Since January 2020 Elsevier has created a COVID-19 resource centre with free information in English and Mandarin on the novel coronavirus COVID-19. The COVID-19 resource centre is hosted on Elsevier Connect, the company's public news and information website.

81 Development of a Novel Emergency Department Quality Measure to Reduce Very Low-Risk Syncope Hospitalizations

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Study Objectives: Emergency department (ED) evaluations for syncope are common, representing 1.3 million annual US visits and $2 billion in related hospitalizations. Despite a growing evidence-base supporting clinical risk stratification and outpatient management, wide variation in syncope hospitalization rates persist. In order to address low-yield hospitalizations, we sought to develop a new quality measure for very low risk ED adult syncope patients who can be incorporated into performance improvement programs using national administrative data.

Methods: We developed this quality measure in two phases. First, we used an existing prospective, observational ED patient dataset to identify a very low-risk cohort with unexplained syncope using two variables: age under 50 years and no history of heart disease. We then applied this across a national sample of ED visits using the

2019 Nationwide Emergency Department Sample (NEDS) to assess its potential impact, assessing for hospital-level factors associated with admission variation.

Results: Of the 8,647 adult patients in the prospective cohort, 3,292 patients (38.5%) fulfilled these two criteria: Age under 50 and no history of heart disease. Of these, 15 (0.4%) suffered a serious adverse event within 30 days post-ED visit. In the NEDS, there were an estimated 566,031 patients meeting these two criteria, of whom 15,507 (2.7%) were hospitalized. We found substantial variation in hospitalizations rates for this very low- risk cohort, with a median hospitalization rate of 1.7%, (range: 0-100%, interquartile range: 0-3.9%). Hospital factors associated with increased hospitalization rates included yearly ED visit volume >80,000 (Odds Ratio [OR]: 3.14, 95% Confidence interval [CI]: 2.02 to 4.89) and metropolitan teaching status (OR: 1.5, 95% CI: 1.24 to 1.81).

Conclusion: In sum, our novel syncope quality measure is a simple method to assess variation in low value hospitalizations for unexplained syncope. Application of this measure could improve the value of syncope care.

No, authors do not have interests to disclose

82 Beyond the Breaking Point: Hospital Occupancy and Emergency Department Boarding During COVID- 19

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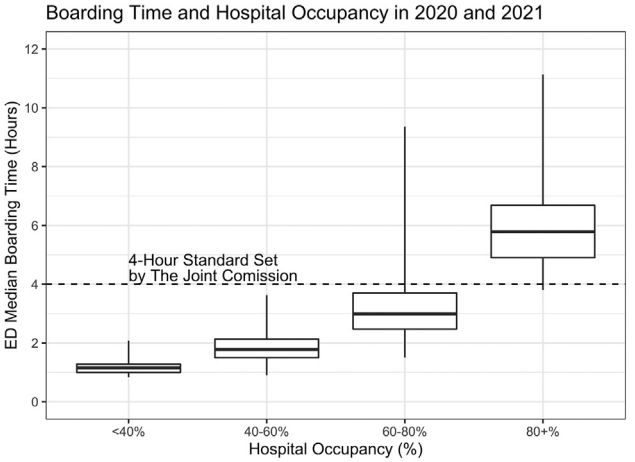
Study Objectives: To describe trends in hospital occupancy, emergency department (ED) median boarding time, and ED left without being seen (LWBS) rates in national sample of 1,769 hospitals in 2020 and 2021.

Methods: This study utilized aggregated hospital-level operational measures available through a peer benchmarking service offered by Epic Systems Corporation to its customers. The benchmarking service confidentially compares the performance of organizations that opt to utilize the service. Measures were analyzed on a monthly basis for all months from January 2020 through December 2021. The analysis sample included 1,769 unique hospitals across 331 organizations in the U.S.. Measures were first calculated at the hospital- level, and then aggregated statistics including median and percentiles for those measures were reported across all hospitals utilizing the service, as well as for subsets of those hospitals within each U.S. Census Region (Northeast, Midwest, South, West). Hospital-level operational measures of strain included hospital occupancy (percentage of staffed inpatient beds that are occupied), ED median boarding time (the median wait in the ED for patients from decision to admit to transfer out of the ED to an inpatient bed), and percent of ED visits resulting in patient leaving prior to clinical evaluation or left without being seen (LWBS).

Results: The median of ED median boarding time across all 1,769 hospitals was 2.00 hours in January 2020, fell to a nadir of 1.58 hours in April 2020, and rose throughout the study period to a high of 3.43 (a 71% increase from January 2020) as of December 2021. Hospital occupancy rates were at their highest in January 2020 at a median of 69.7%, nadired at 48.7% in April 2020, and rose again to a high of 67.2% by September 2021. Occupancy rates and boarding time varied greatly and exhibited a threshold relationship where occupancy exceeded 80%. In those cases, ED median boarding time rose to a median across hospitals of 5.78 hours, and a 95th percentile of 8.60 hours. At the end of 2021, amongst the worst performing hospitals in the 95th percentile by these operational measures, half of admitted ED patients 9 hours or longer for an inpatient bed, and more than 1 in 10 patients who present to the ED leave prior to an evaluation.

Conclusion: Where hospital occupancy exceeded 80%, ED boarding rose far above the 4-hour standard set by The Joint Commission. Hospital occupancy was relatively static over time while ED boarding times and LWBS rates exhibited much more dramatic variation and peaked at the end of 2021. Policymakers must address dynamic crises of acute care system strain in future waves of the COVID-19 pandemic and other disasters, or risk further erosion of hospital system capacity, unsafe patient and health care worker conditions, and excess mortality.



Notes: The figure depicts ED median boarding time according to hospital occupancy.
Results aggregated by month, in a sample of 1,769 hospitals in the U.S. in 2019 and 2020.
Bars represent the 75th, 50th, and 25th percentile (top to bottom).
Lines depict range from 95th percentile to 5th percentile (top to bottom).

No, authors do not have interests to disclose

83 An Interim Reporting of Trigger Point Injection for Myofascial Pain Syndrome (T-PIMPS): A 3-Arm, Partially Blinded, Randomized Controlled Trial

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Background: Low back pain (LBP), accounts for approximately 2.63 million ED visits in the United States, accounting for $100 billion in health care costs annually. Studies have shown that trigger point injections (TPI) are beneficial. These studies suffer from small sample size, lack of randomization, and lack of follow up. This is the first study to compare standard treatment (ST) to TPI with local anesthetic and TPI with normal saline (NS) for LBP in the emergency department (ED). Our primary objective will be to determine which is the superior treatment of low back pain at 30 minutes by comparing the change in pain. The secondary outcome will the change in a low back pain on a functional score at 30 minutes. Tertiary outcomes will be repeating both of these measures at 60-72 telephonic follow-up.

Methods: This study is a prospective 3-armed randomized controlled trial conducted in the ED at Madigan Army Medical Center (MAMC). Participants will be selected from patients presenting with: low back pain, who are over the age 17 years, are not pregnant, and have no findings consistent with emergent etiologies such as cauda equina. The three arms are ST, ST plus TPI with 8 mL of 0.5% Bupivacaine, and ST plus TPI with 8 mL NS. ST is single blinded and the two TPI arms are double blinded. Our power calculation yielded 43 subjects per group to detect a difference of 1.5 cm on a 10 cm visual analog scale (VAS). We increased that number to 60 to account for those lost to telephone follow-up at 60-72 hours. Our study total is 180 study participants. Data collected on a VAS will be analyzed via ANOVA. Modified Oswestry Disability Index (MODI) scores have been previously validated as a functional score for evaluating back pain. We will use change in MODI scores as our secondary outcome, which will be analyzed via the Chi-squared test.

Results: To date, we have screened 172 participants and enrolled 76. Six have withdrawn, and three have been lost to follow-up. Our estimated sample size can tolerate a total drop-out rate of 16% and we are currently at 12%. More participants