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PROFESSION

1 in 3 patients harmed during hospital stay

Many adverse events can be prevented, providing what a patient safety expert calls "humongous opportunities for improvement."

By KEVIN B. O'REILLY, amednews staff. *Posted April 18, 2011.*

One-third of hospital patients experience adverse events and about 7% are harmed permanently or die as a result, according to a study that detected patient safety problems at a far higher rate than other methods.

The study, in April's *Health Affairs*, echoes two reports issued in November 2010 that showed rates of adverse events hovering near 25% among hospitalized Medicare patients nationwide and at 10 North Carolina hospitals.

The findings draw attention to the safety troubles that have lingered in U.S. hospitals in the 12 years since the Institute of Medicine's headline-grabbing report "To Err is Human." The study cited research estimating that up to 98,000 patients die each year due to preventable medical errors.

"This is one of the best studies that now gives us a sense of how much harm is happening to patients in American hospitals," said Robert Wachter, MD, chief of the medical service at the University of California, San Francisco Medical Center, who was not involved in the research. "There is a tremendous amount of harm befalling patients who are admitted to hospitals and humongous opportunities for improvement."

To judge from a survey released March 31, patients are scared of medical mishaps. Nearly 60% of adults polled by the Consumer Reports National Research Center believe medical errors are common in hospitals, and nearly half said serious harm is common. Nearly 80% of patients said they feared contracting an infection in a hospital, 71% were worried about medication errors and 65% were scared of surgical mistakes.

Hospitals have made headway in areas such as preventing central line-associated bloodstream infections, which fell by nearly 60% in intensive care units from 2001 to 2009, according to the March 4 *Morbidity and Mortality Weekly Report*.

But patient safety improvement remains uneven, said Mark R. Chassin, MD, president of the Joint Commission, which accredits hospitals and other health care organizations.

"What we have been doing for the last 10 or 15 years has produced some important progress, but it has not produced the kind of improvement that anybody wants to see," he said. "The progress is not broad enough across the different services that are delivered in health care, and it's not consistent within health care, whether at physician practices, hospitals or facilities of any sort. And it's not deep enough."

Dr. Chassin, who co-wrote a separate article in the April *Health Affairs*, said physicians and hospitals should look to "high-reliability industries" such as commercial aviation to develop processes that identify systemic weaknesses before they result in harm.

The American Medical Association's new Center for Patient Safety is preparing a report on the last decade of research in ambulatory patient safety. The report, to be released this year, will focus on how organized medicine can help office-based practices improve quality in areas such as hospital readmissions.

Error-catching tool

The *Health Affairs* study uses a technique developed at the Cambridge, Mass.-based Institute for Healthcare Improvement. The method, called the Global Trigger Tool, builds upon the medical chart review process that formed the basis of the Harvard Medical Practice Study cited in "To Err is Human."

Nurses and pharmacists trained to review charts systematically look for so-called triggers such as medication stop orders and abnormal laboratory results that could indicate that an adverse event occurred. The trigger prompts further investigation to determine whether harm occurred and how severe it was; a physician reviewer signs off on the chart review. IHI makes the tool available at no cost to hospitals and researchers.

"The Trigger Tool is a more modern, more refined, more efficient version" of the Harvard Medical Practice Study, said David C. Classen, MD, lead author of the study and associate professor of medicine at the University of Utah School of Medicine in Salt Lake City.

Dr. Classen and his colleagues found that in the 795 patient records they reviewed from three large tertiary care centers, the Global Trigger Tool detected 10 times as many adverse events as the Agency for Healthcare Research and Quality's Patient Safety Indicators, which use billing data to spot events such as decubitus ulcers and postoperative

sepsis. And where the Trigger Tool identified 354 total instances of harm, physicians, nurses and other health professionals reported only four adverse events using their hospitals' voluntary reporting systems.

The tool "is far and away the most sensitive and the most reliable measure we have in patient safety," said Christopher P. Landrigan, MD, lead author of a study in the Nov. 25, 2010, *New England Journal of Medicine* that used the method to examine adverse events at 10 North Carolina hospitals.

Avoidable errors

The vast majority of the adverse events identified in the *Health Affairs* study -- 93% -- required medical intervention but did not permanently injure or kill the patient. Most were medication-related or nosocomial infections. The study did not attempt to estimate how many of the adverse events could have been prevented.

The *NEJM* study said 63% of the adverse events that reviewers identified could have been avoided. A November 2010 report from the Dept. of Health and Human Services' Office of Inspector General that used the Trigger Tool for Medicare patients estimated that 44% were preventable.

On April 12, HHS Secretary Kathleen Sebelius announced the "Partnership for Patients" initiative aimed at preventing 60,000 health care-related deaths and avoiding $50 billion in Medicare costs over 10 years.

The program will disburse $1 billion under the Patient Protection and Affordable Care Act to reduce hospital readmissions and cut hospital-acquired conditions such as pressure ulcers and catheter-related urinary tract infections.

Also in April, the Centers for Medicare & Medicaid Services, over objections from the American Hospital Assn., began reporting individual hospital performance on hospital-acquired conditions at its Hospital Compare website.

ADDITIONAL INFORMATION:

Detecting adverse events

Hospital efforts to improve patient safety are impeded by a failure to systematically track when patients are harmed. A review of 795 patient records at three tertiary care centers found that the Global Trigger Tool uncovers far more adverse events than other methods.

Severity of adverse event	IHI Global Trigger Tool	AHRQ Patient Safety Indicators	Hospital voluntary reporting system
Temporary harm, required intervention	204	23	0
Temporary harm, required prolonged hospitalization	124	7	2
Permanent patient harm	8	1	2
Required life-saving intervention	14	0	0
Patient death	4	4	0
Total	**354**	**35**	**4**

Source: " 'Global Trigger Tool' Shows That Adverse Events In Hospitals May Be Ten Times Greater Than Previously Measured," *Health Affairs*, April (**content.healthaffairs.org/content/30/4/581**)

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"The Ongoing Quality Improvement Journey: Next Stop, High Reliability," *Health Affairs*, April (**content.healthaffairs.org/content/30/4/559**)

"Temporal Trends in Rates of Patient Harm Resulting from Medical Care," *The New England Journal of Medicine*, Nov. 25, 2010 (**www.ncbi.nlm.nih.gov/pubmed/21105794**)

"Adverse Events in Hospitals: National Incidence Among Medicare Beneficiaries," Dept. of Health and Human Services Office of Inspector General, November 2010 (**oig.hhs.gov/oei/reports/oei-06-09-00090.pdf**)

Centers for Medicare & Medicaid Services on posting hospital acquired conditions on Hospital Compare website (**www.cms.gov/hospitalqualityinits/06_hacpost.asp**)

" 'Global Trigger Tool' Shows That Adverse Events In Hospitals May Be Ten Times Greater Than Previously Measured," *Health Affairs*, April (**content.healthaffairs.org/content/30/4/581**)

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