

AIMING FOR GREATER ACCURACY IN PRESCRIBING

Medication errors can be harmful to patients. Medicine reconciliation is aimed at reducing discrepancies between what medicines a patient has been prescribed and what medicines they should be receiving.

By Nirasha Parsotam and Jill Clendon

The Health Quality & Safety Commission works with clinicians and health service providers to improve the quality and safety of health and disability services. One of the Commission's priorities is for district health boards (DHBs) to implement paper or electronic medicine reconciliation in all hospitals by January 2012.¹ To date, 17 DHBs have implemented medicine reconciliation based on the safe medication management (SMM) standards and processes.² Medication errors relating to prescribing, dispensing and administration were in the top 10 notified adverse events to the Accident Compensation Corporation (ACC) between 2005 and 2010.³ This ranking underscores the importance of ensuring effective systems are in place to prevent errors.

Evidence-based process

Medicine reconciliation is an evidence-based process, which has been demonstrated to significantly reduce medication errors caused by incomplete or insufficient documentation of medicine-related information. It involves three core steps.

- 1) **Collecting** the "most accurate" medicines list, using at least two different information sources, the primary source being the patient.
- 2) **Comparing** the "most accurate" medicines list against the current medication chart and clinical notes for any documented changes to medicines.
- 3) **Communicating** any discrepancies (ie undocumented changes, whether intended or not) to the prescriber to reconcile and action.

A discrepancy is any medicine that is omitted, altered, added or substituted on the patient's medication chart without documented explanation in the patient's clinical record or other form of accepted communication. A discrepancy can be either intentional, ie a deliberate decision by the prescriber at the time of prescribing, or unintentional, ie unaware or unknown to the prescriber at the time of prescribing.

The goal is to obtain, within 24 hours of

admission, transfer or discharge, the "most accurate" list of all medicines a patient is currently taking. The aim is to reduce any discrepancies that have the potential to become medication errors or cause medication-related harm to patients.

Nurses, midwives, doctors and pharmacists are all health practitioners who can be responsible for any part of the medicine reconciliation process. Other health care workers, such as pharmacy technicians and enrolled nurses, can participate in the medicine reconciliation process under the supervision of a registered health practitioner. Responsibility falls to the registered health practitioner.²

The Commission's vision is to ensure medicine reconciliation becomes integrated into the daily routine of all health care practitioners at all transition points of patient care. The Commission also wants staff and patients to understand that medicine reconciliation is about facilitating the optimal use of medicines and reducing errors.²

Internationally, the variance between medicines that patients are taking *before* admission, and what is prescribed *on* admission to hospital, is reported to be between 10 to 67 per cent.⁴ This means there is a chance that every patient who comes through a hospital door has one out of three medicines prescribed incorrectly at admission.

Although medication history errors are common, not all these variances automatically lead to adverse drug events (ADEs). However, with close to 40 per cent of errors having the potential to change, or have an effect on, the patient's clinical situation, medicine reconciliation offers the opportunity to prevent a significant proportion of ADEs.⁵ Medication errors are not only occurring at admission but at transfer and discharge as well, underscoring the importance of ensuring medicine reconciliation occurs at all three points on the care continuum.

Nationally, there have been four high-profile Health and Disability Commissioner (HDC) cases

in the last 10 years, which identified the absence of medicine reconciliation as a contributing factor to the medicine errors that occurred.^{6,7,8}

Data from six SMM DHB medicine reconciliation pilots, undertaken at admission, during 2009 to 2010 found:

- There were 2805 discrepancies (average of 1.5 discrepancies per patient) identified from the 1865 patients who had medicine reconciliation initiated. Of these, 1257 (76 per cent) were unintentional.
- Sixty-three per cent of all discrepancies identified were reconciled within 24 hours of a patient's admission.
- An average of 22 minutes is required for the "collecting" and "comparing" steps in medicine reconciliation, using at least three information sources.
- The most common type of discrepancy found is omission of a medicine from the patient's list.
- The commonest medicine class for discrepancies is cardiovascular.⁹

The Commission's aim is to reduce the total number of medicine, allergy and ADR discrepancies. However, the following issues have been identified as impeding effective reconciliation:

- Medicine information received from primary care is often not current or lacks sufficient detail.
- Current medication histories taken by health practitioners lack sufficient detail, or are not checked using another source.
- No documentation is available on intentional changes made to medicines and the reasons why.
- The details are unable to be confirmed with GP or community pharmacist outside normal working hours.
- The patient is not used, or is not able to be used, as the primary source of information to check what medicines are actually being taken.

While initiatives involving sharing health information across primary and secondary care, 24 hours a day, are currently underway, all health professionals still need to ensure available information is of sufficient quality to use.

What nurses can do

Ways nurses can help in medicine reconciliation include:

- Being a medicine reconciliation champion – finding out who in your organisation is leading this initiative and getting involved.
- Reminding doctors if a medicine reconciliation form hasn't been reconciled, omissions or

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changes to medicines haven't been added to medication chart and there is no explanation in the notes.

- If taking medication histories, record the minimum details required for a complete history, ie name of medicine, medicine dose and units, frequency of administration, route of administration, any allergies/adverse drug reactions (description of reaction and date) and any specified individualised time for the medicine to be administered. Where possible, verify the information collected with the patient.
- Nurses involved in GP referrals should provide a current (last three months only) and accurate list of medicines, including details of the medi-

cine name, strength, dose, route and frequency. Many GP systems do not automatically provide the required accurate details. Include the "date last administered" for any medicines on cyclical dosing, eg Vitamin B12.

- Nurses involved in rest or nursing home referrals should supply a contact number/name for the facility, the person's GP and the relevant community pharmacy details, when a resident is admitted to hospital, as well as a copy of the last medication administration record or blister pack.

Every health practitioner involved in patient care should recognise that accurate communication of changes to a patient's medicines, allergies and ADR list is essential in reducing

medication errors. All health practitioners involved in medicine reconciliation are responsible and accountable for the accuracy and quality of information provided at all transition points in a patient's care. Accurate information supports the medicines reconciliation process, helps reduce medication errors and enhances patient safety. •

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References

- 1) Health Quality & Safety Commission. (2011) Health Quality & Safety Commission priorities for 2011. www.hqsc.govt.nz/page/23143/health-quality-safetycommissionpriorities/?section=12382&tab=2336&content Type=484. Retrieved 16/09/11.
- 2) Safe Medication Management Programme. (2011) *Medicine Reconciliation Standards, Version 2*. www.safemedication.org.nz. Retrieved 16/09/11.
- 3) Accident Compensation Corporation. (2010) *ACC treatment injury profile: nursing liaison group*. Wellington: Accident Compensation Corporation (private communication).
- 4) Tam, V.C., Knowles, S.R., Cornish, P.L., Fine, N., Marchesano, R. & Etchells, E.E. (2005) Frequency, type and clinical importance of medication history errors at admission to hospital: a systematic review. *Canadian Medical Association Journal*; 173: 5, pp510-515.
- 5) Cornish, P.L., Knowles, S.R., Marchesano, R., Tam, V., Shadowitz, S., Juurlink, D.N. & Etchells, E.E. (2005) Unintended medication discrepancies at the time of hospital admission. *Archives of Internal Medicine*; 165, pp424-429.
- 6) Health and Disability Commission. (2005) *Report by the Health and Disability Commissioner (Case 03HDC14692)*. www.hdc.org.nz/media/3071/03HDC14692dhh.pdf. Retrieved 09/10/10.
- 7) Health and Disability Commission. (2007) *Medication Safety and Hospital Referrals*. www.hdc.org.nz/media/14813/05hdc17139hospital.pdf. Retrieved 09/10/10.
- 8) Health and Disability Commission. (2008) *Medication Safety – prescribing errors (Case 07HDC09719)*. www.hdc.org.nz/media/5022/07HDC09719casenote.pdf. Retrieved 09/10/10.
- 9) Parsotam, N. (2010) *Medicine Reconciliation (MR) at Admission Results Summary*. *Safe Medication Management Programme*. (Unpublished paper).

NURSES' ROLE IN MEDICINES RECONCILIATION

"Patient normally takes 400mg Acyclovir BD but is only charted 200mg."

"Patient very concerned he is missing some meds from night time. Please can you come and have a chat with him and sort out what he takes and when he takes it? Thanks!"

"I normally take a blue pill in the morning but today I was given a pink one?"

The above examples are ones nurses at Hutt Valley District Health Board (DHB) have dealt with in their practice and demonstrate that nurses already have an important role in medicine reconciliation. Nurses receive multiple requests daily to check mismatches between the medicines patients say they are taking and what is actually documented on their medication chart.

As Hutt Valley DHB launches a more formalised medicine reconciliation process in the orthopaedic ward and the pre-assessment clinic, our nurses will be playing a major role. In the ward setting, medicine reconciliation will occur within the first 24 hours of a patient's admission. At the first medication administration round, nurses will check with the patient that the medicines they normally take are correctly prescribed on their medication chart. The nurse will also liaise with the dispensing pharmacy or the GP practice nurse to check the information they have is correct. Once the patient's usual medicines have been confirmed by two sources, the nurse will record and discuss any discrepancies with the prescribing doctor, who will reconcile and amend the medication chart if necessary.

* As told by Hutt Valley DHB clinical nurse manager Annie Taylor, associate clinical nurse manager Rennae Curran and acting associate director of nursing Claire Jennings.

Clinical nurse manager Annie Taylor (right) and associate clinical nurse manager Rennae Curran completing the 'collect' and 'compare' step of the medicine reconciliation process.

