Effect of emergency department mental health nurse implementation on patient length of stay and agitation

Yassmin Atefi, DO; Olivia Pipitone, MPH; James Phelps, MD
Samaritan Health Services, Good Samaritan Regional Medical Center, Corvallis, OR

BACKGROUND

- Patients seeking help for mental health problems in the emergency department (ED) is on the rise.
- One in eight visits to the ED is related to a mental health or substance abuse issue.[1]
- The rate of mental health and substance abuse-related ED visits increased 44.1 percent from 2006 to 2014.[2]
- With the increased need for services and decreased capacity to manage patients with mental illness, patients often have long length of stays (LOS) in EDs.
- Exploring models of mental health care in EDs and assessing their effectiveness will be important to alleviate these problems.

OBJECTIVES

To examine 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 to assist patients who came in with a psychiatric chief complaint.
  - Shifts did not offer 24-hour support
- All MHNs had RN certification and routinely worked at the hospital's psychiatric inpatient unit.
- Data was pulled from the electronic medical record for ED visits between January and August 2020 where patients required psychiatric evaluation.
- Encounters where the patient left without being seen, left AMA, or eloped from the ED were excluded.
- Patient and encounter characteristics, ED LOS, and need for de-escalation medications or restraints were compared across encounters with vs without documented support from an MHN.
- T-tests and 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 patient age, sex, ethnicity, or primary diagnosis. There was a significant difference in race, with significantly more non-White patients helped by the MHN (p=0.046).

Figure 1. Patient outcomes for encounters with vs without MHN support in the ED

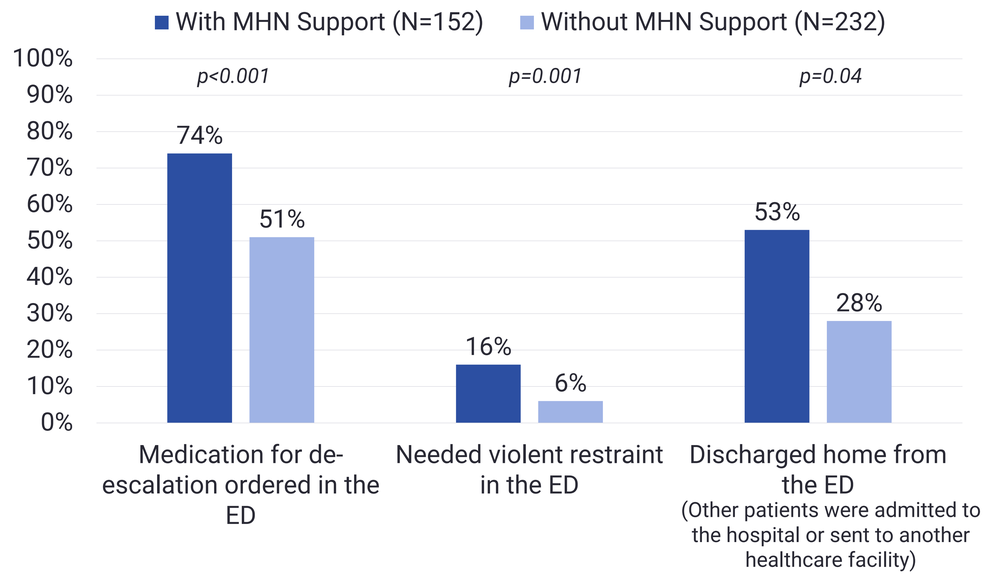
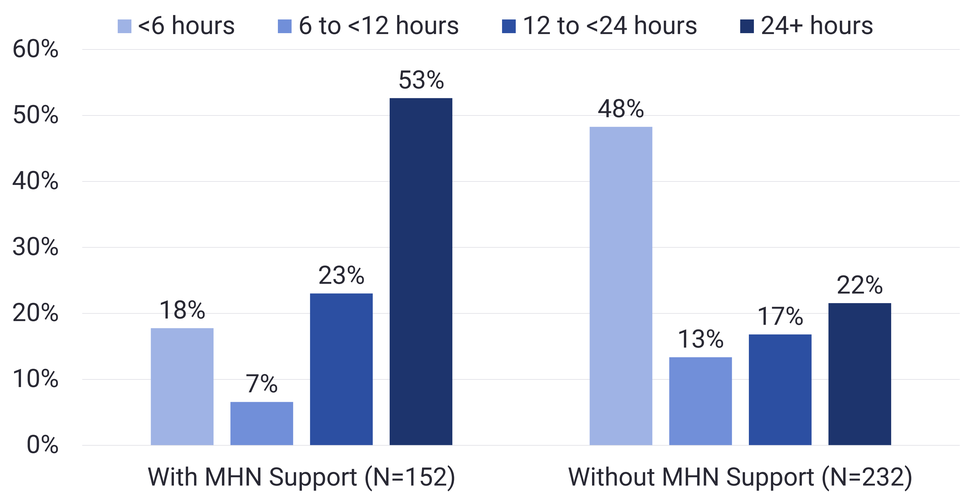


Figure 2. ED LOS for encounters with vs without MHN support (p<0.001)



DISCUSSION

- Longer ED LOS with MHN support
  - MHNs may be providing support for sicker patients, who require longer ED LOS
  - MHNs have knowledge of mental health resources and connecting patients with these resources may require longer ED LOS.
- Increased use of de-escalation methods with MHN support
  - This may have been due MHN experience as they have more training in assessing patients' needs and expertise in utilizing de-escalation interventions to alleviate patient agitation.
  - MHNs may be more consistent in documenting restraint use in the medical record.
- Patients with MHN support were discharged home more frequently
  - MHN support may have led to improved patient assessment and appropriate patient intervention.
- A significantly higher proportion of patients helped by MHNs were non-White, compared to patients not helped by MHNs. All other patient demographics were similar across groups.
  - Potential reasons for this are unclear

FUTURE IMPLICATIONS

- 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 our results.
- Readmission impact may also be explored in the future.

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