

3.2 Percentage of patients whose known adverse drug reactions are documented on the current medication chart

Purpose

This indicator addresses the effectiveness of processes to prevent further harm from known adverse drug reactions (ADRs).

Background and evidence

An ADR is defined as: “a response to a medicinal product which is noxious and unintended and which occurs at doses normally used in man for the prophylaxis, diagnosis or therapy of disease or for the restoration, correction or modification of physiological function”.¹

The purpose of ADR documentation is to avoid further harm to patients who have previously experienced an ADR to that (or a similar) medication. Data from NSW audits of the National Inpatient Medication Chart (NIMC) show that completion of ADR documentation occurs 49-85% of the time.² Incidents involving medication administration to patients with a known ADR to that medication continue to occur. Prevention of such errors depends on current and complete information being available at the time of prescribing, dispensing and administration.³

Key Definitions

Known adverse drug reactions refers to any ADR identified before or during the current admission that has been recorded in the medical record. Any ADR that may influence future therapeutic decision making, whether it involves a prescription medicine (including vaccines), over-the-counter medicine or complementary medicine, should be documented.

Documented means the dedicated space on the current medication chart (defined below) has been completed in a way that is consistent with instructions in the National Prescribing Service Medication Chart Online Training Module as outlined below:

- If there are no known ADRs this should be documented on the medication chart as “nil known”.
- If no information is known about the patient’s ADR status, for example if the patient is unable to communicate, this should be documented as “unknown”
- Where previous reactions are known, the reaction, type and date should be explicitly documented. If the reaction type or date is unknown, this should be explicitly documented. If there is not enough space to explain the reaction type or date in full, a note should be made to refer to the patient’s medical record for more detail.

The current medication chart refers to the NIMC or other chart approved for use by the hospital Drug and Therapeutics Committee.

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Data collection for local monitoring

Recommended sample selection: A random sample of current inpatients. Random means each patient has an equal chance of inclusion in the audit. Adult, paediatric and neonatal patients should be included.

Recommended sample size: The following sample sizes are recommended based on the number of beds in the hospital:

Number of beds in hospital	Sample size
150 or more	20% of current inpatients
30 - 149	30 current inpatients
Less than 30	All current inpatients

Collecting a larger sample where possible will increase the sensitivity of the data.

Recommended methodology: Review of medication charts and medical records.

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 known ADRs are documented on the current medication chart

Denominator = Number of patients in sample

References

- Committee of Experts on Management of Safety and Quality in Health Care (SP-SQS) Expert Group on Safe Medication Practices. Glossary of terms related to patient and medication safety: World Health Organization, 2005:13.
- National Inpatient Medication Chart October 2006 Implementation Audit Report: NSW Health, 2006.
- Building a Safer NHS for Patients: Improving Medication Safety: A report by the Chief Pharmaceutical Officer: National Health Service, 2004:173.
- The Good Clinical Documentation Guide: National Centre for Classification in Health, Commonwealth of Australia, 2003.
- Safe and Effective: The eight essential elements of an optimal medication-use system. In: MacKinnon N, ed: Canadian Pharmacist's Association, 2007.
- Dooley M, Bogovic A, Carroll M, Cuell S, Galbraith K, Matthews H. SHPA Standards of Practice for Clinical Pharmacy. *Journal of Pharmacy Practice & Research* 2005; 35:122-46.
- Medication Safety Self Assessment for Australian Hospitals: Institute for Safe Medication Practices (Adapted for Australian use by the NSW Therapeutic Advisory Group and the Clinical Excellence Commission), 2007.

Limitations and interpretation

Data collection for this indicator relies on documentation of ADRs on the medication chart and in the medical record. Good documentation supports quality patient care⁴ and is a critical component of management. Poor communication can result in adverse drug events.⁵

Recording a detailed medication history at admission is a critical step in determining the accuracy and completeness of the list of known ADRs. This indicator does not assess the accuracy of the list of known ADRs documented in the medical record but rather focuses on availability of complete documentation at the point of prescribing, dispensing and administration (i.e. on the medication chart).

Further information

For more information about documentation of ADRs on the NIMC see the National Prescribing Service Medication Chart - online training module at www.nps.org.au.

Guidelines for detailed medication history taking and ADR management have been published.⁶

The *Medication Safety Self Assessment for Australian Hospitals*⁷ (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 medications. The MSSA is available at www.cec.health.nsw.gov.au