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Despite CMS Reporting Policies, Emergency Department Boarding Is Still A Big Problem—The Right Quality Measures Can Help Fix It

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Nurses and doctors rush a patient on a gurney down a hallway in a hospital.

Emergency departments (EDs) across the country are at their breaking points due to excessive boarding of patients waiting to be admitted to the hospital.

You may have read of the unfortunate man who died after 43 hospitals declined his transfer <https://www.washingtonpost.com/health/2021/09/12/alabama-ray-demonia-hospitals-icu/> , largely due to the number of COVID-19 patients in the intensive care unit (ICU). The current burden of COVID-19 in the hospitals where we work in the Northeast is relatively low, yet the pandemic has exposed and accentuated a brewing storm. As an example, one of us recently cared for a patient with a heart attack who traveled six hours by ambulance for a non-emergent catheterization because there were no closer hospitals with a cardiologist who could accept the transfer.

The current reasons given for these tragic situations: "high demand for medical services <https://www.amnhealthcare.com/amn-insights/news/surge-in-healthcare-demand/> ," "too few behavioral health beds <https://www.jointcommission.org/resources/news-and-multimedia/newsletters/newsletters/quick-safety/quick-safety--issue-19-alleviating-ed-boarding-of-psychiatric-patients/alleviating-ed-boarding-of-psychiatric-patients/> ," "staff is resigning <https://www.bloomberg.com/news/articles/2021-12-21/u-s-hospitals-pushed-to-financial-ruin-as-nurses-quit-en-masse#:~:text=Two%2Dthirds%20of%20nurses%20surveyed,within%20the%20next%20six%20months.> ." But the true root of the lack of ED capacity is due to patients waiting

in the ED until an inpatient bed becomes available. Boarding refers to this practice of holding admitted patients in the ED when there are no inpatient beds available. It occurs when patients present to the ED, either for an initial evaluation or after being transferred from another hospital, and then wait an extended period of time to move from the ED to a hospital ward.

Boarding is associated with several adverse outcomes including increased medical errors <https://journals.lww.com/journalpatientsafety/Abstract/2022/01000/Analysis_of_Risk_Factors_for_Patient_Safety_Events.26.aspx> and death <https://onlinelibrary.wiley.com/doi/10.1002/emp2.12107> , likely because the ED is ill-equipped to provide longitudinal and focused inpatient care and attention is frequently diverted to new patients who present with undifferentiated conditions. Despite these trends, the fact that boarding occurs is not surprising. Rather, it has become an expected outcome of our customarily misaligned incentives in health care financing. Simply put, the financial benefits of ED boarding exceed the cost; by holding admitted patients in the ED, hospitals can continue to bring in and dedicate beds to elective admissions <https://journals.lww.com/annalsofsurgery/Abstract/2021/05000/The_Cost_of_Quarantine__Projecting_the_Financial.5.aspx> .

Carrots And Sticks

To address these underlying forces and permanently end ED boarding, we must leverage “carrots” (financial incentives) and “sticks” (financial penalties). Financial incentives currently favor continuing to perform profitable procedures on patients, especially those with commercial insurance, even if the ED is drowning with patients waiting to be admitted. This is not the hospital’s fault but rather our perverse health care system that encourages this behavior to the point that some hospitals could not survive without doing it. In general, hospitals have fixed capacity, and the ability to board patients in the ED to maintain access for more lucrative bed assignments such as surgical or oncologic care is simply good business.

Meanwhile, the “sticks” are also not in ED patients’ favor. Hospitals rely on accreditation from entities such as the Joint Commission. Hospitals cannot accept Medicare reimbursement without such accreditation, so hospitals routinely jump through hoops to pass their periodic reviews. The Joint Commission did implement standards related to ED boarding <https://www.jointcommission.org/-/media/tjc/documents/standards/r3-reports/r3_report_issue_4.pdf> in 2014 that require that hospitals measure and set goals for mitigating and managing ED boarders. Unfortunately, although the Joint

Commission recognizes that boarding "can result in a heightened risk for patients and inefficiencies for staff," they do not mandate what the target should be. Although they recommend a four-hour maximum boarding time, the Joint Commission chose not to impose it as a requirement for accreditation, citing variable times studied in the literature; this effectively takes the pressure off hospitals to reduce this practice.

Apart from accreditation, the entity with the greatest potential to influence hospitals with its carrots and sticks are the Centers for Medicare and Medicaid Services (CMS). CMS both certifies hospitals for reimbursement from Medicare and collects quality data from hospitals for both public reporting programs that create peer pressure for improvement and value-based purchasing programs that provide direct financial penalties and rewards based on performance.

We had great expectations when a new ED-based metric <https://ecqi.healthit.gov/ecqm/eh/2020/cms111v8> was released in 2016 as part of CMS's Hospital Inpatient Quality Reporting Program. This metric, called "ED-2," recorded the median time from decision to admit an ED patient to their actual departure from the ED. Unfortunately, this measure was only one of several measures that hospitals could choose to use in its data reporting requirements. What is more, the "carrot" in this case came simply from reporting the data, not from meeting certain benchmarks or working on improving. Furthermore, instead of modifying the program to use this metric more effectively, CMS reversed course and, in August 2021, decided to discontinue collection and public reporting of this quality measure entirely.

The Impacts Of ED Boarding

We became curious to know how and why this occurred. In the midst of the COVID-19 pandemic, with ED patients suffering from all of the harms associated with boarding, CMS decided to remove a key metric that could improve the care for literally millions of our patients across the country if it were truly used as a "carrot" or a "stick."

The answer lies deep within the *Federal Register* <https://www.federalregister.gov/documents/2021/08/13/2021-16519/medicare-program-hospital-inpatient-prospective-payment-systems-for-acute-care-hospitals-and-the> . The decision makers cited a systematic review <https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0231253> by Zoubir Boudi and colleagues, which included 12 studies that evaluated the association between boarding time and in-hospital mortality. The review found that six studies showed an association between ED boarding and increased mortality; five studies did not, and one found an association only for patients admitted to non-ICU settings. The study

furthermore described that boarding times greater than six hours were most associated with mortality. The CMS decision makers reviewed data from calendar year 2019 and found that, of the hospitals that reported on ED-2, the average reported median boarding time was 101 minutes and that less than 1 percent of hospitals had median times more than six hours. In other words, they say, the data do not clearly indicate that ED boarding is a problem.

We find two fundamental flaws with this conclusion.

First: This measure was used in a voluntary reporting program and based on a sample of records <https://manual.jointcommission.org/releases/TJC2020A1/MIF0165.html> . Consequently, hospitals had no target or benchmark performance to achieve and could choose to use those data collection methods more likely to result in more favorable scores, respectively. It is not hard to imagine, therefore, that any hospital with bad ED boarding scores would simply to choose not to report them.

The second and more important flaw is that mortality is only one consideration. There are so many other adverse effects <https://www.acep.org/patient-care/policy-statements/definition-of-boarded-patient> associated with boarding, including increased ambulance refusals, prolonged wait times for new patients, use of hallways spaces to evaluate patients without the provision of privacy, and a compromised ability to respond to disasters or other community emergencies. Boarding is also taxing on emergency physicians, who have suffered from increased burnout during the COVID-19 pandemic <https://www.annemergmed.com/article/S0196-0644(21)00108-6/fulltext> .

The authors of the systematic review were quite specific in their conclusions: “The heterogeneity and risk of bias combined with the low number of studies with the same cut-off could not allow [us] to perform a meta-analysis. Prospective international multicenter studies are needed to clarify our findings. Nevertheless, our systematic review highlights a clear and shared message delivered by all authors, which is that [ED boarding] may cause harm to patients waiting for an in-hospital bed. The authors emphasize the absolute necessity to implement efficient interventions to minimize [ED boarding].”

The *Federal Register* addresses several public commenters, including major physician organizations that represent tens of thousands of front-line clinicians who struggle with boarding every day and did not support the proposal to remove ED-2 <https://www.acep.org/globalassets/new-pdfs/advocacy/acep-response-to-fy-2022-ipps-proposed-rule.pdf> . One commenter expressed concern that the removal would disincentivize hospitals from maintaining low ED boarding times.

CMS's response: "We are confident that hospitals are committed to providing high quality care to patients, and we do not have any indication that they will stop trying to reduce emergency department board times." They also added: "However, we encourage commenters to submit any evidence suggesting that removing this measure leads to a reduction in desired clinical behavior." With painful irony, the fact is that the best way to identify such reductions would be to improve and follow ED-2 going forward; instead, by removing it, crucial evidence is put even further out of reach.

Other commenters disagreed with the conclusions of the systematic review and thought that the measure was "reliable, informative, and assesses a critical area of care." CMS's response: "We agree that ED boarding is an important area of care, and as noted earlier, we will continue measuring ED boarding times in the outpatient setting via the OP-18: Median Time from ED Arrival to ED Departure for Discharged ED Patients measure (NQF #0496)."

So what, then, is OP-18? This is a measure of the median time from ED arrival to ED departure for discharged ED patients. Those of us who work in busy EDs understand fully that this is a number directly dependent on the number of boarders <https://www.ncbi.nlm.nih.gov/labs/pmc/articles/PMC7593429/> as waiting rooms fill for all patients (discharged and admitted) when the ED is clogged with admitted patients. CMS removed ED-2 primarily because the "costs associated with the measure outweigh benefit of its continued use in the program." But they chose to keep another measure that is an indirect measure of hospital performance and that should cost the same amount of money to report as ED-2.

In fact, there's an additional, feasible step that could dramatically reduce the cost of measuring ED-2 while improving its accuracy: Retire the work of manual chart-abstraction required for ED-2 and instead adopt a digital quality measure based on standardized electronic health record data already tracked in virtually every US hospital.

Time For Action

It's time for advocacy and action. Barring massive realignment of financial incentives of our health care system, agencies such as CMS and accreditors such as the Joint Commission (as well as hospital quality raters <https://academic.oup.com/intqhc/article-abstract/doi/10.1093/intqhc/mzab156/6444463?redirectedFrom=fulltext&login=false> such as *US News and World Report* and Leapfrog) must measure boarding and act on their findings. With "carrots" offering increased reimbursement for better-performing

hospitals and "sticks" punishing underperformers, we may finally get the traction our struggling EDs need.

If the financial incentives for change are sizeable and meaningful <https://www.acpjournals.org/doi/full/10.7326/M15-1330> , then intractable problems can suddenly be overcome. The evidence is there: Boarding is harmful to our patients. Now it is time for agencies who stand for patient safety to address it.

Authors' Note

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