Can pen and paper help make electronic medical records better?

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The results of a new study of the pen and paper workarounds employed by healthcare providers who use an electronic medical record system may help make electronic medical records even more useful to health-care providers and the patients they serve.

"Exploring the Persistence of Paper with the Electronic Health Record" appears in the September 2009 issue of the *International Journal of Medical Informatics*.

Observing that doctors, nurse practitioners, nurses, pharmacists and others who use electronic health records have not totally abandoned paper, including notes stuck or taped to a computer monitor, index cards, and even notebooks, the researchers, led by Jason Saleem, Ph.D., a Regenstrief Institute investigator and assistant research professor in the Purdue School of Engineering and Technology at Indiana University-Purdue University Indianapolis, documented how and why they were using paper.

"Electronic medical records are instantly accessible to the healthcare team. But so much information is included in an electronic medical record, how does the individual health-care provider pick out what is important at a specific time? Not all uses of paper are bad and some may give us ideas on how to improve the interface between the health-care provider and the electronic record," said Dr. Saleem, who is also a research scientist at the Health Services Research and Development Center of Excellence on Implementing Evidence-Based Practice at the

Roudebush Veterans Affairs Medical Center in Indianapolis.

In the study of 20 health-care workers at the Roudebush VA Medical Center, the researchers found 125 instances of paper use which fell into 11 categories. The most frequently cited reasons for using paper workarounds were efficiency and ease of use. Second most frequently was as a memory aid. The third most frequent reason was to recognize or alert others to new or important information.

"Any use of pen and paper workarounds needs to be coordinated with the electronic record because if it circumvents the electronic medical records it creates the potential for medical error," said Dr. Saleem, a human factors engineer specializing in the delivery of medical care.

An example of use of paper which the researchers labeled as useful was the issuing of pink index cards upon arrival at a clinic to patients who had high blood pressure. The data also was entered into the electronic medical record. The pink cards were passed along to the physician to alert him or her to elevated blood pressure. The study, which was descriptive in nature, did not speculate on whether this alert function could be performed equally as well by the electronic system.

Noting that electronic systems have the ability to alert clinicians reliably and consistently, the study recommended that designers of these systems consider decreasing the overall number of alerts so clinicians don't ignore them due to information overload.

Source: Indiana University (news : web)

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