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PROFESSION

EHR-related errors soar but few harm patients

Display mistakes and missing data are among the issues documented. HHS announced a plan to ease reporting of adverse events caused by faulty health IT.

By KEVIN B. O'REILLY, amednews staff. *Posted Jan. 14, 2013.*

Hospitals are reporting more patient safety problems related to electronic health records, yet it appears that only a fraction of the mix-ups are leading to patient harm, according to a recent study of more than 3,000 incidents in Pennsylvania.

The data, collected and analyzed by the Pennsylvania Patient Safety Authority, found that hospitals in the state reported twice as many EHR-related patient safety incidents in 2011 as in 2010. The number of problems reported to the state agency grew from 555 in 2010 to 1,142 in 2011, the last full year for which data are available. When the safety authority started collecting incident reports in 2004, only 31 were related to EHRs.

Of the 3,099 total incidents reported from 2004 through 2011, only 16 resulted in some kind of patient harm, and researchers classified just one case as significantly harmful. In that case, a patient with a documented allergy to penicillin was given the drug anyway. Although the allergy was noted in a free-text area in the patient's record, it was not entered into the field set aside for listing drug allergies so the system could prevent ordering of the drug. The patient went into anaphylactic shock, but survived.

Forty-seven percent of reports were related to "wrong input" into the systems by health professionals, and 18% were related to failure to update data in the EHR that was listed elsewhere, such as in paper records, said the safety authority's study, released in December 2012. About a third of reports involved other less-frequent problems, such as devices being down or unavailable, display errors, wrong records popping up on the screen, missing data, alert failures, faulty system configurations and data loss.

"For us, the reports that Pennsylvania facilities are sending are much more about human interaction with the EHR and entering wrong information into the EHR. There is something about the design of the display that would lead someone to do that," said William M. Marella, program director of the safety authority. "One of the take-away messages for me is that many of the problems we're seeing with the EHR are very analogous to problems we've seen with paper records for years. There's a sophisticated business logic behind the EHR that makes sense, but only if you enter the right info in there. It's a garbage in, garbage out problem."

Other experts on health IT said the Pennsylvania study probably underestimates the extent of health IT safety problems. They say that is because the research is based on voluntary reports and that health professionals are unaware that a patient safety incident was caused by an EHR failure.

"These systems are incredibly complex," said Scot M. Silverstein, MD, a consultant in medical informatics at Drexel University in Philadelphia. "They're not just huge filing cabinets, they are enterprise resource management systems. There are many ways that things can go wrong that may not be seen as the computer having caused the mess-up in the first place."

For example, he said, it would be difficult for a practicing physician to detect when data are missing from a record or that an alert failed to pop up.

IOM's call to action

The Pennsylvania study highlights the many ways in which EHRs may endanger patients, said John R. Lumpkin, MD, MPH, a member of an Institute of Medicine panel that in November 2011 called for an independent federal body to investigate health IT-related adverse events.

"This report puts an exclamation point into the importance of the recommendations from our committee," said Dr. Lumpkin, director of the health care group at the nonprofit Robert Wood Johnson Foundation. "The results here point out that this is a real problem. While the vast majority of [incidents] do not harm patients directly, it shows that these problems have the risk of harming patients, and so it certainly points out the urgent need to begin addressing them."

The federal government appears to be responding to the IOM's recommendations. In December 2012, the Dept. of Health and Human Services' Office of the National Coordinator for Health Information Technology proposed a plan to make it easier to track and fix EHR-related safety problems. The ONC said it will work with health IT and EHR vendors to adopt a code of conduct to ensure that they work with patient safety organizations to report, collect and analyze IT-related adverse events. Vendors also should make it easier for physicians and other health professionals to report safety problems by refraining from using nondisclosure agreements to prohibit the sharing of such information.

The ONC is accepting public comments on the plan through Feb. 4 and will use the feedback to formulate its final health IT safety effort.

The ONC plan "will help all of us better use health IT to deliver high-quality care and improve patient safety," said Farzad

Mostashari, MD, national coordinator for health IT.

ADDITIONAL INFORMATION:

How rarely EHR problems harm patients

The number of electronic health records-related problems hospitals shared with the Pennsylvania Patient Safety Reporting System has risen dramatically since 2004, yet less than 1% of incidents involved harm to patients. The total represents all reported incidents from 2004 through 2011.

Type of safety incident	Total reports
Error, no patient harm	2,763
Unsafe condition, no patient harm	320
Temporary patient harm	15
Significant patient harm	1

Source: "The Role of the Electronic Health Record in Patient Safety Events," Pennsylvania Patient Safety Authority advisory, December 2012 (**www.patientsafetyauthority.org/ADVISORIES/ AdvisoryLibrary/2012/Dec;9(4)/Pages/113.aspx**)

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"Health Information Technology Patient Safety Action & Surveillance Plan for Public Comment," Office of the National Coordinator for Health Information Technology, Dec. 21, 2012 (**www.healthit.gov/sites/default/files/safetyplanhhspubliccomment.pdf**)

"Using FDA reports to inform a classification for health information technology safety problems," *Journal of the American Medical Informatics Assn.*, January-February 2012 (**www.ncbi.nlm.nih.gov/pubmed/21903979/**)

"Health IT and Patient Safety: Building Safer Systems for Better Care," Institute of Medicine, Nov. 8, 2011 (**www.iom.edu/Reports/2011/Health-IT-and-Patient-Safety-Building-Safer-Systems-for-Better-Care.aspx**)

"Safely implementing health information and converging technologies," Joint Commission, Sentinel Event Alert, Dec. 11, 2008 (**www.jointcommission.org/sentinel_event_alert_issue_42_safely_ implementing_health_information_and_converging_technologies**)

"The Role of the Electronic Health Record in Patient Safety Events," *Pennsylvania Patient Safety Authority Advisory*, December 2012 (**www.patientsafetyauthority.org/ADVISORIES/ AdvisoryLibrary/2012/Dec;9(4)/Pages/113.aspx**)

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