Information Technology improves patient care and increases privacy, informatics expert says

February 7 2013

The federal government invested more than $25 billion in health information technology (IT) as a result of the American Reinvestment and Recovery Act; yet, little is known about how IT applications improve patient safety and protect their privacy. Now, a University of Missouri nursing informatics expert suggests that sophisticated IT leads to more robust and integrated communication strategies among clinical staff, which allows staff to more efficiently coordinate care and better protect patient privacy.

Greg Alexander, an associate professor in the MU Sinclair School of Nursing, found that practitioners use IT to help make clinical decisions, electronically track patients' care and securely relay medical information. Conversely, staff members in nursing homes with less IT use verbal means or visual cues to identify patients' needs at central locations such as nursing stations, on patients' doorways or in closets.

"In nursing homes that have technology, much of the information is kept close to the patient and communication occurs more often at the bedside rather than at nursing stations, which is ideal," Alexander said. "Staff without IT rely on more creative ways to communicate, such as posting a photo of a water droplet on patients' doors to indicate the patients need to be hydrated. This may create issues for privacy and leaves room for misinterpretation among staff."

Alexander also found that face-to-face communication among staff decreased in nursing homes with more IT. Future research will determine how this decreased face-to-face communication affects clinical workflow, staff relationships and quality of patient care, he said.

"The electronic system provides a means of tracking patients' needs and assuring that work is done, but it can't completely replace face-to-face interactions," Alexander said. "Technology is a tool that supports the delivery of care, but it doesn't replace it."

Alexander is the co-principal investigator on a $14.8 million grant from the U.S. Department of Health and Human Services Centers for Medicare and Medicaid Services meant to reduce avoidable re-hospitalizations among nursing home residents. One goal of the project is to enhance staff communication through technology and better information exchange.

  More information: Alexander's most recent study, "Case studies of IT sophistication in nursing homes: A mixed method approach to examine communication strategies about pressure ulcer prevention practices," was published in the *International Journal of Industrial Ergonomics*.

Provided by University of Missouri-Columbia