

# Medication error reporting not indicative of patient safety

March 23 2015

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Credit: Flickr/Philippa Willitts

A comparative study at two Australian hospitals suggests that hospitals' incident data have significant shortcomings, especially as the basis for monitoring safety over time and between sites.

The study found no relationship between the number of reported medication incidents and the 'actual' rate of prescribing and medication

administration errors observed.

Led by Professor Johanna Westbrook of Macquarie University's Australian Institute of Health Innovation, researchers studied medication errors occurring at two large Sydney teaching hospitals by reviewing [patient records](#) and observing nurses administering drugs to patients to find out how many and what kinds of errors were being made, if staff detected these errors, and then if errors were reported to the hospitals' incident reporting systems. They also assessed how the two hospitals differed in terms of the [medication error](#) rates observed versus the errors actually reported by staff.

"The [hospital](#) with the higher number of incident reports had lower 'actual' [prescribing errors](#) and vice versa. Thus in this instance the higher number of medication incidents reported reflected a lower patient risk," said Professor Westbrook.

"This means using the frequency of medication incident reports of errors to compare patient risk or performance quality within or between hospitals is unreliable. New approaches including data mining of electronic clinical information systems are required to support more effective medication error detection and to provide the data needed to develop safer practices. We also support the notion that encouraging the reporting of incidents is an element in creating a safety culture likely to support improved care."

Many hospitals rely on incident reporting as their key quality and safety measure, despite widespread acknowledgement that many errors go unreported. Medication errors are among the most frequent adverse events in hospitals, as well as the most dangerous.

The researchers reviewed 3291 patient records to identify prescribing errors (e.g. wrong drug, dose or strength) and evidence of their detection

by staff. Errors during the administration of medications to patients were identified from a direct observational study of 180 nurses administering 7451 medications to 1397 patients across the two hospitals. Severity of errors was classified, and those likely to lead to patient harm were categorised as 'clinically important'.

Of the 12,567 prescribing errors identified, 539 or 4.3% were clinically important. There was evidence that staff had detected 21.9% (118) of these clinically important errors, but very few (7, 1.3%) were reported to the hospitals' incident systems. The remaining 78.1% (n=421) failed to be detected, although it is possible that staff detected some of these errors but no information to this effect was recorded in patients' records.

Of the medication administration errors, most (79%) were procedural (e.g. failing to check a patient's identification before administering a drug). One or more clinical errors (e.g. wrong dose) occurred in 27.4% of drug administrations, and in 10.2% the errors were rated as clinically important, with the potential to cause patient harm. None was reported to the incident systems

Around half of all adverse medication events are preventable, thus better identification and reporting of [errors](#) can allow for the design of interventions to more effectively reduce harm to patients.

**More information:** "What are incident reports telling us? A comparative study at two Australian hospitals of medication errors identified at audit, detected by staff and reported to an incident system." *Int J Qual Health Care*. 2015 Feb;27(1):1-9. [DOI: 10.1093/intqhc/mzu098](https://doi.org/10.1093/intqhc/mzu098)

Provided by Macquarie University

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