

Electronic tool helps reduce drug errors among hospitalized children

May 5 2014

When children are admitted to the hospital, sometimes the medications they take at home are lost in the shuffle, or they may be given the wrong dose.

Having a system in place at [hospital admission](#) to record and review a child's medication history results in fewer errors, potentially avoiding harm to the patient, according to a study to be presented Monday, May 5, at the Pediatric Academic Societies (PAS) annual meeting in Vancouver, British Columbia, Canada.

The Joint Commission, which accredits and certifies more than 20,000 [health care organizations](#) in the United States, has set a patient safety goal to accurately and completely reconcile medications as patients move through all health care settings. The process involves comparing a patient's current medication regimen against a physician's admission, transfer or discharge orders to identify discrepancies.

Jonathan D. Hron, MD, FAAP, a pediatric hospitalist at Boston Children's Hospital and an instructor of pediatrics at Harvard Medical School, led a team that implemented a quality improvement project that focused on reducing medication errors due to breakdowns at hospital admission. A group of physicians, pharmacists, nurses and information technology specialists worked together to test, implement and train clinicians to use a tool, which facilitates review of a patient's complete medication history when the child is admitted to the hospital.

The tool, which is part of the hospital's electronic health record system, was piloted in one area of the hospital and gradually was expanded to the entire hospital. "We successfully implemented the [medication reconciliation](#) application throughout the hospital, changing the practice of our entire staff," Dr. Hron said.

Using an existing voluntary error reporting tool, Dr. Hron and his colleagues then looked at the number of [medication errors](#) that occurred before and after implementation of the electronic tool.

About 33,000 children were admitted to Boston Children's Hospital during the study period, and the medication reconciliation tool was used for 75 percent of admissions after the intervention. The recording of medication history improved from 89 percent of admissions before the tool was implemented to 93 percent of admissions afterward. During the study, 146 medication errors due to missing or incorrect information at admission were detected. The error rate decreased by about 50 percent after [hospital](#) staff starting using the tool—from 5.9 errors per 1,000 admissions to 2.5 errors per 1,000 admissions. Most of the [errors](#) did not harm patients, while 1 percent required additional monitoring or intervention but did not cause permanent harm.

"Careful medication reconciliation is essential to providing patient care, and it requires teamwork between doctors, nurses and pharmacists," Dr. Hron said. "If it's not being done in a systematic way, it's not being done right."

More information: Dr. Hron will present "Implementation of an Electronic Medication Reconciliation Tool Results in a Reduction in Medication Errors" from 11:15-11:30 a.m. Monday, May 5. To view the study abstract, go to www.abstracts2view.com/pas/view...hp?nu=PAS14L1_3380.4

Provided by American Academy of Pediatrics

Citation: Electronic tool helps reduce drug errors among hospitalized children (2014, May 5)
retrieved 5 July 2023 from <https://medicalxpress.com/news/2014-05-electronic-tool-drug-errors-hospitalized.html>

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