Collaborative pharmaceutical care in hospitals cuts medication errors by three quarters

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(Medical Xpress)—A new Irish study which has just been published in leading international peer reviewed journal, the *British Medical Journal Quality & Safety*, has shown how a new, more collaborative approach to managing medicines with hospitalised patients can significantly reduce medication errors and eliminate potentially severely harmful medication errors.

The study, which is the first of its kind in Ireland, was led by researchers from the School of Pharmacy and Pharmaceutical Sciences at Trinity College Dublin in collaboration with the Medical Directorate and the Pharmacy Department from Tallaght Hospital. The teams trialled a collaborative approach to medicines management between doctors and hospital pharmacists which resulted in a 78% reduction in the number of patients experiencing medication error at admission and a 79% reduction at discharge. It entirely eliminated potentially severely harmful medication errors compared with an incidence of 6% of patients receiving the standard model of care. It also improved the quality of prescribing in older patients by facilitating better communication about the patients' drugs, a particularly important factor given the increase in polypharmacy (i.e., taking five or more medicines at the same time) amongst older adults in Ireland.

Dr Tamasine Grimes, lead author of the paper and Associate Professor in Practice of Pharmacy, at the School of Pharmacy and Pharmaceutical

Sciences, Trinity, explained: "Admission and discharge from hospital are vulnerable times for patient safety. A lot of complex information needs to be shared between healthcare providers and patients. The chance for miscommunication is high and sometimes this can result in error which may result in harm. More and more, the patients who present to our hospitals are already using multiple prescribed medicines. This adds to the challenge of keeping them safe and preventing medication error."

"The involvement of hospital pharmacists in team-based clinical activities at the bed-side in Irish hospitals is rare. This study showed that providing team-based care, involving the doctor and the pharmacist from admission through to discharge, significantly improves patient safety and the quality of prescribing. Improved prescribing is known to cause a decrease in healthcare use and costs, not to mention the potential for keeping patients safe," she continued.

Dr Catherine Wall, Clinical Director of Medicine and Consultant Physician at Tallaght Hospital, said: "Ensuring patient safety is our priority. This study gives us valuable information about how to improve medication safety for hospitalised patients. Team working between doctors and pharmacists with a focus on managing medicines improves the quality and safety of medication use."

The collaborative pharmaceutical care at Tallaght Hospital (PACT) service was delivered at admission, during hospital care and at discharge, with a pharmacist working with the medical team. In standard care, a hospital pharmacist was working on a particular ward and involved at admission and during hospital stay but not at discharge and wouldn't have the same degree of communication and collaboration with doctors as they did in the PACT approach.

More information: "Collaborative pharmaceutical care in an Irish hospital: uncontrolled before-after study." Tamasine C Grimes, Evelyn

Deasy, Ann Allen, John O'Byrne, Tim Delaney, John Barragry, Niall Breslin, Eddie Moloney, Catherine Wall. *BMJ Qual Saf* bmjqs-2013-002188Published Online First: 6 February 2014 DOI: 10.1136/bmjqs-2013-002188