Using mobile devices to look up drug info prevents adverse events in nursing homes

October 16 2013

Nearly nine out of 10 nursing home physicians said that using their mobile devices to look up prescription drug information prevented at least one adverse drug event in the previous month, according to a University of Pittsburgh School of Medicine Department of Biomedical Informatics study published last week in the *Journal of the American Medical Directors Association*.

Adverse drug events are associated with an estimated 93,000 deaths and $4 billion in excess health care costs in nursing homes each year, said lead investigator Steven M. Handler, M.D., Ph.D., assistant professor of biomedical informatics, geriatric medicine, and clinical and translational sciences at Pitt School of Medicine. In the nursing home setting, half of these events are thought to be preventable.

"Most U.S. nursing homes do not have electronic medical record systems and, as a result, physicians frequently do not have access to current medication information at the point of prescribing," Dr. Handler said. "The lack of accurate and timely medication information can lead to adverse drug events and drug-drug interactions. Our hypothesis was that if physicians could look up drug information first, many of these mistakes could be avoided."

For the study, he and his team surveyed more than 550 nursing home doctors attending the 2010 annual meeting of the American Medical Directors Association about their ownership and use patterns of mobile devices, the type of drug reference software on these devices and how

frequently it was used, and the perceived impact of drug reference information obtained from the devices on adverse drug events and drug-drug interactions.

The researchers found that 42 percent of study participants said they used a mobile device to check drug information, and greater use was more common amongst those who had been in practice for less than 15 years. Of the device users, almost all (98 percent) said they used drug reference software daily in the previous four weeks, and three-quarters reported an average of three or more lookups daily.

Eighty-eight percent of the participants reported that using a mobile device to check drug information prevented one or more potential adverse drug events in the previous four weeks, leading to greater patient safety.

"To our knowledge, this is the first large study of the use of drug reference software on mobile devices in the nursing home setting," Dr. Handler said. "Those who did look up medication information on their mobile devices clearly felt that this was helpful and improved medication safety. However, we found that fewer than half of the nursing home doctors were doing this, which suggests that there is a lot of potential to reduce adverse event rates further if more of them took advantage of these tools."

Provided by University of Pittsburgh Schools of the Health Sciences

Citation: Using mobile devices to look up drug info prevents adverse events in nursing homes (2013, October 16) retrieved 18 April 2024 from https://medicalxpress.com/news/2013-10-mobile-devices-drug-info-adverse.html

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