

Medication ordering

3.1 Percentage of patients whose current medicines are documented and reconciled at admission

Purpose

This indicator addresses the effectiveness of processes that promote continuity of care in medicines management.

Background and evidence

Adverse medicine events are commonly caused by lack of effective communication about medicines management, especially in the transition between the community and hospital setting.¹ Medication reconciliation is one of the Australian Pharmaceutical Advisory Council Guiding Principles to Achieve Continuity in Medication Management.² It is an essential component of effective clinical handover and involves verifying the list of medicines a patient is currently taking, identifying variances, and rectifying medication discrepancies at interfaces of care. The purpose is to avoid errors of transcription, omission, duplication of therapy, medicine-medicine and medicine-disease interactions and other errors that may result in adverse medicine events.³

The judicious and appropriate choice of treatment during hospitalisation is more likely when reference can be made to a complete and accurate list of the medicines a patient was taking prior to admission. Thus reconciliation should take place as early as possible after admission so that informed prescribing decisions can be made.

Key definitions

Patients refers to all patients admitted for at least 24 hours.

Current medicines refers to all medicines taken prior to admission including complementary medicines and non-prescribed treatments.

Medication reconciliation is a formal process of obtaining and verifying a complete and accurate list of each patient's current medicines, **matching** the medicines the patient should be prescribed to those they are **actually** prescribed. Where there are discrepancies, these are discussed with the prescriber and reasons for changes to therapy are documented. When care is transferred (e.g. between wards, hospitals or home), a current and accurate list of medicines, including reasons for change is provided to the person taking over the patient's care.⁴

The steps involved are listed in Table 1.

The process and documentation for these steps should be determined by each institution with clear designation of roles and responsibilities and standard documentation of processes irrespective of professional discipline.

Documented means the steps that have been undertaken are explicitly documented in the medical record. Documentation may include use of the dedicated area on the NIMC or other purpose-designed form or medicines management plan, which ultimately forms part of the medical record. If used they should be dated and signed.

At admission means this documentation is completed by the end of the next calendar day after admission. Reconciliation performed at a pre-admission clinic is acceptable.

Table 1. The steps involved in the process of medication reconciliation⁵

1. Obtain a best possible medication history	<p>Using information from patient interviews, GP referrals and other sources, compile a comprehensive list of the patient's current medicines. Include prescription, over-the-counter and complementary medicines and information about the medicine's name (both active ingredient and brand names), strength, dose, dose form, frequency and route; recent changes to treatment; and previous adverse drug reactions.</p> <p>This medication history, sometimes referred to as a Best Possible Medication History (BPMH), should involve a patient medication interview, where possible. The BPMH is different and more comprehensive than a routine primary medication history, which is often a quick medication history.</p>
2. Confirm the accuracy of the history	<p>Use a second source to confirm the information obtained, and ensure you have the best possible medication history. Verification of medication information can include:</p> <ul style="list-style-type: none"> • reviewing the patient's medicines list • inspection of medicine containers • contacting community pharmacists and GPs, with the patient's consent • communicating with carers or the patient's family members • reviewing previous patient health records.
3. Reconcile the history with prescribed medicines	<p>Compare the patient's medication history with their prescribed inpatient treatment. Check that these match, or that any changes are clinically appropriate.</p> <p>Where there are discrepancies, discuss these with the prescriber and ensure that the reasons for changes to therapy are documented e.g. atenolol ceased prior to surgery.</p>
4. Supply accurate medicines information	<p>When patients are transferred between wards, hospitals or to their home or residential care facility, ensure that the person taking over their care is supplied with an accurate and complete list of the patient's medicines.</p> <p>Ensure that the care provider, patient and/or their carer are also provided with information about any changes that have been made to medicines.</p>

Data collection for local use

Please refer to the section *Using the National Quality Use of Medicines Indicators for Australian Hospitals* for guidance on sample selection, sample size, measurement frequency and other considerations.

Inclusion criteria: Current adult, paediatric and neonatal inpatients.

Exclusion criteria: Patients admitted to hospital for less than 24 hours, trauma patients and patients admitted direct to ICU.

Recommended data sources: Discharge documentation, medication charts, medication management or reconciliation forms and medical records.

The data collection tool for QUM Indicator 3.1 assists data collection and indicator calculation.

Data collection for inter-hospital comparison

This indicator may be suitable for inter-hospital comparison. In this case, definitions, sampling methods and guidelines for audit and reporting need to be agreed in advance in consultation with the coordinating agency.

Indicator calculation

$$\frac{\text{Numerator}}{\text{Denominator}} \times 100\%$$

Numerator = Number of patients whose current medicines are documented and reconciled at admission

Denominator = Number of patient records in sample

Limitations and interpretation

Data collection for this indicator relies on documentation that medication reconciliation has occurred. In the absence of a purpose-designed form, such as a medication management plan, documentation of the reconciliation process is likely to be limited. Good documentation supports quality patient care⁶ and poor communication can result in adverse drug events.⁷ Thus it is assumed that absence of explicit documentation means that medication reconciliation did not take place. The indicator assesses the frequency with which medication reconciliation occurs; it does not look at the quality of the process itself. It is recommended that the quality of the medication reconciliation process is assessed and staff performing medication reconciliation undergo regular competency assessment to ensure that the process is consistently carried out to a high standard.

This indicator does not examine reconciliation at other points of transition, or communication of medication information to subsequent care providers. Medication reconciliation is only complete when reconciliation occurs at all transition points, including discharge. It may be useful to collect this indicator concurrently with:

- *Indicator 5.3: Percentage of discharge summaries that include medication therapy changes and explanations for changes*
- *Indicator 5.8: Percentage of patients whose discharge summaries contain a current, accurate and comprehensive list of medicines*
- *Indicator 5.9: Percentage of patients who receive a current, accurate and comprehensive medication list at the time of hospital discharge.*

Further information

The Australian Commission on Safety and Quality in Health Care medication reconciliation web page includes information on the process of medication reconciliation and resources to support its implementation www.safetyandquality.gov.au/our-work/medication-safety/medication-reconciliation

Use of a medication management plan (MMP) or similar form can improve the accuracy of information recorded on admission and assist with medication reconciliation at transitions of care. A national MMP and tools to support implementation are also available from the Australian Commission on Safety and Quality in Health Care web site at www.safetyandquality.gov.au/our-work/medication-safety/medication-reconciliation/nmmp/

Medication Safety Self Assessment for Australian Hospitals⁸ (MSSA) can help identify potential strategies for improvement with this and other indicators. The MSSA encourages development of robust systems for safe prescribing, dispensing, administration and monitoring of medicines. The MSSA is available at www.cec.health.nsw.gov.au

This indicator can be used to assist hospitals in meeting the National Safety and Quality Health Service Standard 1 [items 1.2.1, 1.2.2, 1.5.2, 1.6.1, 1.6.2], Standard 4 [items 4.2.1, 4.2.2, 4.5.1, 4.5.2, 4.6.1, 4.8.1, 4.12.1, 4.12.3, 4.12.4] and Standard 6 [items 6.1.1, 6.2.1, 6.3.1].⁹

References

1. Second National Report on Patient Safety - Improving Medication Safety. Australian Council for Safety and Quality in Health Care, 2002.
2. Guiding Principles to Achieve Continuity in Medication Management: Australian Pharmaceutical Advisory Council, 2005.
3. Joint Commission Hospital National Patient Safety Goals 2011-2012: NPSG 03.06.01 (Maintain and communicate accurate patient medication information). The Joint Commission, 2011.
4. Medication Reconciliation. Australian Commission on Safety and Quality in Health Care. www.safetyandquality.gov.au/our-work/medication-safety/medication-reconciliation/ (Accessed 6 June 2014)
5. MATCH UP Medicines. A guide to medication reconciliation. Australian Commission on Safety and Quality in Health Care, 2010. www.safetyandquality.gov.au/wp-content/uploads/2012/02/42794-MATCH-UP-brochure.pdf (Accessed 6 June 2014).
6. The Good Clinical Documentation Guide. National Centre for Classification in Health, Commonwealth of Australia, 2003.
7. MacKinnon NJ, ed. Safe and Effective: The Eight Essential Elements of an Optimal Medication-Use System. Canadian Pharmacists Association, 2007.
8. Medication Safety Self Assessment for Australian Hospitals: Institute for Safe Medication Practices USA (Adapted for Australian use by NSW Therapeutic Advisory Group and the Clinical Excellence Commission), 2007.
9. Australian Commission on Safety and Quality in Health Care. National Safety and Quality Health Service Standards. Sydney, ACSQHC, 2012.