

3.5 Percentage of medication orders for intermittent therapy that are prescribed safely

Purpose

This indicator assesses the effectiveness of processes that encourage clear and unambiguous communication of medication orders.

Background and evidence

Australian and overseas incident monitoring systems continue to report adverse outcomes involving medicines intended to be administered intermittently at regular intervals longer than one day that are inadvertently administered daily. Examples include daily administration of oral methotrexate when weekly dosing was intended. Some cases have resulted in fatalities.¹ Similarly, adverse outcomes have occurred when fentanyl patches were administered every 24 hours when dosing every 72 hours was intended.²

Key definitions

Intermittent therapy refers to medicine that is intended to be administered at regular intervals, but less frequently than daily. Examples of medicines administered intermittently include bisphosphonates (e.g. alendronate), cytotoxics (e.g. oral methotrexate), transdermal opioids (e.g. buprenorphine or fentanyl patches) and depot antipsychotics.

Prescribed safely means that the day or days of the week the medicine is to be administered is stated in the order (e.g. Wednesday) AND the days of the week where the medicine is not to be administered are crossed out in the administration section of the medication chart.

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: Medication orders for intermittent therapy of adult, paediatric and neonatal inpatients. Data may be collected on all medicines prescribed intermittently or on specific medicines or medicine groups, depending on the collection setting.

Exclusion criteria: Nil.

Recommended data sources: Medication charts.

The data collection tool for QUM Indicator 3.5 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 medication orders for intermittent therapy that are prescribed safely

Denominator = Number of medication orders for intermittent therapy in sample

Limitations and interpretation

This indicator does not assess safe prescribing of intermittent therapy in terms of dose level but it assesses the ability of a prescriber to clearly communicate a required interval of longer than 24 hours for any medicine to be given by any route of administration.

Further information

Clear instructions on how to prescribe for intermittent dosing are given in the National Inpatient Medication Chart User Guide³, available at www.safetyandquality.gov.au/publications/national-inpatient-medication-chart-user-guide-including-paediatric-versions

Prescribing of intermittent dosing schedules is included in the NPS MedicineWise National Inpatient Medication Chart online training course, available at <http://learn.nps.org.au>

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 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] and Standard 4 [items 4.2.1, 4.2.2, 4.4.2, 4.5.1, 4.5.2, 4.11.1].⁵

References

1. ISMP Medication Safety Alert! Methotrexate overdose due to inadvertent administration daily instead of weekly. Vol. 2007. Institute for Safe Medication Practices, 2002.
2. Fentanyl patches: preventable overdose. *Prescribe Int* 2010; 19: 22-25.
3. National Inpatient Medication Chart User Guide. Australian Commission on Safety and Quality in Health Care, June 2013.
4. 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.
5. Australian Commission on Safety and Quality in Health Care. National Safety and Quality Health Service Standards. Sydney, ACSQHC, 2012.