

Memorandum

To: Board of Directors
Council Officers

From: Diana Fite, MD, FACEP
Chair, Emergency Medicine Practice Committee

Date: March 22, 2007

Subj: ED Crowding Resources

During the 2006-2007 committee year, the Emergency Medicine Practice Committee was assigned an objective to explore development of additional tools and information for members to address ED crowding. The subcommittee working on the objective reviewed the materials that are referenced on the ACEP web page on ED crowding. The subcommittee members also reviewed ACEPs information papers on crowding, “Approaching Full Capacity in the Emergency Department” and “Emergency Department Crowding,” and determined that no changes were required. Bibliographies and resources were compiled on “ED Crowding and Quality of Care” and “Surge Capacity” (Attachment A) with links as available. An example of a patient flow plan (Attachment B) was provided by a member of the committee to be included with the resources.

The new materials will be added to the ACEP web page on crowding and a link to the National EM Report Card will also be included on the crowding web page.

Please review this document and submit any comments to Margaret Montgomery by **Tuesday, May 1, 2007.**

HEADQUARTERS

Post Office Box 619911
Dallas, Texas 75261-9911

1125 Executive Circle
Irving, Texas 75038-2522

972-550-0911
800-798-1822
972-580-2816 (FAX)
www.acep.org

BOARD OF DIRECTORS

Brian F. Keaton, MD, FACEP
President
Linda L. Lawrence, MD, FACEP
President-Elect
Cherri D. Hobgood, MD, FACEP
Chair of the Board
Nicholas J. Jouriles, MD, FACEP
Vice President
Angela F. Gardner, MD, FACEP
Secretary-Treasurer
Frederick C. Blum, MD, FACEP, FAAP
Immediate Past President
Kathleen M. Cowling, DO, MS, FACEP
Ramon W. Johnson, MD, FACEP
Alexander M. Rosenau, DO, FACEP
Sandra M. Schneider, MD, FACEP
David C. Seaberg, MD, CPE, FACEP
David P. Sklar, MD, FACEP
Robert C. Solomon, MD, FACEP

COUNCIL OFFICERS

Todd B. Taylor, MD, FACEP
Speaker
Bruce A. MacLeod, MD, FACEP
Vice Speaker

EXECUTIVE DIRECTOR

Dean Wilkerson, JD, MBA, CAE

ED Crowding and Quality of Care References

- Development and validation of a new index to measure emergency department crowding.** Bernstein, SL, Verghese V, Leung W, et al. *Acad Emerg Med.* 2003;10(9):938-942.
- Emergency department crowding and thrombolysis delays in acute myocardial infarction.** Schull MJ, Vermeulen M, Slaughter G, et al. *Ann Emerg Med.* 2004;44(6):577-585.
- Emergency department crowding: The effect on resident education.** Atzema, C, Bandiera G, Schull MJ. *Ann Emerg Med.* 2005;45(3):276-281.
- Decreased health care quality associated with emergency department overcrowding.** Miro O, Antonio MT, Jimenez S, et al. *Eur J Emerg Med.* 1999;6(2):105-107.
- Access to emergency care restricted by long waiting times and cost and coverage concerns.** Kennedy J, Rhodes K, Walls CA, et al. *Ann Emerg Med.* 2004;43(5):567-573.
- Profiles in patient safety: Antibiotic timing in pneumonia and pay-for-performance.** Pines JM. *Acad Emerg Med.* 2006;13(7):787-790.
- The association between emergency department crowding and hospital performance on antibiotic timing for pneumonia and percutaneous intervention for myocardial infarction.** Pines JM, Hollander JE, Localio AR, et al. *Acad Emerg Med.* 2006;13(8):873-878.
- The effect of emergency department crowding on the management of pain in older adults with hip fracture.** Hwang, U, Richardson LD, Sonuyi TO, et al. *J Am Geriatrics Soc.* 2006;54(2):270-275.
- The effect of crowding on access and quality in an academic ED.** Vieth TL, Rhodes KV. *Am J Emerg Med.* 2006;24(7):787-794.
- Impact of emergency department crowding on door to antibiotic timing in admitted patients with community-acquired pneumonia.** Fee C, Weber E, Maak C. *Acad Emerg Med.* 2006;13(5 Supplement 1):S59.
- The association between hospital overcrowding and mortality among patients admitted via Western Australian emergency departments.** Sprivulis PC, DaSilva JA, Jacobs IG, et al. *Med J Aust.* 2006;184(5):208-212.
- Clinical review: Emergency department overcrowding and the potential impact on the critically ill.** Cowan RM, Trzeciak S. *Critical care.* 2005;9(3):291-295.
- Ways to reduce patient turnaround time and improve service quality in emergency departments.** Sinreich D, Marmor Y. *J Health Org & Manage.* 2005;19(2):88-105.
- Hospital overcrowding: an opportunity for case managers.** Simmons FM. *Case Manager.* 2005;16(4):52-54; quiz 55.
- IOM report: the future of emergency care in the United States health system.** Institute of Medicine. *Acad Emerg Med.* 2006;13(10):1081-1085.

Resources on Surge Capacity

- Surge Capacity for Health Care Systems: Early Detection, Methodologies, and Process.** Peter L. Estacio, PhD, MD, MPH. *Acad Emerg Med.* 2006;13(11):1135-1137. <http://www.aemj.org/cgi/content/full/13/11/1135>
- Executive Summary: The Science of Surge Conference.** Koenig KL, Kelen G. *Acad Emerg Med.* 2006;13:1087-1088.; published online before print October 10 2006, 10.1197/j.aem.2006.07.008

The Science of Surge. Kelen GD, McCarthy ML. *Acad Emerg Med.* 2006;13:1089-1094.

Daily Patient Flow Is Not Surge: "Management Is Prediction." Davidson SJ, Koenig KL, Cone DC. *Acad Emerg Med.* 2006;13:1095-1096.

The Science of Surge: An All-hazard Approach Is Critical to Improving Public Health Preparedness. Carmona RH. *Acad Emerg Med.* 2006;13:1097; published online before print September 11 2006, 10.1197/j.aem.2006.06.039

Understanding Surge Capacity: Essential Elements. Barbisch DF, Koenig KL. *Acad Emerg Med.* 2006;13:1098-1102. <http://www.aemj.org/cgi/content/abstract/13/11/1098>

Current Status of Surge Research. Phillips S. *Acad Emerg Med.* 2006;13:1103-1108. published online before print October 10 2006, 10.1197/j.aem.2006.07.007

Developing Models for Patient Flow and Daily Surge Capacity Research. Asplin BR, Flottesmesch TJ, Gordon BD. *Acad Emerg Med.* 2006;13:1109-1113.; published online before print October 2 2006, 10.1197/j.aem.2006.07.004

Improving Surge Capacity for Biothreats: Experience from Taiwan. Shih FY, Koenig KL. *Acad Emerg Med.* 2006;13:1114-1117; published online before print October 2 2006, 10.1197/j.aem.2006.06.044

Population-based Triage Management in Response to Surge-capacity Requirements during a Large-scale Bioevent Disaster. Burkle FM. *Acad Emerg Med.* 2006;13:1118-1129. published online before print October 2 2006, 10.1197/j.aem.2006.06.040

The Art and Science of Surge: Experience from Israel and the U.S. Military. Tadmor B, McManus J, Koenig KL. *Acad Emerg Med.* 2006;13:1130-1134; published online before print October 2 2006, 10.1197/j.aem.2006.06.043

The Measurement of Daily Surge and Its Relevance to Disaster Preparedness. McCarthy ML, Aronsky D, Kelen GD. *Acad Emerg Med.* 2006;13:1138-1141; published online before print October 10 2006, 10.1197/j.aem.2006.06.046

Individual-based Computational Modeling of Smallpox Epidemic Control Strategies. Burke DS, Epstein JM, Cummings DAT, et al. *Acad Emerg Med.* 2006;13:1142-1149.

The Creation of Emergency Health Care Standards for Catastrophic Events. Wise RA. *Acad Emerg Med.* 2006;13:1150-1152 published online before print October 2 2006, 10.1197/j.aem.2006.06.034

State of Research in High-consequence Hospital Surge Capacity. Schultz CH, Koenig KL. *Acad Emerg Med.* 2006 13: 1153-1156; published online before print August 31 2006, 10.1197/j.aem.2006.06.033

Surge Capacity for Healthcare Systems: A Conceptual Framework. Kaji A, Koenig KL, Bey T. *Acad Emerg Med.* 2006;13:1157-1159; published online before print September 11 2006, 10.1197/j.aem.2006.06.032

Research Priorities for Surge Capacity. Rothman RE, Hsu EB, Kahn CA et al. *Acad Emerg Med.* 2006;13:1160-1168; published online before print October 10 2006, 10.1197/j.aem.2006.07.002

Differentiating Large-scale Surge versus Daily Surge. Jenkins JL, O'Connor RE, Cone DC. *Acad Emerg Med.* 2006;13:1169-1172.

Metrics in the Science of Surge. Handler JA, Gillam M, Kirsch TD, et al. *Acad Emerg Med.* 2006;13:1173-1178; published online before print October 10 2006, 10.1197/j.aem.2006.07.006

The Science of Surge: Detection and Situational Awareness. McManus J, Huebner K, Scheulen J. *Acad Emerg Med.* 2006;13:1179-1182; published online before print September 11 2006, 10.1197/j.aem.2006.06.038

Research Methods of Inquiry. Rodgers J, Foushee R, Terndrup TE, et al. *Acad Emerg Med.* 2006;13:1183-1192; published online before print September 11 2006, 10.1197/j.aem.2006.07.001

Characteristics of Medical Surge Capacity Demand for Sudden-impact Disasters. Stratton SJ, Tyler RD. *Acad Emerg Med.* 2006;13:1193-1197; published online before print August 2 2006, 10.1197/j.aem.2006.05.008

Hospital Disaster Preparedness in Los Angeles County. Kaji AH, Lewis RJ. *Acad Emerg Med.* 2006;13:1198-1203; published online before print August 2 2006, 10.1197/j.aem.2006.05.007

An Independent Evaluation of Four Quantitative Emergency Department Crowding Scales. Jones SJ, Allen TA, Flottesch TJ, et al. *Acad Emerg Med.* 2006;13:1204-1211; published online before print August 10 2006, 10.1197/j.aem.2006.05.021

System Complexity As a Measure of Safe Capacity for the Emergency Department. France DJ, Levin S. *Acad Emerg Med.* 2006;13:1212-1219; published online before print June 28 2006, 10.1197/j.aem.2006.04.010

The Effects of Ambulance Diversion: A Comprehensive Review. Pham JC, Patel R, Millin MG, et al. *Acad Emerg Med.* 2006;13:1220-1227; published online before print August 31 2006, 10.1197/j.aem.2006.05.024

Surge Capacity Associated with Restrictions on Nonurgent Hospital Utilization and Expected Admissions during an Influenza Pandemic: Lessons from the Toronto Severe Acute Respiratory Syndrome Outbreak. Schull MJ, Stukel TA, Vermeulen MJ, et al. *Acad Emerg Med.* 2006;13:1228-1231.
<http://www.aemj.org/cgi/content/abstract/13/11/1228>

Equipment, Supplies, and Pharmaceuticals: How Much Might It Cost to Achieve Basic Surge Capacity? Hanfling D. *Acad Emerg Med.* 2006;13:1232-1237; published online before print June 26 2006, 10.1197/j.aem.2006.03.567

Physicians' Preparedness for Bioterrorism and Other Public Health Priorities. Alexander GC, Larkin GL, Wynia MK. *Acad Emerg Med.* 2006;13:1238-1241; published online before print April 13 2006, 10.1197/j.aem.2005.12.022

The Effects of a Physician Slowdown on Emergency Department Volume and Treatment. Walsh B, Eskin B, Allegra J, et al. *Acad Emerg Med.* 2006;13:1242-1245; published online before print April 13 2006, 10.1197/j.aem.2005.12.024

The effect of crowding on access and quality in an academic ED. Vieth TL, Rhodes KV. *Am J Emerg Med.* 2006;24(7):787-794.

Hospital surge capacity: if you can't always get what you want, can you get what you need? Schull MJ. *Ann Emerg Med.* 2006;48(4):389-390. Epub 2006 Jul 12.

Annual bed statistics give a misleading picture of hospital surge capacity. DeLia D. *Ann Emerg Med.* 2006;48(4):384-8, 388.e1-2. <http://www.acep.org/webportal/Newsroom/NR/annals/2006/022706.htm>

Surge capacity and casualization: Human resource issues in the post-SARS health system. Baumann AO, Blythe JM, Underwood JM. *Can J Public Health.* 2006;97(3):230-232.

Hospitals must improve infrastructure, surge capacity, officials say. Young D. *Am J Health Syst Pharm.* 2006;63(11):990-992.

Using annual bed statistics to measure hospitals' surge capacity is misleading, Rutgers researchers report. *Hosp Health Netw.* 2006;80(4):85.

The legal framework for meeting surge capacity through the use of volunteer health professionals during public health emergencies and other disasters. Hodge JG Jr, Gable LA, Calves SH. *J Contemp Health Law Policy.* 2005;22(1):5-71.

Mobile hospital raises questions about hospital surge capacity. Voelker R. *JAMA.* 2006;295(13):1499-1503.

Building community-based surge capacity through a public health and academic collaboration: the role of community health centers. Koh HK, Shei AC, Bataringaya J, et al. *Public Health Rep.* 2006;121(2):211-216.

Military medical surge capacity in times of war and natural disaster. Eiseman B, Chandler JG. *J Trauma.* 2006;60(1):237-239.

http://www.ncbi.nlm.nih.gov/entrez/query.fcgi?cmd=Retrieve&db=PubMed&list_uids=16456463&dopt=Abstract

At capacity and beyond. Ideas such as 'surge' hospitals are getting a more careful look as healthcare wrestles with planning for large-scale disasters. Romano M. *Mod Healthc.* 2005;35(39):6-7, 16,

Development of a state medical surge plan, part I: the procedures, process, and lessons learned or confirmed. Moser R Jr, Connelly C, Baker L, et al. *Disaster Manag Response.* 2005;3(4):112-117.

Hospitals' preparation for surge of patients helps with new Joint Commission standards. *ED Manag.* 2005;17(8):suppl 1-3.

Hospital bed surge capacity in the event of a mass-casualty incident. Davis DP, Poste JC, Hicks T, et al. *Prehospital Disaster Med.* 2005 May-Jun;20(3):169-76.

Health care system surge capacity recognition, preparedness, and response. American College of Emergency Physicians. *Ann Emerg Med.* 2005;45(2):239.

Surge capacity for mass-casualty disasters. *Healthc Hazard Manage Monit.* 2004;18(4):1-6.

Space, staff key concerns in ED surge capacity plans. *ED Manag.* 2004;16(10):112-113.

Health care facility and community strategies for patient care surge capacity. Hick JL, Hanfling D, Burstein JL, et al. *Ann Emerg Med.* 2004;44(3):253-261.

Mobile Hospital Raises Questions About Hospital Surge Capacity. Rebecca Voelker. *JAMA.* 2006;295:1499-1503

Web Resources on Surge Capacity

Health care system surge capacity recognition, preparedness and response. American College of Emergency Physicians. [policy statement], Approved August 2004.

<http://www.acep.org/webportal/PracticeResources/PolicyStatements/ems/hlthcaresysurgecaprecogpreprespns.htm>

Hospital and Healthcare Systems – Surge Capacity. Barbisch D. June 2003.

<http://www.dtic.mil/ndia/2003terrorism/barb.pdf>

Surge capacity: Education and training for a qualified workforce. Agency for Healthcare Research and Quality. March 2, 2004. http://www.dhs.ca.gov/smallpox/PDF/SurgeCapacityOA_Final.pdf

Medical surge capacity and capability handbook. DHHS Office of Public Health Emergency Preparedness. August 2004. http://www.hhs.gov/ophep/mscc_handbook.html

Emergency department utilization and surge capacity in New Jersey, 1998-2003. DeLia D. March 2005.

<http://www.cshp.rutgers.edu/PDF/ED%20Utilization%20and%20Surge%20Capacity%20in%20NJ.pdf>

Addressing Surge Capacity in a Mass Casualty Event. March 2006. Agency for Healthcare Research and Quality.

<http://mmrs.fema.gov/news/publichealth/2006/mar/nph2006-03-02.aspx>

Optimizing surge capacity: Hospital assessment and planning. Agency for Healthcare Research and Quality. January 2004. <http://www.ahrq.gov/news/ulp/btbriefs/btbrief3.htm>

Improving health care surge capacity for California. May 2006. <http://www.dhs.ca.gov/epo/PDF/SurgeSummary.pdf>

A dynamic model to support surge capacity planning in a rural hospital. Manley W, Homer J, Hoard M, et al. <http://www.albany.edu/cpr/sds/conf2005/proceed/papers/MANLE333.pdf>

Attachment B was removed from this version. It was proprietary.

Scoring Grid

- 0 Insufficient compliance
- 1 Partial compliance
- 2 Satisfactory compliance
- NA Not applicable

B 0 1 2 NA

B 0 1 2 NA

B 0 1 2 NA

B 0 1 2 NA

B 0 1 2 NA

B 0 1 2 NA

A 0 1 2 NA

B 0 1 2 NA

B 0 1 2 NA

- Compliant
- Not Compliant

B 0 1 2 NA

Elements of Performance for LD.3.15

1. Leaders assess patient flow issues within the hospital, the impact on patient safety, and plan to mitigate that impact.
2. Planning encompasses the delivery of appropriate and adequate care to admitted patients who must be held in temporary bed locations, for example, postanesthesia care unit and emergency department areas.
3. Leaders and medical staff share accountability to develop processes that support efficient patient flow.
4. Planning includes the delivery of adequate care, treatment, and services to non-admitted patients who are placed in overflow locations.
5. Specific indicators are used to measure components of the patient flow process and address the following:
 - Available supply of patient bed space
 - Efficiency of patient care, treatment, and service areas
 - Safety of patient care, treatment, and service areas
 - Support service processes that impact patient flow
6. Indicator results are available to those individuals who are accountable for processes that support patient flow.
7. Indicator results are reported to leadership on a regular basis to support planning.
8. The hospital improves inefficient or unsafe processes identified by leadership as essential to the efficient movement of patients through the hospital.
9. Criteria are defined to guide decisions about initiating diversion.

Standard LD.3.20

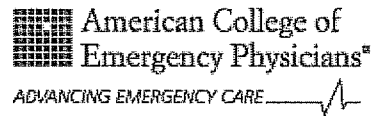
Patients with comparable needs receive the same standard of care, treatment, and services throughout the hospital.

Rationale for LD.3.20

For patients with the same needs, hospitals may be providing different services. Patients may receive more or fewer visits, or may receive equipment with or without enhanced features. Also, hospitals may choose to have branch offices that offer different services from one another. The leaders must make sure that factors such as different individuals providing care, treatment, and services; different payment sources; or different settings of care do not intentionally negatively influence the outcome.

Elements of Performance for LD.3.20

1. Patients with comparable needs receive the same standard of care, treatment, and services throughout the hospital.



Boarding of Admitted and Intensive Care Patients in the Emergency Department

Revised and approved by the ACEP Board of Directors January 2007
Originally approved by the ACEP Board of Directors October 2000

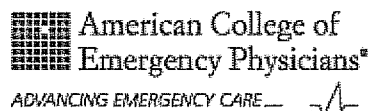
Optimal utilization of the emergency department (ED) includes the timely evaluation, management, and stabilization of all patients. The ED should not be utilized as an extension of the intensive care and other inpatient units for admitted patients, because this practice adversely affects quality of care and access to care. ED leadership, hospital administrators, EMS directors, community leaders, hospital regulators and accrediting bodies should work together to resolve this problem. In order for the ED to continue to provide quality patient care and access to that care, ACEP believes that:

- Hospitals have the responsibility to provide quality patient care and optimize patient safety by ensuring the prompt transfer of patients admitted to inpatient units as soon as the treating emergency physician makes such a decision. The hospital regulatory and accrediting bodies should mandate this prompt transfer as one of their standards.
- ED directors should work with their administrators and nursing director to develop a workable plan to achieve the prompt transfer of admitted patients to inpatient units.
- Hospitals should have staffing plans in place that can mobilize sufficient health care and support personnel to meet increased patient needs. The hospital regulatory and accrediting bodies should mandate this escalation as one of their standards.
- Hospitals should develop appropriate mechanisms to facilitate availability of inpatient beds. The hospital regulatory and accrediting bodies should mandate bed availability planning as one of their standards.
- Emergency physicians should work with their hospital and medical staff to monitor and improve the use of limited inpatient resources.
- Staffing patterns applicable to other specialized areas/units of the hospital should apply equally to the ED to assure that patients receive a consistent standard of care within the organization.
- Mutual aid agreements should be in place to assist any hospital that is unable to meet the emergency and intensive care needs of its community.
- Hospital diversion should be instituted only when internal resources have been exhausted and other community facilities have resources available to meet the needs of patients presenting to their facilities. EMS systems should develop mechanisms to address patient diversion by health care facilities utilizing the ACEP policy on ambulance diversion.

Copyright © 2007 American College of
Emergency Physicians. All rights reserved.
Legal.

Annals of Emergency Medicine





Medical Screening of Emergency Department Patients

Revised and approved by the ACEP Board of Directors January 2007
Originally Approved by ACEP Board of Directors April 2006

The American College of Emergency Physicians (ACEP) believes that:

- emergency departments (EDs) should have a standardized process to ensure that patients presenting for medical care receive an appropriate medical screening examination by a qualified medical person; and
- the examiner should be designated by hospital bylaws, rules, and regulations; and
- appropriate medical treatment should be provided for emergency medical conditions, as is required by the Emergency Medical Treatment and Labor Act (EMTALA).

ACEP strongly opposes deferral of care for patients presenting to the ED.

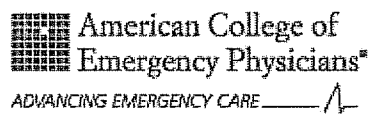
ACEP believes that deferring medical care for patients presenting to the emergency department reflects a void in the healthcare system.

In situations in which it is required that patients be deferred, very specific and concrete standards must be adopted by the hospital to ensure patient access to an alternative setting and timely, appropriate treatment. Deferral of care from the ED can have significant risks. Emergency departments participating in deferral of care processes should have active emergency physician involvement in the development of the processes. Emergency physicians should always have the opportunity to further evaluate and treat any patient presenting to the ED and should not be compelled to participate in deferral of care strategies.

Copyright © 2007 American College of
Emergency Physicians. All rights reserved.
Legal.

Annals of Emergency Medicine





Gridlock in Nation's Emergency Departments Caused by Lack of Inpatient Bed Capacity, Not Patients with Nonurgent Medical Conditions

Washington, DC - A recent report promotes the use of urgent care centers as a solution to emergency department overcrowding, although the gridlock in emergency departments is related to the lack of inpatient bed capacity, not patients with nonurgent medical conditions, according to the American College of Emergency Physicians (ACEP).

"Urgent care centers may appear to be a reasonable safety valve for overcrowded emergency departments, and educating people about when to seek emergency care is beneficial to the public, but offering the wrong solutions to overcrowding might actually threaten patient safety," said Dr. Rick Blum, president of ACEP. "Hospitals across the country have serious shortages of resources, physicians and nurses that have led to an increasing number of holes that are jeopardizing the nation's emergency medical system. Solving these problems is critical for responding effectively to the day-to-day emergencies and to disasters and acts of terrorism.."

Dr. Blum said only 13 percent of emergency visits are classified as nonurgent, according to the latest statistics from the Centers for Disease Control and Prevention. The report released by the National Association of Community Health Centers uses an older statistic of one-third.

Research shows the real gridlock in emergency department crowding is a "throughput" problem, caused by the lack of inpatient bed capacity in hospitals, not by too many nonurgent patients. The General Accountability Office (GAO 03-460) reported in 2003 that "boarding" of critically ill patients causes overcrowding, tying up staff and resources, making them unable to treat any more patients from the waiting room or from an ambulance.

"Urgent care centers are linking themselves with the overcrowding issue," said Dr. Blum. "However, the link is not really appropriate, especially when they don't have a federal mandate, like emergency departments, to treat patients, regardless of their ability to pay."

A large number of patients in a waiting room is a symptom of a deeper problem in the emergency department itself. Patients with nonurgent medical conditions can usually be treated quickly and released. Emergency departments use a triage process to sort patients, which means the most critically ill patients are cared for first. Even if some patients in a waiting room went to urgent care centers instead, the patients who remained would still wait until critically ill patients were cared for.

Dr. Blum said the nation's emergency physicians are asking the public to visit www.acep.org and send a message to Congress in support of bipartisan legislation introduced by Reps. Bart Gordon (D-TN) and Pete Sessions (R-TX). The Access to Emergency Medical Services Act (H.R. 3875) would help reduce dangerous trends that are limiting the public's ability to receive high-quality, lifesaving medical care by:

- Addressing the growing lack of resources by recognizing emergency medicine as an essential community service that must be funded.
- Addressing the growing physician shortages by extending limited liability protection to physicians who care for patients in emergency departments.
- Providing financial incentives to hospitals to end the practice of "boarding" patients in the emergency department.

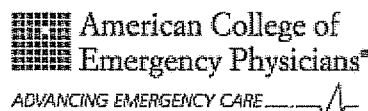
ACEP is a national medical society representing specialists in emergency medicine. With more than 23,000 members, ACEP is committed to advancing emergency care through continuing education, research, and public education. Headquartered in Dallas, Texas, ACEP has 53 chapters representing each state, as well as Puerto Rico and the District of Columbia. A Government Services Chapter represents emergency physicians employed by military branches and other government agencies.

###

Copyright © 2007 American College of
Emergency Physicians. All rights reserved.
Legal.

Annals of Emergency Medicine





Observation Unit Model Relieves ED Diversion

ACEP News
July 2005

By Jeff Evans
Elsevier Global Medical News

New York - Observation units may be the answer that overcrowded emergency departments seek to reduce ambulance diversion, Robbin S. Dick, M.D., said at the annual meeting of the Society for Academic Emergency Medicine.

"Ambulance diversion has become a crisis in many cities in the United States. Sometimes every hospital is on divert at the same time, with ambulances driving around looking for a place to deliver the patient," said Dr. Dick of the department of emergency medicine at the University of Rochester (N.Y.).

"I think [the observation unit] is going to be the solution for emergency departments that are high in volume" and have high admission and inpatient occupancy rates, he predicted.

While observation units show promise, some experts cautioned that true solutions must reach beyond the ED to reform the hospital systems and practices that ultimately fuel overcrowding.

In hospitals with an inpatient occupancy rate of 90%, observation units may provide breathing room for seasonal and monthly fluxes in EDs that see patient volumes of 50,000-70,000 or more per year and have admission rates of 20% or higher, Dr. Dick said in an interview.

Ambulances can be diverted for a variety of reasons: ED overcrowding, large numbers of patients presenting to an ED, staff shortages (mostly nurses), closure of other EDs, and ED boarding patients--those who remain in the ED waiting for an inpatient bed to open up.

In the last 7 years, Rochester experienced the closure of two EDs, each of which had a patient volume of about 30,000 per year, he said.

Strong Memorial Hospital, a teaching institution in Rochester where Dr. Dick practices, had almost 4,000 hours of ED overcrowding in 2003, which averages out to more than 300 hours per month. "Rochester is a poster child for ED overcrowding," Dr. Dick quipped.

Rochester follows a community-wide standard in which an ambulance can be diverted if three out of four criteria are met: No inpatient beds are available, no ICU beds are available, a 4-hour or longer wait exists for treat-and-release patients, and more than 40% of the beds in the ED are occupied by inpatients.

In January 2004, Strong Memorial opened a 24-bed observation unit for ED patients. The new unit accepted patients who are commonly observed as a part of treatment, such as those with chest pain, heart failure, asthma, or kidney stones. Stable ED boarding patients who were awaiting an inpatient bed and ED patients who required consultation or extended testing also went to the observation unit.

During 2004, more than 6,800 patients came through the unit; 90% of the patients required observation of their condition, 5% were ED boarding patients, and 5% required additional consultation or testing. The unit averaged 95% occupancy and admitted a mean of 19 patients per day to the inpatient floor--a 12% rate of admission overall.

In a prospective study, Dr. Dick and his colleagues found that the observation unit significantly reduced the number of ambulance diversion hours from 3,447 in 2003 (40% of the time) to 1,585 in 2004 (18% of the time). This decline occurred despite increases in both ED patient volume (from 87,101 in 2003 to 88,962 in 2004) and ambulance arrivals (from 25,774 in 2003 to 29,441 in 2004). The ED admitted about 800 more patients in 2004

than in 2003.

Dr. Dick said he chose ambulance diversion time as the primary end point rather than ED boarding time because diversion time is the one indicator that stands out regardless of the primary cause of overcrowding, such as a decrease in nursing staff or bed availability in the hospital. Diversionary hours will increase along with the primary cause of overcrowding even when other factors remain the same.

The study's results could be limited, Dr. Dick acknowledged, if the decrease in ambulance diversion hours was due to unrecognized changes in community factors. But "we don't know of anything specifically that changed during 2004," he added.

Building Buy-In

To establish the unit at Strong Memorial, Dr. Dick had to create new protocols to drive the unit and change the mindset of practitioners, especially nurses, to be comfortable with the fact that the unit's occupancy will turn over every 24 hours.

The availability of the observation unit has not led physicians to keep ED patients longer or admit them to the unit rather than immediately as an inpatient, Dr. Dick said. In the Strong Memorial ED, an emergency physician decides whether a patient can or cannot go home after an evaluation. A utilization review nurse decides if the patient satisfies InterQual criteria for admission to an inpatient floor bed or if the patient can be sent to the observation unit.

In the first year and a half of the unit's operation, Dr. Dick and another emergency physician devoted all their practice to the observation unit, which had a nursing staff separate from the rest of the hospital. Residents were slated in June 2005 to begin rotations for the first time through the observation unit.

The ED has plans to increase the observation unit to 36 beds or possibly even 48 beds in the near future, he said.

Observation Units: Silver Bullet?

A 10-bed observation unit that has operated for about 9 years in the ED at Brigham and Women's Hospital, Boston, has also had a dramatic effect on the flow of care through the department, said Richard Zane, M.D., vice chair of emergency medicine at Brigham and Women's.

The unit has allowed for not only more "timely and appropriate work-ups in the ED, but also the ability to offload lower-acuity patients from inpatient services. This frees up inpatient capacity for higher-acuity patients," Dr. Zane told ACEP NEWS.

"We've been successful in prescreening patients who will not require inpatient work-up after the observation unit. We very much try to avoid having [the observation unit] used as a holding unit until patients get a bed," he added.

While observation units are potentially beneficial in increasing patient care capacity, "I would view them, not infrequently, as an incomplete solution," cautioned Randall B. Case, M.D., an emergency physician and a vice president at Siemens Medical Solutions' Healthcare Services Corporation.

"There are other systemic issues within the [hospital] that often are the root-cause issues behind emergency department crowding," said Dr. Case, who recently chaired ACEP's Emergency Medicine Practice Committee. Last year, the Committee studied the various causes of ED crowding and concluded that "the most common root cause for ED crowding is delayed inpatient cycle time."

In many cases, "the real reason the ED gets crowded is that the inpatient units manifest some inefficiency, or delay, in discharging their patients," Dr. Case said. Until those patients' beds are freed up, there is no place for the admitted ED patients to go.

"If this is the case on a regular basis at your institution, then it might be more effective to address the systemic inefficiency directly, rather than relying on observation beds as an inpatient capacity buffer," Dr. Case explained.

"It's thought in the literature that every observation bed provides you the equivalent of about 2.5 inpatient beds, only because you're pushing patients through the system in an active manner," Dr. Dick explained. "I don't think that adding 24 beds in the ED--where you haven't really fixed the boarder problem or the movement of patients through the system per se--would have as big of an impact as an active ongoing observation unit that has a physician on site."

Even if observation units are just one of the many solutions to ED overcrowding, they are rapidly becoming the standard, Dr. Zane said. The vast number of new emergency departments that are being built or renovated are including observation units, he added.

Copyright © 2007 American College of
Emergency Physicians. All rights reserved.
Legal.

Annals of Emergency Medicine

