Emergency Department Crowding, Part 2—Barriers to Reform and Strategies to Overcome Them

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Part 1 of this 2-article series reviews serious moral problems created by emergency department (ED) boarding and resultant crowding. In this second part of the series, we identify and describe operational and financial barriers to resolving the crisis of ED crowding, along with a variety of institutional and public policy strategies proposed or implemented to overcome those barriers. Finally, the article evaluates 2 additional actions designed to address the problem of ED crowding, namely, distribution of a warning statement to ED patients and implementation of a “reverse triage” system for safe early discharge of hospital inpatients. [Ann Emerg Med. 2009;53:612-617.]

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INTRODUCTION

Part 1 of this 2-article series examines serious moral problems posed by emergency department (ED) boarding and resultant crowding.1 The existence of ED crowding, and the moral risks it creates, will come as no surprise to most emergency physicians, because they will have had substantial firsthand experience with crowding and its consequences. Nor will ED crowding be a surprise to readers of the literature of emergency medicine and health policy, as reports of crowding first appeared in the literature in the early 1990s and have become more frequent since 2000.2-12 If the problem of ED crowding is significant and increasingly longstanding, why has it been allowed to persist and, in fact, to worsen in recent years?

In its comprehensive 2006 report on hospital-based emergency care in the United States, the Institute of Medicine (IOM) Committee on the Future of Emergency Care in the United States Health System identified formidable barriers to resolving the problem of ED crowding.12 This second part of a 2-article series on ED crowding examines multiple reasons why Crowding persists despite the moral risks it poses. The article describes various strategies that have been proposed to ease the problem of ED crowding. These barriers and strategies are organized into 2 categories: operational and financial. The article concludes with a review and evaluation of 2 recent strategies emergency physicians have offered for addressing the growing crisis of ED crowding.

OPERATIONAL BARRIERS AND STRATEGIES

Operational Barriers

The US health care system is the most costly and the most technologically advanced health care system in the world.13 Despite these distinctive features, one commentator characterizes US health care as “a miracle of disorganization”14 A 2005 joint report of the National Academy of Engineering and the IOM describes the US health care sector as “an underperforming conglomerate of independent entities (individual practitioners, small group practices, clinics, hospitals, pharmacies, community health centers, et al.). . .”15 The National Academy of Engineering/IOM report observes that, unlike other sectors of the economy, including banking, transportation, and manufacturing, the health care sector has been slow to use systems engineering tools and information and communication technologies to improve the quality, safety, and efficiency of its services and products.

Despite its relatively loose organization, health care is a highly complex and interdependent system. In the ED, for example, effective patient care depends on the interaction of emergency physicians, on-call specialists, emergency nurses, allied health professionals, laboratory and diagnostic imaging services, and inpatient units, among others. If any one of these interdependent components is performing poorly or is
overwhelmed, delivery of care in the ED will suffer. Some of these components are controlled, at least in part, by the ED, and ED leaders can design and implement improvements in these areas. But many components are controlled by stakeholders outside the ED, and these “external” decisionmakers may not place a high priority on optimizing patient care in the ED. Thus, the ED may experience “operational inefficiencies” as a result of inadequate staffing levels, or poor communication with laboratory and imaging services, or, most important, restricted access to inpatient beds for admitted patients. Emergency physicians and other ED-based health care providers will then feel the brunt of the problem of ED crowding, but they will have little or no power to address its causes, since those causes are beyond their control. ED leaders must thus appeal to institutional executives and to public policymakers for institution-wide or health-care-system-wide initiatives to ease ED crowding.

In a recent survey of members of the American College of Emergency Physicians, respondents ranked ED crowding caused by boarding of admitted patients as their most important patient safety concern. For many institutional and health care industry leaders, however, ED crowding has not yet become a top-priority problem. For example, reduction of ED crowding is not one of the 12 target interventions included in the national 100,000 Lives and 5 Million Lives Campaigns for hospital quality improvement sponsored by the Institute for Healthcare Improvement. Nor is reduction of ED crowding one of the 2008 National Patient Safety Goals adopted by The Joint Commission. Establishing ED crowding as a leading national patient safety priority may be complicated by the still-limited evidence for the deleterious effects of crowding and by the fact that there is great regional variation within the United States in the number of hospital beds per capita, and thus presumably also in the prevalence of ED crowding. Western states, for example, have much lower rates of hospital beds (1.7 to 2.3 beds per 1,000 population) than states in the northern Great Plains (3.5 to 5.6 beds per 1,000 population).

Operational Strategies

The 2006 IOM report describes a variety of management initiatives designed to improve patient flow through the hospital from admission to discharge, thus easing the shortage of inpatient beds and reducing the number of admitted patients boarding in the ED. Among the initiatives discussed are the following:

1. Hospitals can create multidisciplinary teams to address ED and inpatient crowding as a systems problem. Such teams can collect data about the problem, design and implement strategies to alleviate it, and evaluate those strategies. By focusing attention on crowding, they can also increase understanding of the problem and accountability for addressing it among hospital leaders and medical staff. Such teams might implement any of the following strategies.

2. Hospitals can establish coordinated bed management programs to optimize the occupancy of inpatient beds. A “bed czar” or “bed team” could receive early notice of impending discharges, facilitate rapid turnaround of vacant beds, make interunit transfers, communicate hospital census information, assign waiting patients to inpatient beds, and initiate ambulance diversion. Bed management programs could direct increased attention, additional resources, and explicit procedures toward the goal of making the most efficient use of hospital beds.

3. Relying on data about predictable weekly or daily peaks and valleys in demand for admission, hospitals can adopt “smoothing” strategies to distribute admissions more evenly across the workweek. For example, emergency admissions to a particular hospital may peak on Monday, and that day may also have the highest number of admissions for elective surgery. To alleviate a predictable shortage of inpatient beds and resultant crowding in the ED, elective surgery schedules could be adjusted by moving surgeries to other days of the week.

4. Hospitals can create inpatient units to relieve ED crowding. Clinical decision units or observation units, for example, can monitor patients with symptoms such as chest pain, abdominal pain, or shortness of breath who may or may not ultimately need hospitalization. Discharge units sometimes referred to as discharge lounges, can accommodate patients who have been discharged by their physician and are merely awaiting discharge instructions or a ride home from the hospital.

5. Hospitals can implement “full-capacity protocols” in periods of severe hospital and ED crowding. Under these protocols, patients boarding in hallways or other unsafe areas in the ED are moved to hallways in various inpatient units. Such protocols alleviate the burden on the ED of boarded patients by distributing those patients throughout the hospital. This strategy may also increase hospital-wide awareness of crowded conditions and thereby motivate physicians and staff to make beds available.

These operational strategies are generally designed to improve the efficiency of the system of inpatient hospital care, that is, to secure the maximum amount of benefit from the available resources. The strategies seek to achieve this goal by reducing or eliminating waste (empty beds, underused staff) and by assigning patients to the most appropriate available treatment setting for the level and type of care they need.

FINANCIAL BARRIERS AND STRATEGIES

Financial Barriers

The organizational strategies described above appear promising, and there is anecdotal evidence that individual hospitals have implemented one or more of them with some success. There is, however, no clear evidence of a strong groundswell of effort on the part of hospitals to resolve this problem.
the problem of ED crowding. If this problem is as serious as we have argued, why are hospitals not taking aggressive measures to address it? The IOM report offers the following reason: “No major change in health care can take place without strong financial incentives, and today hospitals have almost no incentives to address the myriad problems associated with inefficient patient flow or ED crowding. Indeed, ... hospitals have a number of financial incentives to continue the practices that lead to these problems.”12

What are these alleged financial incentives? The IOM report identifies the following 4:

1. Hospitals maximize income by operating at high capacity, making full use of their employees and facilities. The ED can enable its hospital to operate at or near full capacity by acting as an escape valve for excess demand, providing necessary care for seriously ill or injured patients until the hospital can accommodate them as inpatients.12
2. Patients awaiting an inpatient bed in the ED compete for beds with patients admitted electively for surgery or other invasive procedures. Such elective admission patients are usually insured, and the procedures they undergo are often well reimbursed, generating significant revenue for hospitals. Emergency admissions, in contrast, are more likely to be uninsured or underinsured, to have more severe illnesses, and to have lower rates of reimbursement.12,27
3. Hospitals thus have a financial incentive to prefer elective over emergency admissions. Failure to honor requests for elective admissions, or frequent cancellation of scheduled admissions, may in fact alienate surgeons and other procedural specialists whose patients generate substantial income for the hospital.
4. Giving elective admissions priority over emergency admissions may enable hospitals to maximize revenues in another way. If they are denied admission, elective patients may choose not to be hospitalized, or to go to a different hospital, and the hospital will lose their patronage. In contrast, patients boarded in the ED are “captive”; they are already in the hospital and cannot easily go elsewhere.12 So, despite lower priority and a longer wait for an inpatient bed, the boarding patients will receive continuing care in the ED and will also eventually be admitted. In this way, the hospital will secure 2 admissions instead of just 1.

The financial incentives described above are based on hospitals’ interests in maximizing revenues and minimizing expenses in a market-based health care system. The problem of ED crowding, however, is not limited to US-style market economies in health care. Instead, persistent ED crowding has been reported in many nations, including Canada, Australia, New Zealand, Ireland, and other nations that provide universal health insurance for their citizens.29-34 In all of these settings, ED crowding appears to be primarily the result of a shortage of inpatient beds and resultant boarding of admitted patients in the ED for long periods. In the United States, the number of hospital beds has declined steadily for the past 40 years, primarily because of a variety of cost-containment measures, including prospective reimbursement systems, preadmission certification, and limits on length of stay, among many others.35

In countries with national health systems, global hospital budgets and the lack of financial incentives restrict the number of inpatient beds.

The shortage of hospital beds and resultant ED crowding may thus be a symptom of implicit or explicit rationing of scarce resources in virtually every health care system. One might be tempted to conclude that the moral risks to patients of ED crowding described in the first article in this series, including loss of privacy and confidentiality, reduced quality of care, delayed access to care, and barriers to participation in treatment decisionmaking, are unavoidable consequences of increased demand for expensive medical care. It is notable, however, that patients in other treatment settings, such as private physician offices, are not typically exposed to these same moral risks.

Financial Strategies

If the financial incentives described above reinforce the status quo, new incentives will be required to encourage hospitals and the health care system at large to address the problem of ED crowding. In fact, the 3 IOM reports on the US emergency health care system published in 2006 made no fewer than 60 separate recommendations to fix the system.12,36,37 A March 2007 national summit on the IOM recommendations, organized by the American College of Emergency Physicians, narrowed this list to 6 key recommendations. Most notable for the problem of ED crowding are the following 2 policy proposals:

1. Congress should establish dedicated funding (initially $50 million) to reimburse hospitals that provide significant amounts of uncompensated emergency and trauma care for financial losses incurred by those services.
2. Hospitals should end the practices of boarding patients in the ED and ambulance diversion, except in the most extreme cases. The Centers for Medicare & Medicaid Services should convene a working group of experts to develop boarding and diversion standards, incentives, and enforcement.38
A policy initiative adopted in the United Kingdom directed National Health Service hospitals to limit the amount of time patients spend in the ED before they are admitted to the hospital or discharged. The performance target was set at 98% of patients discharged from the ED or admitted within 4 hours of arrival. The Health Service provided additional personnel and financial incentives to hospitals to achieve this goal.39

Several of the above policy initiatives would impose new standards that require hospitals to make more efficient use of their current resources; others would provide additional resources to enable hospitals to increase their inpatient capacity. If adopted and fully implemented, these initiatives may go at least some way toward alleviating the problem of ED crowding. Even if the process of adoption and implementation of these policies is successful, however, it will likely take years to complete. In the meantime, how should emergency physicians and hospitals contend with this continuing problem?

ED CROWDING: RESPONSES TO A CRISIS

As noted above, the various strategies offered to address ED crowding seek to use existing hospital resources more efficiently or to secure additional resources to expand hospital capacity. Both of these goals raise significant questions of distributive justice. To maximize efficiency, hospitals must decide how to distribute resources among their current patients to do the best job of caring for all. Because resources are scarce, however, different distribution strategies will delay or defer satisfaction of the needs of some patients to satisfy the needs of other patients. If the major institutional funders of health care—the government and employers—decide to provide new resources to increase hospital capacity, they will have fewer resources to devote to other major needs both within and outside of health care. There is therefore no easy or painless solution to the problem of ED crowding. All the available options involve difficult decisions to confer benefits on some stakeholders and impose burdens on others.

We have noted that although emergency physicians and other emergency care professionals confront the moral challenges of ED crowding firsthand, effective responses must come from the institutional and system-wide level. Although emergency physicians do not have the power to change the health care system, they certainly can and should participate in addressing the problem of ED crowding. Below, we briefly describe and evaluate 2 of the many responses to ED crowding recently offered by emergency physicians. Both of these approaches are controversial and not necessarily recommended for generalized application.

A “No-Confidence” Statement

In April 2005, emergency physicians at Vancouver General Hospital, frustrated by their ongoing failure to persuade hospital administration “to address the crisis of admitted patients in our ED,” began giving selected patients a statement expressing their “non-confidence in the ability of the Vancouver General Hospital ED to provide safe, timely, and appropriate emergency medical care.”40 This action stimulated heated public, political, and professional debate in British Columbia. After emergency physicians at other Vancouver area hospitals publicly expressed similar concerns about patient safety, the provincial Ministry of Health funded a $7 million campaign to address the problem. Despite this campaign, however, the ED at Vancouver General Hospital remained gridlocked with admitted patients in 2006.40

The Vancouver no-confidence statement certainly called attention to the problem and it evoked an official governmental response. The Vancouver emergency physicians’ proposed strategy for alleviating ED crowding, namely, the use of time limits on ED stays to trigger protocols that distribute admitted ED patients throughout hospital hallways, is also intended to raise the visibility of the crowding problem by spreading the burden to areas other than the ED. This strategy is obviously not an ideal solution, because patients are likely to feel almost as exposed and uncomfortable in a hallway of an inpatient unit as in a hallway of the ED.

Was the Vancouver collective action of distributing a no-confidence statement to ED patients a justifiable response to ED crowding? This action posed some risk of harm to patients who may have been frightened by it, and there may have been other avenues, such as direct appeals to public officials or letters to local newspapers, available to the Vancouver emergency physicians. In their defense, these emergency physicians may have exhausted other avenues, and they may have decided that ED patients and the public needed to be warned about an unsafe situation. An American Medical Association opinion on collective action rejects the use of strikes by physicians but encourages physicians to use other tools of collective action to press for needed reforms, including informational campaigns, nondisruptive public demonstrations, lobbying and publicity campaigns, and collective negotiation.41

“Reverse Triage”

In a recent article, Kelen et al42 describe first steps in the creation of a classification system for safe early discharge of hospital inpatients to create additional inpatient capacity. This system, called reverse triage, would identify hospital patients who could be discharged with little risk of a serious complication in their condition, thus making room for disaster victims in greater need of hospital care. Kelen et al42 initially describe their system as a response to disaster surge, but later in the article they add that “it is also designed for everyday hospital use. Emergency Departments in many parts of the world are often overcrowded, mainly as a result of severely restricted inpatient capacity. Thus, on a small scale, disaster-like settings arise every day. The device being developed here could have a substantial effect on the safe management of hospital capacity on a routine daily basis.”42

Hospitals and public health agencies have developed triage systems to allocate scarce resources in the event of a pandemic or other natural or manmade disaster.43 These plans typically give priority for treatment to those patients whose needs are
greatest and for whom treatment is likely to preserve life or restore health. Disaster plans also typically allow delay or deferral of care for patients whose needs are not as serious or as urgent. The moral principle most commonly cited to defend this approach to triage is utilitarian, that is, we should seek to achieve the most good for the greatest number of people. If this type of triage system is the morally preferable approach to allocating care to patients during a disaster surge, we believe that it also may be the morally preferable approach to allocating care to patients during everyday surge. If this is correct, then the use of a reverse triage system to give priority to ED patients with urgent needs over inpatients who can be discharged with little or no health risk may be a justifiable approach to addressing the problem of ED crowding.

In the first phase of a multiphase project, Kelen et al assembled a panel of 39 experts who defined a classification system of 5 risk categories for hospital discharge, from minimal to very high risk. In the next phase of the project, the group will seek to develop a real-time decision rule or scoring system to place individual patients in these 5 risk categories. If this project is able to demonstrate evidence-based measures for safe early discharge of inpatients, implementation of those measures can achieve 2 valuable goals: (1) more rapid admission and treatment for ED patients requiring inpatient care, and (2) reduction of the intensity and duration of ED crowding.

In summary, this 2-article series has examined conceptual, moral, and policy perspectives on the issue of ED crowding. In part 1 of the series, we displayed the substantial moral risks faced by patients in our increasingly crowded EDs. In part 2, we have identified formidable barriers to resolving the problem of ED crowding, and we have examined a variety of strategies to overcome those barriers, including efficiency measures, national policy initiatives, new triage systems, and political activism, such as public warning statements by emergency physicians. We hope that a clearer picture of ED crowding as a systems problem and of the moral risks posed by crowding will give emergency physicians, institutional leaders, and public policymakers a strong incentive to work collaboratively to implement timely and effective responses to this growing crisis.

For the ACEP Ethics Committee.

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