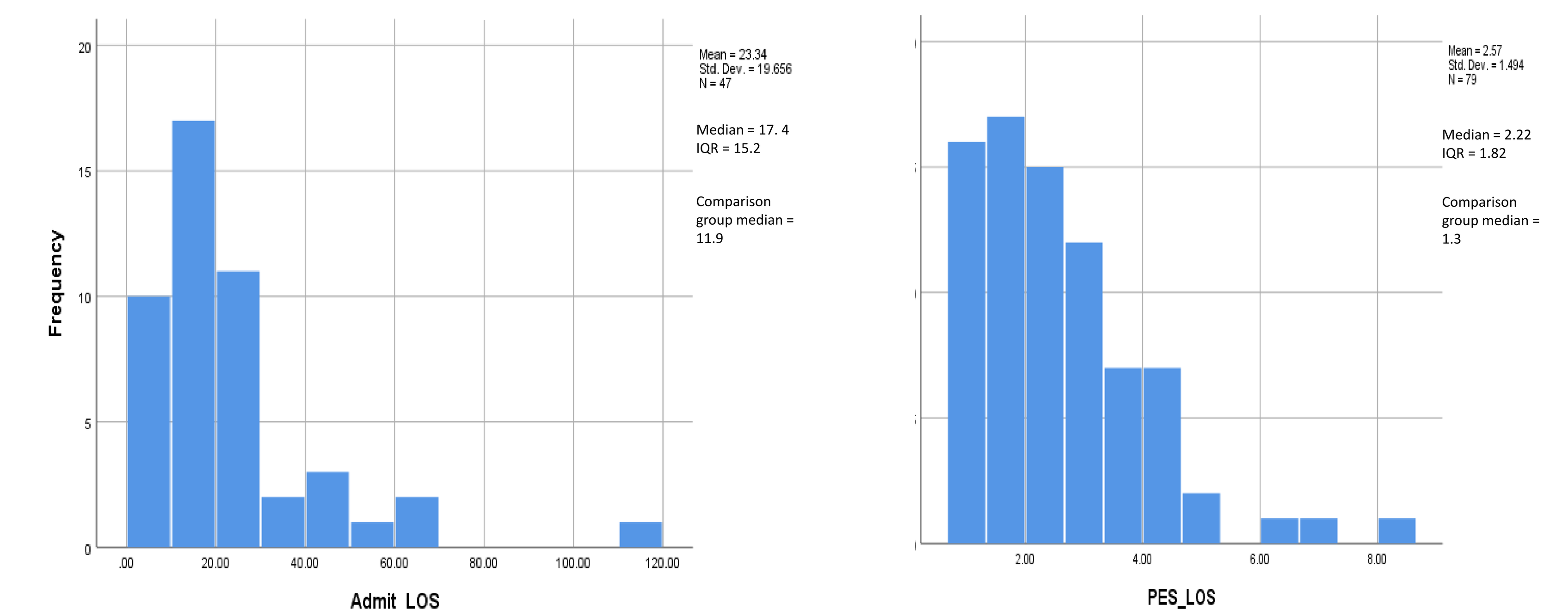
Aim 1: Significant decrease in target psychiatric symptoms

Dependent t-test: significant decrease in the mean number of symptoms present on arrival and final disposition ($M = 1.08$, $SD = 3.05$; $t(78) = 3.13$, $p = 0.002$).



Aim 2: No significant decrease in LOS

Comparison group (N=139) from prior year. One-sample Wilcoxon signed rank test: reject the null ($p = 0.00$); significantly different LOS.



Conclusions

An order set allows ED providers to:

1. Target primary symptoms of psychotic disorders.
2. Reduce the risk of agitation with PRN options that can be given by nurses.
3. Allow for ongoing monitoring and titration of medications to improve outcomes.
4. Potential to decrease LOS and financial impact of boarding patients.
5. Can be adapted across the health system of the organization.

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