Research Letter | Health Policy

Monthly Rates of Patients Who Left Before Accessing Care in US Emergency Departments, 2017-2021

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Introduction

Acute care demands have increased dramatically alongside stagnant hospital capacity,¹ and extremes of emergency department (ED) boarding have become endemic.² EDs are unique access points for comprehensive acute diagnostics and treatment in an otherwise-fragmented system.³ Patients often leave EDs before clinical evaluation (left without being seen [LWBS]) when EDs are crowded and wait times are long. These departures may have significant consequences for patients given the associated delayed or deferred care for acute conditions.⁴ Patients from minoritized communities are more likely to depart before evaluation, with problems relatively concentrated among hospitals serving low-income populations.⁵ This occurs despite the increasing added value of ED-based linkages to care for populations at increased risk, such as patients with opioid use disorder seeking medication treatment.⁶ We sought to characterize how often patients left the ED before clinical evaluation over time using a national sample of US hospitals.

Methods

This cross-sectional study was classified as exempt from review and informed consent by the Yale University Institutional Review Board because it contained no patient data; all reporting adheres to STROBE reporting guidelines. The study used aggregated hospital measures available through a voluntary peer benchmarking service offered by Epic Systems Corporation, an electronic health record vendor. Measures were collected monthly from 2017 to 2021. Median (IQR) and 95th percentiles were reported for ED LWBS rates across hospitals each month. Statistical analyses were performed using R statistical software version 4.2.1 (R Project for Statistical Computing) from January to March 2022.

Table. Site Characteristics for Participating Hospitals, 2021

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Hospitals, No. (%) (N = 1769)</th>
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</thead>
<tbody>
<tr>
<td>Hospital beds, No.</td>
<td></td>
</tr>
<tr>
<td>&lt;100</td>
<td>743 (42.0)</td>
</tr>
<tr>
<td>100-299</td>
<td>495 (28.0)</td>
</tr>
<tr>
<td>300-499</td>
<td>248 (14.0)</td>
</tr>
<tr>
<td>500-999</td>
<td>212 (12.0)</td>
</tr>
<tr>
<td>≥1000</td>
<td>71 (4.0)</td>
</tr>
<tr>
<td>Annual ED visits, No.</td>
<td></td>
</tr>
<tr>
<td>0-20 000</td>
<td>513 (29.0)</td>
</tr>
<tr>
<td>20-40 000</td>
<td>531 (30.0)</td>
</tr>
<tr>
<td>40-60 000</td>
<td>371 (21.0)</td>
</tr>
<tr>
<td>60-80 000</td>
<td>177 (10.0)</td>
</tr>
<tr>
<td>≥80 000</td>
<td>177 (10.0)</td>
</tr>
</tbody>
</table>

Abbreviation: ED, emergency department.
Results

There were 365 hospitals reporting benchmarking data in January 2017, increasing to 1769 hospitals by December 2021. Annual ED visit volumes and total hospital beds for participating sites are included in the Table. Median (IQR) hospital LWBS rates nearly doubled from 1.1% (0.5%-2.5%) in 2017 to 2.1% (0.6%-4.6%) by the end of 2021 (Figure). Among the worst performing hospitals at the 95th percentile, 10.0% of ED patients left before a medical evaluation at the end of 2021, compared with 4.4% in the 95th percentile in January 2020 and 4.3% at the beginning of 2017.

Discussion

Findings from this cross-sectional study demonstrate the failure of the emergency care system to maintain broad access in the context of pandemic demands, suggesting that existing regulatory and financial incentives may be inadequate to meet challenges of future pandemic waves and other disasters. Historically, LWBS was viewed as an ED management problem rather than a hospital- or systems-level issue. Thus, most solutions to date have relied on intradepartmental operational fixes to mitigate ED crowding; for example, doctor-in-triage or split-flow models offer more rapid medical screening evaluations, effectively bypassing traditional triage processes. These processes promote rapid but limited physician evaluations, often in the waiting room. Amid the current crisis, these ED-focused operational efforts may be inadequate to stem this growing problem.

Our work is observational, and due to limitations of available data fields, we were not able to address hospital characteristics or local COVID-19 infections or address how the mix of participating hospitals changed over time. We hypothesize that system strain would be associated with increased differences in rates of LWBS for hospitals serving low-income and underinsured patient populations. Furthermore, while some work addresses the association of LWBS with patient outcomes, there is little contemporaneous work on this for patients during COVID-19.

Access to emergency care cannot be considered universal until all patients presenting to EDs receive high-quality treatment for time-sensitive conditions. Given contributing system constraints, LWBS should be viewed as a failure to offer equitable access to acute care, understood in the context of other measures of care access.
ARTICLE INFORMATION

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Author Contributions: Dr Janke had full access to all of the data in the study and takes responsibility for the integrity of the data and the accuracy of the data analysis.

Concept and design: All authors.
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Drafting of the manuscript: Janke.
Critical revision of the manuscript for important intellectual content: All authors.
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REFERENCES


