

6.2 Percentage of patients that are reviewed by a clinical pharmacist within one day of admission

Purpose

This indicator assesses the availability of timely clinical pharmacy services for all patients.

Background and evidence

The services provided during clinical pharmacist review include medication history documentation, drug therapy review and monitoring, provision of medicines information, including advice about pharmacokinetic and pharmacodynamic aspects of medicines use, and provision of targeted medicines advice to patients.¹

Clinical pharmacist review should inform prescribing decisions and therefore should be initiated as soon as possible after patient admission. Subsequent monitoring of drug therapy and outcomes should optimally be performed on a daily basis, although some patients may require less intensive monitoring. By working to ensure that drug therapy is safe, effective and cost-effective, clinical pharmacists serve the interests of individual patients and also the wider community. Furthermore, clinical pharmacists play an important role in providing educational services for medical staff and other health care providers.¹

Key definitions

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

Review by a clinical pharmacist means there is explicit documentation by the pharmacist on the medication chart or in the medical record that review has occurred.

Within one day of admission means documentation of clinical pharmacist review was signed and dated by the end of the next calendar day after admission.

Data collection for local monitoring

Recommended sample selection: A random sample of patients admitted over a one month period. 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 patients
30 - 149	30 patients
Less than 30	All patients

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

Recommended methodology: Review of medical records including medication charts.

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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 reviewed by a clinical pharmacist within one day of admission

Denominator = Number of patients in sample

Limitations and interpretation

Data collection relies on documentation in the clinical record (generally on the medication chart) of the date of review by the pharmacist. Good documentation supports quality patient care² and is a critical component of management of adverse drug reactions. Poor communication can result in adverse drug events.³ Thus it is assumed that absence of explicit documentation means no clinical pharmacy review was performed.

This indicator does not assess the extent, appropriateness or quality of the clinical pharmacy service provided to an individual patient.

It is acknowledged that some patients may not require a full clinical pharmacy service therefore the target for this indicator is not necessarily 100%. For example, uncomplicated midwifery cases and those patients who have been reviewed by a clinical pharmacist in a pre-admission clinic may have a less urgent need for a clinical pharmacy review at admission.

Further information

The *Medication Safety Self Assessment for Australian Hospitals⁴ (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

References

1. 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.
2. The Good Clinical Documentation Guide: National Centre for Classification in Health, Commonwealth of Australia, 2003.
3. Safe and Effective: The eight essential elements of an optimal medication-use system. In: MacKinnon N, ed: Canadian Pharmacist's Association, 2007.
4. 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.