

1 in 10 patients gets drug error

Study examines six community hospitals in Mass.

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Globe Staff / February 14, 2008

One in every 10 patients admitted to six Massachusetts community hospitals suffered serious and avoidable medication mistakes, according to a report being released today by two nonprofit groups that are urging all hospitals in the state to install a computerized prescription ordering system.

The report is the first large-scale study of preventable prescription errors in community hospitals, and its author, Dr. David Bates of Brigham and Women's Hospital in Boston, said he was surprised that these mistakes were so frequent in these community hospitals. Previous studies in large academic hospitals that also lacked computerized systems found such medication errors occurred less than half as often, he said.

Researchers declined to release the names of the six Massachusetts hospitals, which participated in the \$5 million study voluntarily on condition that they would remain unnamed.

Of 73 hospitals in the state, only 10, almost all of them large teaching hospitals in Boston, have adopted the computerized physician order entry system, which requires doctors to type into a central database every medical order, including prescriptions, diagnostic tests, and blood work. The doctors' orders are matched against the patient's medical history, triggering red flags to prevent problems related to drug allergies, overdoses, and dangerous interactions with other drugs.

Bates said that after this system was put in place at Brigham and Women's Hospital in 1995, preventable medication errors declined by 55 percent over the next two years.

The researchers could not explain the higher rate of preventable errors in the community hospitals but cautioned against patients assuming that these hospitals overall are less safe than academic teaching hospitals. They said this is one of only a small number of studies nationwide that have analyzed prescription error rates at hospitals, and comparisons are difficult because each study varied slightly in its scope and definitions.

Donald Thieme, head of the Massachusetts Council of Community Hospitals, said studies show that many community hospitals offer the same, if not better, care for patients with some serious illnesses. He said community hospitals struggle to adopt the computerized prescription systems because of cost, but they are committed to improvements because they want "errors down to zero." Thieme said he could not comment on the specifics of today's study because he had not seen it.

Community hospitals in Massachusetts may not have a choice but to implement such computerized systems, based on increasing pressure from insurers who see the systems enhancing patient safety and saving money. Gerald Greeley, director of information services at Winchester Hospital, said Blue Cross Blue Shield of Massachusetts and Harvard Pilgrim Health Care, over the last year, have demanded the gradual introduction of the computerized physician order entry system as a condition of reimbursement contracts with Winchester Hospital.

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"The technology is there - we must adopt it," said Wendy Everett, president of the New England Healthcare Institute, a nonprofit health policy research organization that is one of the two groups releasing the study.

The report argued, based on a financial analysis by PricewaterhouseCoopers, that it makes financial sense for all hospitals to install a computerized ordering system, despite the \$2.1 million up-front costs and more than \$400,000 annual operating costs. The study estimated that the average victim of a medication error stays in the hospital at least four extra days. The researchers also looked at how often doctors at the six community hospitals ordered more expensive drugs when a cheaper, generic drug would do, or when they ordered an intravenous delivery of a medication when a less expensive oral pill would have been just as effective. Redundant lab tests were also documented.

The study concluded that by eliminating these extra expenses, a computerized system could save each of the community hospitals an average of \$2.7 million a year, said Mitchell Adams, executive director of the Massachusetts Technology Collaborative, a nonprofit organization focused on the state's high-tech economy and the other group involved in the study. Adams said any hospital putting the system in place would recoup its cost in about two years. The two nonprofits called on hospitals to install the computerized systems within three years.

The researchers reviewed a total of 4,200 randomly selected patient medical charts at the six community hospitals, covering stays from January 2005 to August 2006. An average of 10.4 percent of patients suffered a preventable "adverse drug event" - defined as a case in which the patient was given a drug even though the medical records noted that the medication could trigger a drug allergy or that the dose given would exacerbate a medical condition. Medication errors were counted only when patients suffered serious reactions, including going into shock or suffering kidney failure. In nearly every instance, the patients remained in the hospital longer to recover from the mistake. Nobody died from any of the mistakes, researchers said.

Everett said the study's findings can be "generalized to all hospitals" without such computerized systems, and indicate that prescription errors are often made in the rushed hospital atmosphere. She recommended that patients inquire about a hospital's patient-safety systems, and ask medical staff to double-check dosages and names of all medications given.

"I'd demand it," she said.

Bates said some doctors have worried that the computerized system requires them to spend precious time entering data - one study put it at 20 minutes a day, but also found that, over the long haul, doctors saved time through the centralization of records. He said the system has many benefits for nurses and pharmacists who can easily find all the information in one place.

Adams said he hopes the study's results will spur more medical insurers, government officials, and healthcare providers to pressure the state's hospitals to adopt the computerized system. "We must speed up the adoption of this technology in every hospital in Massachusetts," he said.

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