A prescription for improved medication safety

Medication safety is a priority across our hospitals to ensure a positive experience for patients. Effective communication between Metro North Hospital and Health Service (MNHHS) pharmacists, doctors and nurses is improving medication management and providing better health outcomes for patients.

Medicines are the most common treatment used in health care and range from sedatives and pain relief for a day only surgical procedure to antibiotics to long term cardio-vascular drugs. As such, medications can be associated with a higher incidence of errors and adverse effects than other healthcare treatments.

Dr Ian Coombes, Director of Pharmacy at Royal Brisbane and Women's Hospital (RBWH), said medication errors can and do occur in some instances, but the majority are detected and corrected before they affect the patient.

To oversee efforts that prevent and reduce the likelihood of errors, Dr Coombes said RBWH had implemented significant systems changes, such as standardised medication ordering and administration systems, "Smart infusion pumps" that control the rate of medication infusions and automated medication distribution systems that are being put into our emergency departments.

"In addition we are working to apply the successful model already used with pharmacists with medical and nursing staff to provide self and peer evaluation and immediate feedback to junior doctors, nurses and pharmacists to guide their development and ensure medication safety best practice," Dr Coombes said.

Junior doctors reacted positively to the self and peer evaluation and feedback, with a majority acknowledging it as a "good learning experience" and "beneficial to improve prescribing". Nurses also reported that individual feedback had raised awareness of strengths and weakness and allowed them to take accountability for their practice and make improvements.

"Effective communication between the people who deliver care and those who receive care can help prevent medication errors," Dr Coombes said.

"Due to the complexity of a patient's medications, it is important to ensure they receive the right medicine in the right dose at the right frequency.

"As patients come in, they will be asked what medications they are taking. This information is critical in building an accurate picture of what they are taking, and how they are taking it.

"Before a patient receives any medication during a hospital stay they will always be asked questions by their pharmacist, doctor or nurse to ensure the right medication is correctly administered.

"On average, people will leave hospital with nine medications. During hospital stays, there can be four, five or six changes to medicines.

"Having accurate information allows patients to be informed about their medicines, helps us prepare for a patient's discharge and reduces the chance of them having problems with your medicines when they go home. It also ensures the patients' GPs are able to safely continue therapy after they go home."

Dr Coombes said RBWH has taken a leading role in the development, testing and implementation of many best practice standards and is ranked among the top hospitals in Australia for a number of initiatives which have resulted in statistically significant improvements in medication safety.

196,609 items dispensed from RBWH Pharmacy per year { that's an average of 16,384 per month }

Opposite: *Clinical Educator, Brooke Myers (right), with junior pharmacist, Kate Streatfeild.* ***Opposite inset:*** *RBWH Clinical Pharmacology Registrar, Dr Richard Friend (right), provides medication management feedback to Senior House Officer, Dr Joel Thomas.*

Internal medicine medication administration observation and feedback

Providing direct feedback to individual nurses resulted in significant improvement in a range of medication safety targets, including:

- Identification check increased from 57.6% to 98%
- Adverse Drug Reaction (ADR) checks increased from 45% to 93%
- Inappropriate dose omissions halved from 5.1% to 2.5%
- Interruptions by nurses decreased from 4.3% to 3.2%
- Wrong infusion rate decreased from 17% to 0.1%