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Administration of Emergency Medicine

Emergency Department Hallway Care From the Millennium to the Pandemic: A Clear and Present Danger

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Abstract—Background: Emergency department (ED) crowding and hallway care has been a serious problem for the past three decades in the United States and abroad. Myriad articles highlighting this problem and proposing solutions have had little impact on its progression. **Objectives:** To discuss reasons for ED crowding leading to hallway care, the impact of the coronavirus disease (COVID-19) pandemic, potential solutions, and why little has changed despite widespread awareness. **Discussion:** ED crowding has been a public health issue for the past three decades, leading to patient care and boarding of admitted patients in ED hallways with limited resources. This care is often substandard and precarious. The COVID-19 pandemic placed further strain on the ED safety net, especially in certain urban areas. Despite recognition of the problem, publication of studies, and proposals offering many solutions, this problem continues to worsen. Corporate and hospital leadership must be made aware of the financial and legal ramifications for failure to address potential solutions, such as inpatient hallway boarding, provision of flexible expansion care areas, smoothing of elective admissions/surgeries, and efficient inpatient discharge flow. State and federal legislation may also be required to motivate this process. **Conclusions:** ED crowding and hallway care will continue to worsen unless hospital leadership is willing to listen to ED staff concerns and address the problem on all levels of the hospital using previously proposed solutions. Emergency physicians should not fear termination for discussing this issue and its potential for poor clinical outcomes and ED staff morale. © 2022 Elsevier Inc. All rights reserved.

Keywords—Emergency; Crowding; Hallway; Pandemic; COVID-19

Introduction

In an article published 22 years ago, we raised a red flag regarding the use of emergency department (ED) hallways for patient care (1). ED crowding in the United States and worldwide had become commonplace, and ill and injured patients often overflowed into packed, noisy, and chaotic hallways, increasing the risk of poor outcomes. At the time, many hospital administrators in charge heard from many emergency physicians regarding patient safety and quality of medical care provided in ED hallways. These administrators either attempted to address the problem or hoped the problem would go away over time. From a financial perspective, some hospital leaders may have felt the situation should best remain in the ED and not affect other more essential hospital operations, such as elective surgeries, cardiac catheterizations, and endoscopies. Unfortunately, cancellation or delay of these procedures may also result in poor outcomes. The ED hallway conundrum has continued to grow during these past two decades, and the issue has been discussed in over 100 published articles in a recent PubMed search (2). Regardless of the scope of the problem, emergency physicians soldier on and care for patients in whatever space the hospital provides for them, which has included outdoor tents, parking lots, trailers, and conference rooms.

With the advent of the coronavirus disease 2019 (COVID-19) pandemic, a dangerous problem became a nightmare, with critically ill patients being boarded in ED hallways in highly afflicted cities such as New York (3).

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Now that the tide of COVID-19 patients needing hospital admission is receding, some administrators may think that delivering care in ED hallways will be a bad dream of the past. As emergency physicians with experience know, this is wishful thinking; hallway care will continue and only get worse unless a solution is prioritized by hospital leadership. Individual emergency physicians in the trenches do not have the power to make needed changes, but may have the power to incentivize hospital leadership to address this ongoing problem based on patient safety and financial benefit to the hospital. Unfortunately, many are unwilling to do so, as there are several cases of emergency physicians being fired for highlighting unsafe conditions during the pandemic (4).

Discussion

Why is Hallway Care a Problem?

Receiving care on a gurney or chair in the ED hallway is substandard for many reasons (5). First of all, there is no verbal or physical privacy, which makes accurate history taking and complete physical examination of patients impossible. Emergency, consulting, and admitting clinicians may not be able to discuss sensitive topics with hallway patients. Incomplete and interrupted patient evaluation can lead to misdiagnosis (6). Nursing care may be compromised due to higher than normal nurse-to-patient ratios, staff shortages, and fragmentation of care spread over many patients scattered in different directions. Consistent monitoring for change in mental status, vital signs, and cardiac telemetry is difficult, if not impossible. Patient-on-patient violence or assaults against ED staff, which have increased during the pandemic, may precipitate (7). Patients on psychiatric holds may be more likely to attempt to elope without being noticed. Intravenous lines stop flowing, and medications may be infused incorrectly or not at all in the absence of consistent nursing care. Normotensive patients suddenly can become hypotensive, and medications may be delayed by hours. Nebulizers run empty, and oxygen tanks are depleted. Hallway transmission of COVID-19 and other respiratory viruses from coughing, sneezing, or dyspnea from patients who can't, or refuse to, wear a mask is unavoidable.

Like boxcars in a freight yard, patients may be bumped from one hallway space to another, leading to delays in imaging, receiving medication, and disposition to admission or home. Reliance on electronic medical records, which were not originally designed to track complex care in nonlicensed ED hallway beds, may further compound the problem (8). Fractured ED hallway nursing care and monitoring, medication administration, and misdiagnosis

can have a terrible end result: death, preventable disabilities, and prolonged hospital stays (9). The hospital exists to help ill and injured patients, prevent death and mitigate disability. Placing admitted patients into crowded unmonitored hallways is a gamble that could be prevented. There may be some hospital administrators and inpatient nursing staff who are indifferent and declare "It's the ED's problem..." However, patients and their families do not feel this way and would rather be boarded in a quiet inpatient hallway than in the turbulent ED hallway (10). Hospital staff who do not work in the ED would most certainly do an about-face if they or their loved ones came to the ED with an acute medical issue and were placed in a crowded hallway (11). Burnout of ED workers is another consideration that has been highlighted during the pandemic (12).

Who Gets "Parked" in the Hallway?

Any patient may find themselves lying for hours or even days on a hallway gurney, chair, or even the floor during the height of the pandemic (13). The group most discussed are patients who have been admitted to the hospital, have been stabilized, and await an inpatient bed. This group and practice are referred to as "boarders," and "boarding inpatients in the ED." Not all boarders are housed in hallways; some are too ill or unstable and remain in a licensed and monitored ED bed. Hallway patients may have a prolonged period of suffering, waiting up to 48 h prior to moving to an inpatient bed. Once admitted, emergency physicians may be less involved in their monitoring and treatment. Admitting physicians, such as hospitalists, must care for these boarders as if they were inpatients, and may even discharge them from the hallway after a certain period. Another group are those patients awaiting transfer out of the ED to an outside psychiatric facility. These patients may linger in hallways for 72 h or more, as these outside facilities are full or closed to new admissions on weekends and nights. Without privacy, voluntary bathroom privileges, nutrition, hygiene, and bathing, this vulnerable group of patients may have worsening mental health issues from these additional stressors. A lengthy stay under continuous bright fluorescent lighting and incessant noise is analogous to torture and interrogation methods utilized by certain worldwide intelligence and police agencies, wreaking havoc on sleep hygiene and increasing the development of delirium (14).

What are the Solutions?

Hallway care may occur in any ED in any part of the world, whether its rural, suburban, city, county, veterans, or university. There are many factors implicated in crowding, and many of the solutions that have been proposed and published over the past three decades continue to be

Table 1. Potential solutions to emergency department (ED) crowding and hallway care.**ED-specific**

- Expand inpatient and licensed ED beds
- Expand “fast track” areas to treat minor problems
- Ban patient care and boarding in ED hallways
- Use of chairs instead of beds for patients who can sit to maximize space
- Expand annex areas adjacent to the ED to handle increased patient volume
- Physician in triage for rapid evaluation, test ordering and potential discharge
- Enable ED triage nurse screening and referral to local urgent or primary care clinics
- Point of care ED testing, dedicated phlebotomists, improve laboratory turnaround time
- Electronic marquee or board in the ED waiting room to broadcast waiting times
- Online or phone-in ED appointments
- ED observation units for short-stay admissions
- “Home hospital” healthcare for ED boarders or early inpatient discharges
- Decrease EMR complexity for emergency physicians (fewer mouse clicks, pop-ups, etc.)
- Provide telemedicine options to appropriate ambulatory patients at ED triage
- Transfer admitted patients boarding in the ED to uncrowded partner hospitals
- Improve imaging and interpretation times

Community-specific

- Ambulance diversion to non-crowded EDs
- Increased paramedic on-scene triage responsibility to prevent unnecessary transport
- Increase availability of urgent and primary care by extending hours
- After-care clinics for recently discharged patients
- Increased reimbursement and salaries for primary care practitioners
- Tuition assistance and loan forgiveness for students entering primary care
- Discourage primary care clinics from sending non-urgent patients to the ED after hours
- Increase access for uninsured and Medicaid patients
- Increase local mental health and substance use treatment options and facilities
- Increased reimbursement for mental health care
- Pay-for-performance by Medicare, Medicaid for reduced ED length of stay
- State and Federal government mandates against ED boarding

Hospital-specific

- Streamline admission process, encourage direct admits
- Allow emergency physician temporary inpatient admission orders
- Expedited inpatient bed cleaning immediately after discharge
- Inpatient “reverse triage” and centralized inpatient bed coordinator
- Expand elective surgery hours and to weekends
- “Smoothing” elective surgeries and admissions over the week rather than certain days
- Early inpatient discharges and bed turnover using discharge holding units
- Transfer admitted patients boarding in the ED to inpatient hallways near nursing stations
- Relaxation of nurse:patient ratios at critical crowding levels

mentioned (Table 1) (1,5,15). With the advent of the pandemic, these propositions have garnered more interest and taken on even greater importance. Despite some isolated success stories, emergency physicians are losing the war. Many proposed solutions will require structural changes to the system of health care delivery in hospitals. If some

hospital leaders ignore these solutions altogether due to no perceived financial benefit and additional cost, then state and federal legislation may be the next step (16). A multitude of patient complaints and lawsuits against health systems from poor outcomes may also motivate those in charge. These lawsuits may also name individ-

ual health system leaders responsible for implementing policy changes that could alleviate ED crowding in the interest of patient safety and staff well-being (17).

Conclusion

Eliminating care in ED hallways will not occur without ongoing discussions among emergency physicians in the trenches, ED chiefs, and hospital lead administrators, and a commitment to do something rather than “send it to a review committee.” Actual cases of poor outcomes should be forwarded to hospital leadership. Unfortunately, in some hospitals this may need to be done anonymously by emergency physicians who legitimately fear being terminated for speaking up. Discussing the problem with state and federal representatives individually and through emergency medicine organizations such as the American Academy of Emergency Medicine, the Society for Academic Emergency Medicine, and the American College of Emergency Physicians is another option. Public education and outcry about the problem has led to systematic changes in other countries, such as the United Kingdom (18). Although these measures may not ultimately succeed, it demonstrates a willingness to address the problem and provides a framework for future change. Optimizing patient safety and satisfaction while improving the working conditions and morale of ED staff ultimately increases the bottom line and is the right thing to do. We have been able to successfully end hallway care at our ED for over two years utilizing many of the solutions outlined in Table 1. The pandemic provided yet another revisit of the dangers of ED crowding and hallway care. We must continue to be proactive and persistent despite the temptation to give up.

References

- Derlet RW, Richards JR. Overcrowding in the nation's emergency departments: complex causes and disturbing effects. *Ann Emerg Med* 2000;35:63–8.
- National Library of Medicine, PubMed. “emergency hallway” search. Available at: <https://pubmed.ncbi.nlm.nih.gov/?term=emergency+hallway>. Accessed May 28, 2022.
- Mareiniss DP. The impending storm: COVID-19, pandemics and our overwhelmed emergency departments. *Am J Emerg Med* 2020;38:1293–4.
- Page L. Doctors lose jobs after speaking out about unsafe conditions. *Medscape*. April 28, 2021. Available at: <https://www.medscape.com/viewarticle/950074>. Accessed May 28, 2022.
- Richards JR, van der Linden MC, Derlet RW. Providing care in emergency department hallways: demands, dangers, and deaths. *Adv Emerg Med* 2014;495219. Available at: <https://doi.org/10.1155/2014/495219>. Accessed May 28, 2022.
- Trzeciak S, Rivers EP. Emergency department overcrowding in the United States: an emerging threat to patient safety and public health. *Emerg Med J* 2003;20:402–5.
- McGuire SS, Gazley B, Majerus AC, Mullan AF, Clements CM. Impact of the COVID-19 pandemic on workplace violence at an academic emergency department. *Am J Emerg Med* 2022;53(285):e1–5.
- Abraham J, Kannampallil TG, Reddy MC. Peripheral activities during EMR use in emergency care: a case study. *AMIA Annu Symp Proc* 2009 2009:1–5.
- Singer AJ, Thode Jr HC, Viccellio P, Pines JM. The association between length of emergency department boarding and mortality. *Acad Emerg Med* 2011;18:1324–9.
- Richards JR, Ozery G, Notash M, Sokolove PE, Derlet RW, Panacek EA. Patients prefer boarding in inpatient hallways: correlation with the national emergency department overcrowding score. *Emerg Med Int* 2011;2011.
- Pulliam BC, Liao MY, Geissler TM, Richards JR. Comparison between emergency department and inpatient nurses' perceptions of boarding of admitted patients. *West J Emerg Med* 2013;14:90–5.
- Phillips K, Knowlton M, Riseden J. Emergency department nursing burnout and resilience. *Adv Emerg Nurs J* 2022;44:54–62.
- Steinbuch Y. Coronavirus patients spotted lying on floor at overrun Madrid hospital. *New York Post*. March 2, 2020. Available at: <https://nypost.com/2020/03/23/coronavirus-patients-spotted-lying-on-floor-at-overrun-madrid-hospital>. Accessed May 28, 2022.
- van Loveren K, Singla A, Sinvani L, et al. Increased emergency department hallway length of stay is associated with development of delirium. *West J Emerg Med* 2021;22:726–35.
- Kelen GD, Wolfe R, D'Onofrio G, et al. Emergency department crowding: the canary in the health care system. *NEJM Catal Innov Care Deliv*. September 28, 2021. Available at: <https://catalyst.nejm.org/doi/full/10.1056/CAT.21.0217>. Accessed May 28, 2022.
- Rabin E, Kocher K, McClelland M, et al. Solutions to emergency department 'boarding' and crowding are underused and may need to be legislated. *Health Aff (Millwood)* 2012;31:1757–66.
- Kusterbeck S. No reassessment of patients in waiting room or hallway is malpractice risk. *ED Management*. January 1, 2022. Available at: <https://www.reliasmmedia.com/articles/148832-no-reassessment-of-patients-in-waiting-room-or-hallway-is-malpractice-risk>. Accessed May 28, 2022.
- Weber E, Mason S, Carter A, Hew RL. Emptying the corridors of shame: organizational lessons from England's 4-hour emergency throughput target. *Ann Emerg Med* 2011;57:79–88.