Hello, electronic medical records? It's me, unintended consequences

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Emergency department information systems (EDIS), a significant focus of both federal legislation and U.S. health care reform, may ultimately improve the quality of medical care delivered in hospitals, but as currently configured present numerous threats to health care quality and patient safety. Two physician work groups in the American College of Emergency Physicians assessed the potential harm lurking in EDIS and make recommendations on how to improve patient safety as these systems are implemented across the country. Their findings were published online Friday in *Annals of Emergency Medicine* ("Quality and Safety Implications of Emergency Department Information Systems").

"The rush to capitalize on the huge federal investment of $30 billion for the adoption of electronic medical records led to some unfortunate and unintended consequences, particularly in the unique emergency department environment," said lead author Heather L. Farley, MD, of the Department of Emergency Medicine at Christiana Care Health System in Newark, Del. "Some relate to product design, others to user behavior. We offer seven recommendations on how to improve the safety of emergency department information systems, and through their use, patient care."

Researchers created clinical scenarios related to four common pitfalls of EDIS use in emergency departments: communication failure, poor data display, wrong order/wrong patient errors and alert fatigue.

They then developed seven recommendations for emergency

departments using any type of EDIS, with some recommendations directed at the EDIS vendor and others directed at the end user. These include:

- appointment of an emergency department "clinician champion,"
- creation of a multidisciplinary EDIS performance improvement group,
- establishment of an ongoing review process,
- timely attention to EDIS-related patient safety concerns raised by the review process,
- public dissemination of lessons learned from performance improvement efforts,
- timely distribution by EDIS vendors of product updates to all users, and
- removal of "hold harmless" and "learned intermediary" clauses from all vendor software contracts.

"The recommendations developed by our work groups should be paired with those issued by the Institute of Medicine (IOM) in 2011 in its report 'Health IT and Patient Safety: Building Safer Systems for Better Care,'" said Dr. Farley. "The irreversible drive toward EDIS implementation should be accompanied by a constant focus on improvement and hazard prevention. Our paper and the IOM paper create a framework for doing just that."

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