News

U.S. emergency care in jeopardy, experts say

Nearly five years ago, *U.S. News & World Report* ran a cover story about how the nation's emergency medical care system was on the verge of collapse.

The date of the magazine issue was September 10, 2001, noted Arthur L. Kellermann, chair of the emergency medicine department at Emory University in Atlanta.

"Nothing has been done since to deal with this problem," he told reporters at a June 14 press conference in Washington, D.C. "That's inexcusable," he asserted.

Kellermann, a member of the Institute of Medicine (IOM) Committee on the Future of Emergency Care in the United States Health System, spent the past two years with his IOM colleagues examining the U.S. emergency medical and trauma care system.

The committee looked at three aspects of the emergency care system: (1) hospital-based emergency care, (2) emergency medical services, and (3) pediatric emergency care.

The panel's findings were grim.

Between 1993 and 2003, emergency department (ED) visits grew by 26%. Yet during that same decade, 703 U.S. hospitals closed, the number of EDs declined by 425, and the number of inpatient beds fell by nearly 200,000, resulting in serious overcrowding in the nation's emergency rooms, IOM experts wrote in three reports issued on June 14.

"Do the math. With more people needing care and fewer resources available to provide that care, crowding was inevitable," Kellermann declared.

When no inpatient beds are available, severely ill or injured patients are often "boarded" in examination rooms or hallways for hours, and sometimes, even days, IOM panelists found.

"Meanwhile, new emergency patients are arriving every hour," Kellermann said.

Daniel P. Hays, clinical pharmacy specialist in the ED at the University of Rochester Medical Center (URMC) in New York, noted that it is not unusual for his ED to board 30 patients a day while waiting for inpatient beds to become available.

Much of the overcrowding at EDs is due in part to the 46 million uninsured U.S. residents who are increasingly using EDs as their primary source for health care services, IOM panelists said.

Overcrowded EDs can also be blamed on physicians who often refer after-hours callers to the local ED, the experts found. Some physicians also send patients to EDs for diagnostic services.

Diverting patients. Because of overcrowding, hospitals often divert inbound ambulances to other, often farther away, facilities, IOM authors wrote.

In 2003, ambulances were diverted to other hospitals about 500,000 times.

"It happens once every minute of every hour of every day in this country" panelist A. Brent Eastman, chief medical officer and chair of trauma care at Scripps Health in San Diego, California, told reporters.

"We have a crisis in emergency care," he proclaimed, adding that the crisis can jeopardize the health of every U.S. resident who seeks care at an ED.

What if disaster strikes? Many EDs are operating at or near full capacity and are overwhelmed when handling a local disaster, such as a multiple-vehicle crash, IOM experts wrote.

Hays said that his ED found itself quickly overwhelmed this past January when it responded to a fatal bus crash on Interstate 390 outside of Rochester.

Daniel P. Hays

The charter bus, which was carrying about 30 members of a Canadian women's hockey team, slammed into a parked tractor trailer. Most on the bus were injured, and four people died.

"We were able to make do, but you could see what would happen if we" were not fully staffed, Hays said in an interview.

If a large-scale disaster strikes, such as a terrorist attack or another Hurricane Katrina, most EDs are ill prepared to respond, the IOM panel warned.

"If our EDs are struggling to handle their daily and nightly load of 911 calls," Kellermann asked, "how in the world are they going to handle a mass-casualty event?"

In 2002, hospital grants from the federal government's Bioterrorism Hospital Preparedness Program averaged between $5,000 and $10,000—not even enough to equip even one critical care unit, according to IOM.

The Department of Homeland Security gave emergency-service providers only

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4% of the $3.38 billion distributed in 2002 and 2003 for emergency preparedness.

Lack of specialists. Also frightening in the IOM committee's findings, Eastman said, is that there is a rapidly declining number of on-call specialists available at EDs.

"You do not want to get to the emergency department with a critical illness or injury and find the specialist is not there," he said.

Many specialists are deterred from providing care in EDs because of the growing number of uninsured patients, resulting in little or no compensation for the specialist, according to the IOM panel.

Being forced to provide unlimited amounts of unpaid care to uninsured patients, Kellermann said, "can put a doctor and even a hospital out of business."

But, he added, when specialists are not available to anybody, "the entire community suffers, insured and uninsured alike."

Specialists face higher medical liability exposure than those practitioners who do not provide emergency care, IOM experts noted.

Driven by a fear of rising legal liability, Kellermann said, a growing number of specialists are "simply opting out of taking emergency room calls."

No coordination. The emergency care system in the United States is fragmented, IOM authors said.

There is a lack of coordination between EDs and the emergency medical services (EMS) agencies that deliver patients to EDs, experts contended.

Few systems around the nation coordinate the regional flow of emergency patients to hospitals and trauma centers effectively, panelists added.

In fact, IOM experts asserted, the only time an ED passes along information concerning its status to EMS agencies is when the ED formally goes on diversion status and refuses to take further deliveries of patients, resulting in patients often being taken to facilities that are not able to provide the best expert care.

According to IOM, there are more than 6000 911 call centers in the United States, some of which are operated by fire or police departments, while others are operated by other local government agencies or private entities.

Moreover, panelists found, there are no nationwide standards for training and certification of EMS personnel, or even national accreditation of the institutions that train them.

In such a fragmented system, Eastman said, "We may fail in our longtime effort to get the right patient to the right hospital at the right time."

Pediatric concerns. Most cities lack children's hospitals or facilities with pediatrics EDs, according to IOM. Most pediatric patients receive emergency care in general hospitals rather than children's hospitals.

Pediatric patients make up about 27% of all ED visits. But only 6% of EDs in the United States, IOM experts found, have all the supplies necessary for handling pediatric emergencies, and only about half of all EDs have 85% of the essential supplies needed to treat children and adolescents.

Few EDs have clinicians specializing in pediatric emergency care, the panelists added.

Many drugs and medical devices have not been adequately tested on or dosed properly for children, the IOM committee noted.

The pharmacist's role in emergency care. Use of pharmacists in the ED can potentially reduce the high number of medication errors that occur in that environment, the IOM panel wrote.

However, Hays said, less than 1% of EDs in the United States have a clinical pharmacist working full-time in that department.

The Joint Commission on Accreditation of Healthcare Organizations's 2005 National Patient Safety Goals, which call for complete and accurate medication reconciliation across the continuum of care, may spur a greater demand for clinical pharmacists in the ED, IOM experts maintained.

The IOM reports, said Kasey Thompson, director of practice standards and quality for the American Society of Health-System Pharmacists (ASHP), "outline numerous opportunities for pharmacists to exert significant leadership to improve the quality of medication use in emergency care."

Hospitals and pharmacy groups, he added, should carefully examine the IOM reports to "determine the key places where pharmacists can have the greatest impact."

Thompson noted that ASHP's section on clinical specialists and scientists recently formed an emergency pharmacist advisory group.

The ED, Hays proclaimed, "is such a right place" for clinical pharmacists to practice.

"There's everything from pediatrics to geriatrics to ambulatory care to critical care," he said. "It's kind of the whole gamut."

With the emergency care system in the United States at the breaking point, Hays added, it's also the right place for a pharmacist to "step in and make a difference."

"I think that as [the emergency care system] nears the edge of disaster, we can help hold up the walls a little bit," he said.

IOM panelists noted that the inclusion of a clinical pharmacist in the emergency care team has resulted in improved medical care and reduced institutional expenditures.

Having a clinical pharmacist obtain a patient's medical history also resulted in a higher percentage of patients receiving a clinical intervention, IOM experts added.

Hays noted that he recently stopped a nurse from crushing a tablet of a sustained-release form of oxycodone—which should never be crushed. The nurse had planned to put the crushed tablet in a patient's nasogastric tube to administer the drug.

He also recently helped his team determine that a patient was experiencing withdrawal from a benzodiazepine after extensively interviewing the person about what medications she was taking.

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When Hays joined URMC in 2000, the hospital did not have a pharmacist in the ED.

However, he was able to convince his bosses that the position could be cost justified.

"You can almost say 'How can you not justify the position?' If you think of what one significant adverse event could cost the institution, the cost of a pharmacist is much lower than that," Hays said.

URMC's ED recently added a second clinical pharmacist, Sarah J. Kelly-Pisciotti, and developed a pharmacy residency program in emergency medicine, which is accredited by ASHP.

Examining the pharmacist's role. The facility last year was awarded a two-year $600,000 Agency for Healthcare Research and Quality (AHRQ) grant to study the effect of a clinical pharmacist on patient safety in the ED.

Lead investigator Rollin J. (Terry) Fairbanks, assistant professor of emergency medicine at the University of Rochester, said that the AHRQ-funded study has four phases.

The first phase, he said, involved taking the existing ED clinical pharmacist program and optimizing it to maximize patient safety.

Most clinical pharmacists in the ED do not have roles solely focused on patient safety, Fairbanks noted.

Investigators interviewed physicians, nurses, pharmacists, and patients to ask how the ED pharmacist could be more effective in improving patient safety, Fairbanks explained.

"During the interviews, we found that our pharmacists were spending a lot of time taking care of admitted patients boarded in the ED and doing routine drug dispensing and administration for these patients that already have the inpatient pharmacy available to them," he said. "We have had great support of the administration of this hospital, and so the pharmacy leadership and our departmental leadership authorized the ED pharmacists to stop doing that function, and that freed up about 33% of their time to focus on ED patients."

The second phase of the study involves a large-scale chart review to evaluate whether there is a reduction in the frequency of adverse drug events during times that the ED pharmacist is on duty, Fairbanks said.

In the study's third phase, he said, investigators will interview ED staff to determine the overall satisfaction with the clinical pharmacists' role in the ED.

The results of that phase, Fairbanks said, will hopefully prove to physicians and nurses at other EDs that there are no concerns with "turf" issues in having a clinical pharmacist as part of the ED care team.

The fourth phase, Fairbanks said, involves the development of a "tool kit" intended to help other EDs adopt a clinical pharmacist program.

URMC, which won an ASHP Best Practices Award last year for the emergency pharmacist's role in enhancing patient safety during trauma resuscitations, plans to publicly post all results from its AHRQ-funded study on its Web site, Fairbanks noted.

"We want to get the word out," he said.

—Donna Young

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Tysabri's return draws cautious optimism

Pharmacies, infusion centers must register to participate

The reintroduction of natalizumab to the U.S. market through the Tysabri Outreach: Unified Commitment to Health (TOUCH) risk management program is being greeted with guarded optimism that the program will succeed in its aims.

"It seems like all the components are in place," said Allen J. Vaida, executive director of the Institute for Safe Medication Practices. "Hopefully, it will work," he said.

Natalizumab—better known as Tysabri—is a monoclonal antibody specific for leukocytic integrin molecules that was licensed in November 2004 for the treatment of adults with relapsing forms of multiple sclerosis (MS). But Biogen Idec and Elan Pharmaceuticals withdrew the drug from the market three months later after two patients who had received natalizumab during clinical trials died later from progressive multifocal leukoencephalopathy (PML). A third patient who received the drug during a study was also diagnosed with PML but survived the condition.

PML is caused by the JC virus, a normally benign organism that can cause disease in people who have an immune deficiency or receive immunosuppressive therapy. All three PML victims in the Tysabri studies had received recent or concomitant immunosuppressive or immunomodulating therapy, according to Biogen and Elan.

Although Tysabri was voluntarily withdrawn from the market by the manufacturers, they and MS patients immediately began to push for the drug's return under controlled circumstances. At a March 2006 meeting of FDA advisers, many patients said Tysabri had prevented or reduced their MS relapses and disability. Most said they were willing to risk PML if natalizumab were made available again.

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