

Resident Work Hour Reforms Would Be Costly

BY MARY ANN MOON

Implementing the Institute of Medicine's four main recommendations for taming excessive resident work hours would cost an estimated \$1.6 billion each year just to substitute other providers to perform the residents' work, according to a report.

Alternatively, hiring enough additional residents to take up the slack—rather than distributing this work among nurses, physician assistants, attending physicians, and others—would cost an estimated \$1.7 billion annually, according to Dr. Teryl K. Nuckols of the University of California, Los Angeles, and her associates.

The four key IOM recommendations are that residents work no more than 80 hours per week, be ensured of an uninterrupted 5-hour nap during extended (21-hour) shifts, work no more than 16 hours at a time without such a nap, and have a generally reduced workload.

For each major teaching hospital, costs

would be an estimated \$3.2 million every year for substitute providers or \$990,000-\$3.5 million every year for additional residents. This is more expensive than implementing other patient safety systems, including computerized physician order entry (\$3.3 million to \$11.8 million over a period of 10 years) and medication bar-coding systems (\$2.2 million over a period of 5 years).

Even after monetary outlays of this magnitude, "it remains unknown whether implementing the IOM's recommendations would reduce preventable adverse events" because research has not yet demonstrated such an effect. A single randomized trial suggested that shorter work shifts could reduce residents' errors in the ICU by 25%, but such errors rarely cause patient injury, and the results could differ in other clinical settings, the researchers wrote.

Moreover, the additional patient-care handoffs necessitated by these changes could increase preventable adverse events, Dr. Nuckols and her colleagues

wrote in their IOM-supported report.

They arrived at these conclusions after constructing a probability model based on estimated labor costs at 1,206 hospitals accredited by the Accreditation Council for Graduate Medical Education and estimated costs at major teaching hospitals. The model simulated hypothetical changes in preventable adverse events when residents' workweek, duration and frequency of extended shifts, and time on inpatient rotations vary.

The investigators found that if the recommended changes prove to be very effective at reducing medical errors, they would be cost-effective for society at large but very expensive for hospitals.

"Possible strategies that teaching hospitals could use to manage the additional costs include reducing residents' salaries, increasing the workload of faculty physicians without increasing compensation, increasing charges to patients, allowing profitability to decrease, reducing clinical services, allowing quality of care to decline, improving efficiency,

and securing subsidies—or not implementing the recommendations," Dr. Nuckols and her associates wrote.

To date, surveys of residents have found widespread nonadherence to the recommendations, which were implemented by ACGME in 2003 but are not enforced.

In an editorial, Dr. Melvin S. Blanchard and Dr. Kenneth S. Polonsky of Washington University, St. Louis, and Dr. David Meltzer of the University of Chicago urged that the IOM recommendations not be implemented yet.

"Such a major policy change should be based not only on the recommendations of an expert committee but also on careful studies and evidence that improvements in both patient and educational outcomes will result. To date, the necessary research has not been done and the evidence of benefit is lacking," they noted.

Dr. Blanchard reported receiving grant support from Pfizer Inc. No other potential conflicts of interest were reported. ■

Hospitalist Care for Boarders Can Reduce Length of Stay

BY PATRICE WENDLING

CHICAGO — Designating a hospitalist to manage patients boarded in the emergency department enhances patient care and safety and has the potential to affect hospital length of stay, according to a pilot study presented at the annual meeting of the Society of Hospital Medicine.

A total of 4,363 patients were admitted during a 3-month period to the medicine service of a 1,121-bed, acute-care teaching hospital, of whom 3,555 qualified as boarders based on an ED stay of 2 hours or more. There was an average of 29 boarders per 24 hours, with a mean boarding time of 440 minutes.

A full-time hospitalist was on duty from 8 a.m. to 6 p.m. weekdays, and evaluated 634 of the boarders, averaging 8 per day.

The role of the hospitalist was to round on all medicine patients and to focus on patient safety, said Dr. Alan S. Briones, an internist at Mount Sinai Hospital and the Mount Sinai School of Medicine, New York. The hospitalist addressed any changes in patient status or stability and informed the primary teams, and ensured that vital home and hospital medications were administered and reconciled with inpatient orders.

Hospitalists acted on laboratory re-

sults for 472 (74.4%) boarded patients and followed up on medication orders for 506 (80%) of them.

Hospitalists discharged 46 (7.3%) patients or 1.3% of all ED boarders, and downgraded telemetry for 61 (9.6%) patients or 1.7% of all ED boarders.

"Designating a full-time hospitalist to care for admitted patients has the potential to impact ED throughput and hospital length of stay, as demonstrated by our discharge rate and our

[telemetry] downgrade rate," Dr. Briones said.

He noted that prolonged ED length of stay is the most frequent reason for overcrowding and that an estimated one-third of American hospitals experience ED overcrowding on a

daily basis. He described Mount Sinai Hospital as experiencing periodic "moderate to severe" episodes of ED overcrowding.

"A 5% increase in hospital occupancy or census can cause a 14-hour delay time in the ED or holding time," Dr. Briones said. "Overcrowding has important consequences on physician and patient satisfaction and quality of care."

The researchers are further evaluating the data to determine the broader impact of the program on hospital length of stay and ED diversion rates.

The investigators reported no conflicts of interest. ■

Most Large EDs Board Admitted Patients for More Than 2 Hours

BY HEIDI SPLETE

WASHINGTON — Approximately 87% of large, high-volume emergency departments "board" admitted patients for more than 2 hours, based on the latest estimates from the National Hospital Ambulatory Medical Care Survey of 337 emergency departments.

Large emergency departments—defined as those that handle more than 50,000 visits per year—make up only 18% of all EDs in the United States, but they manage approximately 44% of all ED visits, Linda McCaig of the Centers for Disease Control and Prevention said at a workshop sponsored by the Institute of Medicine.

Ms. McCaig shared ED estimates for items that were added to the 2007 National Hospital Ambulatory Medical Care Survey (NHAMCS) hospital induction interview in the wake of the 2006 IOM report on emergency care in the United States.

The report raised concerns about overcrowding, fragmentation of care, lack of disaster preparedness, and the need for better emergency care for children.

The NHAMCS was designed to collect, analyze, and share information about the health care in emergency departments and outpatient medical departments. The data are collected from a national sample of hospitals across the United States, excluding federal, military, and Veterans Affairs facilities.

Data are taken from patient record forms, which are completed by hospital staff based on instructions from the CDC.

Overall, 63% of EDs board patients, including 83% of medium-sized EDs

(20,000-50,000 visits per year) and 39% of small EDs (fewer than 20,000 visits per year).

Just over half (51%) of all EDs reported having a designated inpatient bed coordinator to help manage patient flow, including 71% of large EDs, 63% of medium EDs, and 34% of small EDs.

One-third of all EDs in the United States don't use any type of electronic medical records, including 18% of large EDs, 26% of medium EDs, and 54% of small EDs, Ms. McCaig said.

These NHAMCS data provide an example of how EDs are responding to the recommendations from the 2006 IOM report, which include creating a coordinated, regionalized system for emergency care and putting an end to the practice of boarding ED patients and diverting ambulances.

"This meeting and the two that will follow in the next few months are an opportunity, 3 years later, to revisit the committee's recommendations, to assess what progress we have made in achieving the committee's overall vision of a regionalized, coordinated, and accountable emergency care system," said Dr. Arthur Kellermann, a professor and associate dean for health policy at Emory University in Atlanta, who served as the workshop chair. ■

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