

# Observation Unit Helps Prevent ED Diversion

*Solutions to overcrowding and ambulance diversion 'crisis' proven to be effective.*

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NEW YORK — Observation units may be an 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.

## A Diverting Solution

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 told this newspaper.

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 board-

ing 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 emergency departments, 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

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

the ability to offload lower-acuity patients from inpatient services. This frees up inpatient capacity for higher-acuity patients," Dr. Zane said.

"We've been successful in pre-screening 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," he said.

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. ■



An ED observation unit helped cut ambulance diversion hours 54% in 1 year at Rochester's Strong Memorial Hospital, Dr. Robbin S. Dick said.

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.

Diversions 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

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.

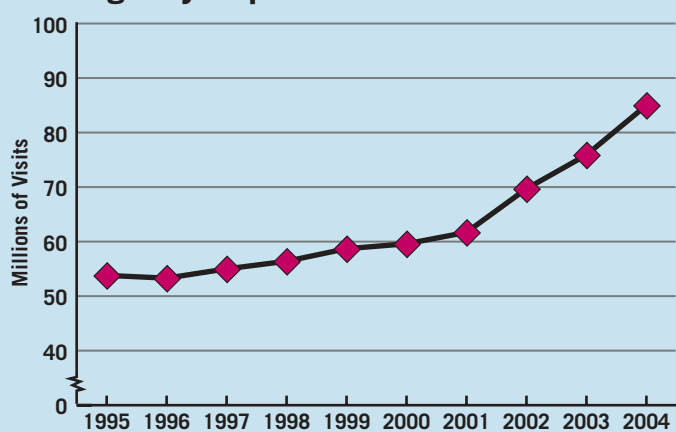
## Observation Units: Silver Bullet?

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

## DATA WATCH

### Emergency Department Visits on the Rise



Note: Based on projected nationwide data from a monthly survey of about 124 emergency medicine physicians.  
Source: Verispan