Study finds drug warning labels need overhaul to better capture attention and effectively convey information

July 5 2012

(Medical Xpress) -- Many patients seem to ignore prescription drug warning labels with instructions that are critical for safe and effective use, according to a study by a Kansas State University researcher working with scientists at Michigan State University.

Consumers, particularly older ones, often overlook prescription drug warning labels in part because the labels fail to attract attention, said Nora Bello, an assistant professor of statistics at Kansas State University. Bello helped investigate the effectiveness of prescription drug warning labels to convey drug information to patients. She and experts in packaging and psychology found that prescription drug warning labels fail to capture patients' attention, impairing the communication of important safety information. The research is published in PLoS One.

"These findings have implications for the design of prescription drug warning labels to improve their effectiveness, particularly as the U.S. government recently started to investigate approaches to standardize the format and content of these labels to decrease medication error rates," Bello said. "Results from this study can provide insight to assist debates about labeling designs that are most likely to impact a wide age range of consumers."

About 15 million medication errors occur each year in the United States, and most happen at home where patients are responsible for complying

with medication regimes. Prescription warning labels are intended to serve as quick reminders of the most important instructions for safe and effective drug use to prevent injuries from medications. They can include, for example, warnings against accompanying use of the medication with alcohol or driving.

The findings show that older patients do not always pay attention to drug warning labels. The results are worrisome, Bello said, because this population is reportedly at a greater risk for dangerous medication errors given their usually more complicated drug regimes relative to younger patients.

Researchers tracked study participants' eye movements over labels on a prescription drug vial to measure attention. The participants interacted with vials under a hypothetical scenario of just having been delivered prescription medications from the pharmacy.

In the study, the eye gaze of 50 percent of participants older than 50 years of age failed to notice a warning label on prescription vials. For 22 percent of these participants, their vision did not enter the warning label area in any of the five vials they interacted with. In contrast, 90 percent of young adults between ages 20 and 29 fixated on the warning labels.

This difference was partially attributed to the age-specific dynamic of visual fixation of information between the age groups, researchers said.

The data provided a compelling case that understanding consumers' attentive behavior and how to attract their attention is crucial to developing an effective labeling standard for prescription drugs, researchers said.

Collaborators include Michigan State University researchers Mark Becker and Laura Bix and Michigan State University graduate student

Raghav Sundar. Research was partially funded through the Center for Food and Pharmaceutical Packaging Research at Michigan State University.

Provided by Kansas State University

Citation: Study finds drug warning labels need overhaul to better capture attention and effectively convey information (2012, July 5) retrieved 24 April 2024 from https://medicalxpress.com/news/2012-07-drug-overhaul-capture-attention-effectively.html

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