New iPhone app, 'MedWatcher,' to support real-time drug safety surveillance

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Researchers at Children's Hospital Boston have developed a new iPhone application in collaboration with the University of North Carolina at Chapel Hill to engage health care practitioners and the general public in issues of drug safety and real-time pharmacovigilance. The application, "MedWatcher," allows users to track the latest drug safety updates provided by official alerts from the Food and Drug Administration (FDA), as well as news from informal channels such as the media. It also enables users to report information about drug side effects and view reports of adverse events submitted to the application by patients and physicians.

Designed as an easy-to-use tool to enhance and support ongoing drug safety efforts, MedWatcher incorporates information about thousands of medications listed in FDA databases and enables users to customize the app based on their medications of interest. As drugs are selected in the app, users are able to view alerts that have been generated by the FDA, create news feeds about a particular drug, and set preferences to receive future alerts and news about those medications. Users are also able to see reviews by patients and providers, and may choose to submit a review as a patient/clinician themselves about adverse events they, or their patient, may have experienced.

"Traditional voluntary drug safety surveillance is limited by substantial under-reporting," said John Brownstein, PhD, director of the Computational Epidemiology Group within the Informatics Program at Children's Hospital Boston (CHIP), who co-led the development of the

application with Clark Freifeld, research software developer at CHIP, and Nabarun Dasgupta, PhD student at the University of North Carolina Gillings School of Global Public Health. "High profile failures to detect safety problems during the pre-approval period have brought new intense scrutiny on the drug approval process and underscore the need for additional methodologies and data sources to monitor drug safety."

"Our hope is that through the release of MedWatcher, we will prompt increased participation in surveillance, empowering people to participate in the public health process but also potentially allowing us to crowdsource problem drugs which will lead to better understandings of side effects of medicines, and possibly even bring about earlier detection and prevention," said Freifeld.

Two unique, highly-structured, user-friendly forms were created to support the reporting function of the app and are geared toward clinicians and patients respectively. Reports of serious adverse events are reviewed by members of the Children's Computational Epidemiology Group and then submitted to the FDA and displayed in the app. Recognizing that the data contained in the app will come from official and unofficial sources, users are encouraged to interpret the data appropriately.

"Traditionally, reporting adverse events has been a cumbersome and lengthy process - for clinicians who have had to interrupt their workflow to submit information, and for patients who are unsure of the process," said Dasgupta. "In making this an easy-to-use mobile app, we aim to lower that barrier and reach people where they live and work, ultimately improving the performance of drug safety surveillance and enhancing our signal detection capabilities."

MedWatcher builds on the surveillance technology efforts of the HealthMap team at Children's, which last year released "Outbreaks Near

Me," an application for the iPhone and Android phone which tracks, maps, and encourages reporting of incidents of infectious disease.

More information: It has been optimized for the iPhone, iPad, and iPod Touch and is available for download free in the iTunes App Store. For more information on MedWatcher, visit: www.healthmap.org/medwatcher

Provided by Children's Hospital Boston