

Analyzing the Impact of Crowding on Provider Attitudes: A Multidisciplinary Investigation between Emergency Medicine and Behavioral Health

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Background

- Since the late 1960s deinstitutionalization movement, emergency departments (EDs) have become vital for handling mental health crises [1].
- Recent studies show psychiatric issues comprise 6-10% of all ED visits, leading to increased demand and crowding [3].
- Boarding patients with behavioral health (BH) concerns in EDs, due to limited resources elsewhere, extends stays and compromises care quality, stressing providers [2].
- Interventions such as standardized boarding procedures and ED psychiatric staffing have improved provider satisfaction and reduced length-of-stay (LOS) in EDs [4].
- Research on both ED and BH provider satisfaction remains limited.

Methods

- A satisfaction survey was distributed to ED and BH personnel, including physicians, residents, mid-level providers, and nursing staff, assessing satisfaction with psychiatric patient assessment, care coordination, and efficiency of disposition planning before and after interventions.
- Interventions included implementing an evidence-based medical clearance protocol for psychiatric patients and assigning a consulting psychiatry resident to the ED on weekdays.
- Surveys were re-administered at four, eight, and thirteen months post-intervention.
- Provider attitudes and satisfaction scores were collected via Qualtrics and analyzed alongside ED length-of-stay before and after interventions.
- Pre and post-intervention survey responses were compared using Chi-square or exact Chi-square tests.
- LOS times were compared using a negative binomial model.
- Statistical analyses were conducted using SAS software version 9.4 (SAS Institute Inc., Cary, NC, USA), and the figures were created using R version 4.1.2.
- We extend our sincere appreciation to Yanzhi Wang, PhD for her invaluable assistance with the statistical analysis and results section, which significantly contributed to the outcomes of this project.

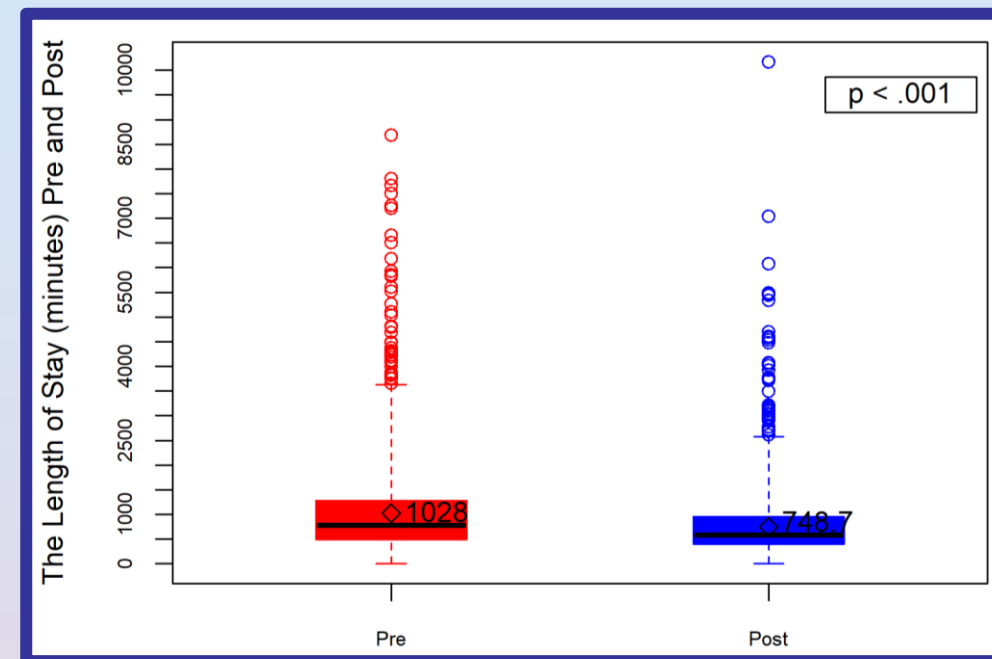


Figure 1. The box plot of the length of stay for pre and post intervention. The diamond represents the mean.

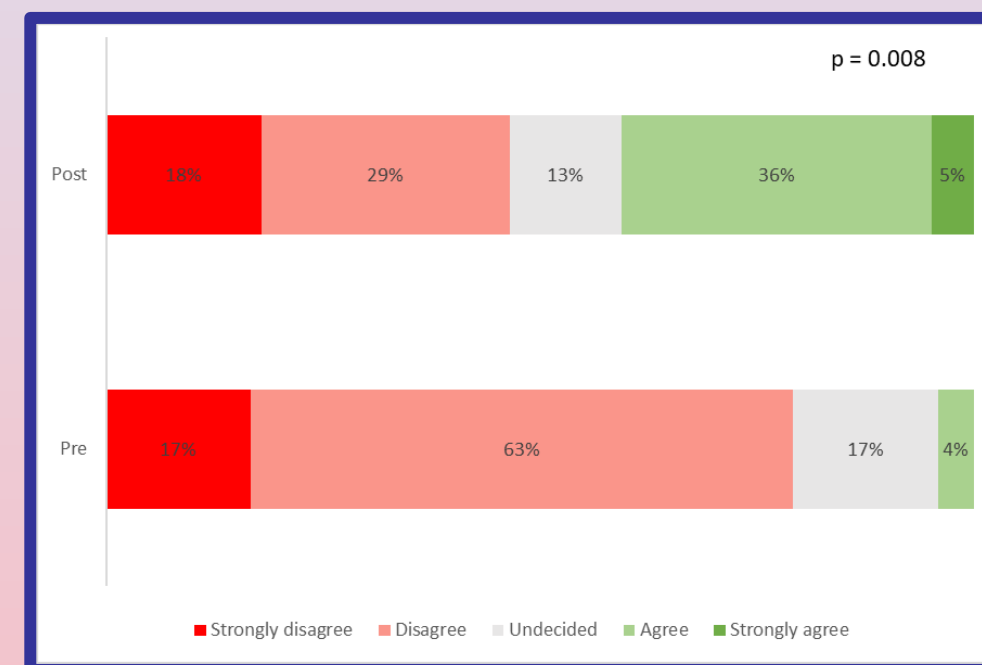


Figure 2. Representation of response from ED/BH providers from survey question assessing satisfaction with coordination between the ED and BH.

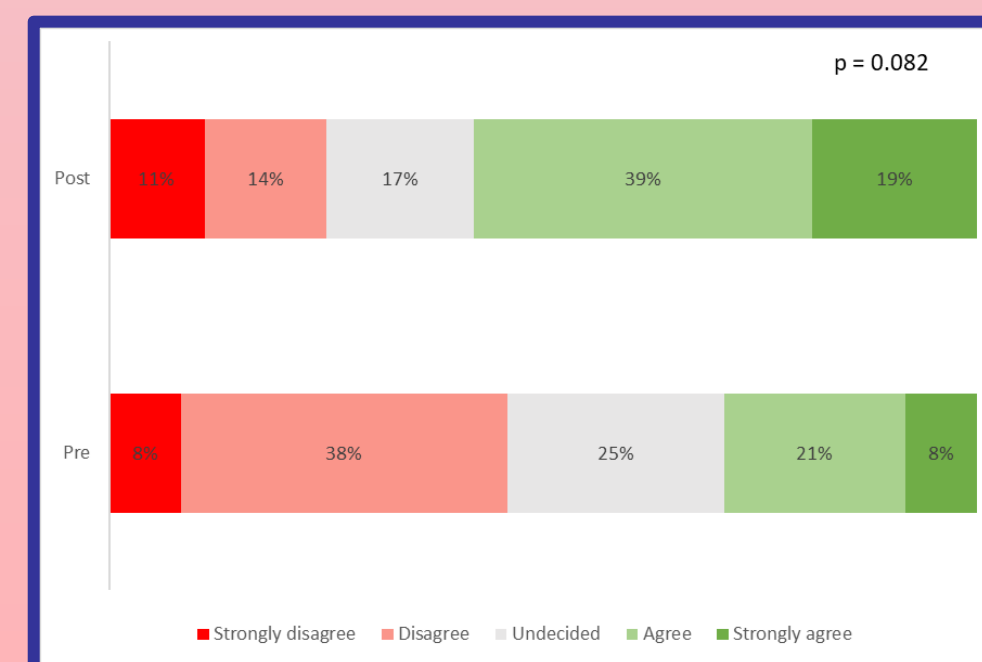


Figure 3. Representation of response from ED/BH providers from survey question assessing clear communication of medical clearance requirements.

Results

- Mean LOS decreased from 1028 to 749 minutes ($p < .001$), and median LOS decreased from 780.5 to 584 minutes ($p < .001$) post-intervention. Figure 1
- Statistical significance of LOS data remains consistent with outliers removed.
- ED/BH coordination satisfaction increased from 4.2% to 41.3% post-intervention ($p = 0.008$). Figure 2
- Satisfaction with the disposition process increased from 16.7% to 51.6% post-intervention ($p = .01$).
- Percentage of respondents that agree or strongly agree there is clear communication of medical clearance requirements for BH admission increased from 29.1% to 57.9% post-intervention ($p = .082$). Figure 3

Discussion

- Survey data indicates increased satisfaction among ED and BH providers regarding coordination, disposition process, communication, and efficiency.
- Post- interventions, ED length-of-stay for psychiatric patients decreased, correlating with increased satisfaction from both ED and BH providers.
- The number of respondents post- intervention decreased with each subsequent round of surveying, and participants were not linked across surveys.
- BH respondents increased from 48% pre-intervention to 73.8% post-intervention. The impact of ED respondents on results is uncertain, potentially reflecting dissatisfaction through lack of response.
- Our interventions could serve as a model for residency programs and community hospital EDs seeking to enhance interdisciplinary collaboration.
- Implementing universal medical clearance guidelines and increasing availability of psychiatric personnel in the ED may improve efficiency and reduce crowding, thus enhancing quality of care and reducing provider stress.

References

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