

Electronic Pharmacy May Protect War Veterans from Medication Errors

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(PhysOrg.com) -- Thousands of men and women who served in Iraq and Afghanistan sustained life-threatening injuries but were fortunate enough to return home alive.

In a cruel twist of fate, some may have suffered accidental harm or even death from incorrect use of potent prescription medications for their pain and injuries.

A robotic device that dispenses the proper dose of oral prescription medications to soldiers suffering from traumatic brain injuries, [post traumatic stress disorder](#) and other conditions requiring risky medications is under study by researchers at the University of Illinois at Chicago's Center for Pharmacoeconomic Research and Milwaukee's Columbia College of Nursing.

"The military has an increasing number of patients with combat-related injuries that may not allow them to strictly adhere to their medication regimens," said Daniel Touchette, UIC assistant professor of pharmacy practice, who serves as co-principal investigator on the project along with Jill Winters, professor and dean of Columbia College of Nursing. Some, he said, "are in transitional-care outpatient settings that do not have nurses or pharmacists to manage their medications daily."

The study involves the use of an electronic medication management assistant, or EMMA delivery unit, designed to remotely deliver, manage and monitor a patient's drug therapy and adherence in the outpatient

setting under the guidance of a physician, nurse case manager and pharmacist.

EMMA is trademarked and manufactured by INRange Systems, Inc. It is the only one of its kind cleared for remote medication management by the U.S. [Food and Drug Administration](#), Touchette said.

The hope is that the system "will help ensure that these errors are minimized, while eliminating the need for labor intensive and inherently inaccurate practices of manually filling and reorganizing pill boxes," he said.

"It also eliminates the need for patients to try to remember whether they have taken their medications as prescribed, as the system will remind them when a medication has been missed or already taken."

More than 1.5 million preventable medication errors occur each year, according to the 2006 Institute of Medicine report, "Preventing Medication Errors."

The study will be undertaken initially at the Camp Pendleton Naval Hospital in California and the James A. Haley Veterans Affairs Hospital and Polytrauma Facility in Tampa, Fla. The program may expand to include additional Department of Defense or VA sites.

Dr. Mary Anne Papp of the [Medical](#) College of Wisconsin in Milwaukee directed the development of EMMA for INRange Systems.

"For many patients in the military and veteran's health care systems -- particularly those who are in transitional care between the Department of the Defense, the Veterans Administration and home setting -- taking medication properly, monitoring health care status and assessing [health care](#) providers becomes increasingly difficult," she said.

"We believe patients who use the EMMA units, along with its documented adherence and medication reconciliation abilities, will have fewer drug-related problems, fewer medication-related hospital admissions and emergency room visits, fewer duplicate narcotic prescriptions, and a decreased number of narcotic tablets/equivalent doses, when compared to patients receiving medication reconciliation alone."

Provided by University of Illinois at Chicago ([news](#) : [web](#))

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