2020 Research Awards

Project Title:

Testing a digital medication risk tool for early identification of patients at high risk of medication-related harm

Lead Investigator:

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Project Summary:

Medications offer significant health benefits; however, their use can also result in patient harm which can manifest in various ways such as delirium, bleeding, falls, kidney, and liver injury. These in turn can increase length of hospital stays, cause further hospitalisations, and incur added cost to healthcare.

Early identification of individuals at high risk of medication-related harm shortly after admission to hospital allow for timely and targeted medication optimisation and monitoring, by clinicians (i.e. pharmacists, doctors and nurses) skilled in preventing patient harm. Having complete electronic health records available within Metro South provides access to data that can be used to create new tools for identifying individuals at high risk and optimising patient safety. Risk tools can be embedded into hospital electronic systems and prompt clinicians to triage high-risk individuals for timely medication review and monitoring.

A recent PhD study at the Princess Alexandra Hospital involved the development of a tool for identifying high-risk patients (the Adverse Inpatient Medication Event tool). The current study aims to evaluate the effectiveness and cost-effectiveness of use of the tool in clinical practice at the Princess Alexandra and Logan Hospitals.

Research Benefits:

Between 4% and 14 % of hospital admissions are associated with some form of medication-related harm, of which up to half is potentially preventable. Whilst most events are of minor or moderate severity, a recent local study identified 18% of these events involving severe adverse reactions. With funding provided by the PA Research Foundation, this study aims to reduce medication-related harm in our hospitals, by identifying high-risk individuals early after admission and having their medications reviewed and optimised in a timely manner that also optimises use of scarce clinician resources.

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