

Issue 17, July 2016

Suggested Action Items

- Recommend that patient safety committees review the annual analysis report on critical incidents related to medications and IV fluids in Ontario hospitals.

Distributed to:

- Chief executive officers
- Chiefs of staff
- Board chairs
- Quality/patient safety leads
- Directors of pharmacy
- Directors of nursing

Summary of 2015 Critical Incident Reporting Analysis

Advice for Hospitals

- Use analysis results based on reported incidents to learn about vulnerabilities encountered by other hospitals, and ensure your facility has strategies to address the safety gaps identified.
- Consider the contributing factors identified through incident reporting and assess possible safety gaps in your organization.
- Review your institution's processes for independent double checks to ensure they incorporate best practices known to improve safety.
- Examine how time-sensitive (e.g., STAT) medications are ordered and processed and how the urgency of a new order is communicated to the most responsible nurse.
- Contribute to ongoing work in medication safety by advocating for and encouraging the reporting and review of patient safety incidents within your facility and reporting incidents to the National System for Incident Reporting (NSIR).

Ontario hospitals are required to report critical incidents involving medications and intravenous (IV) fluids to the NSIR of the Canadian Institute for Health Information (CIHI). A critical incident is an "unintended event that occurs when a patient receives treatment in the hospital, (a) that results in death, or serious disability, injury or harm, and (b) does not result primarily from the patient's underlying medical condition or from a known risk inherent in providing the treatment".¹

Analysis of such incidents is the cornerstone for understanding vulnerabilities in medication-use processes and for building better and safer healthcare systems. ISMP Canada has reviewed the critical incident reports involving medications and IV fluids submitted by Ontario hospitals between October 2011 and December 2015, and these findings are shared on the [Ontario Critical Incident Learning](http://www.ismp-canada.org/ocil/) webpage (www.ismp-canada.org/ocil/). This bulletin focuses on results presented in the 2015 annual report.

What Have We Learned from 2015 Data?

A total of 17 critical incident reports from Ontario hospitals, with submission dates between January 1 and December 31, 2015, were available in the NSIR for review. These incidents were self reported by Ontario facilities and may not reflect all critical incidents that occurred. Six healthcare facilities worked closely with ISMP Canada to analyze the incidents or review opportunities for system improvements.

Of the 17 incidents, 10 (59%) were associated with **severe harm** and 7 (41%) were reported to have contributed to a patient's **death**.

A total of 21 patient care areas were noted for the 17 incidents, a reminder that medication incidents can happen anywhere. Although harms caused by high-alert medications were predominant, the incidents that occurred in 2015 involved more than 17 medications from 14 different drug classes, which illustrates that incidents can occur with virtually any type of medication. Although opioids continued to be represented most frequently among all of the therapeutic classes, this class did not predominate to the same degree as in the past.



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Identification of factors contributing to a patient safety event is key to uncovering safety gaps in the medication-use process, and the NSIR allows reporters to select one or more contributing factors that played a role in the incident. For the 17 critical incidents reported in 2015, a total of 101 factors were identified as having some influence, and these factors highlight opportunities for added safeguards.

Qualitative study of the 17 critical incidents yielded 4 themes that suggest potential areas of focus for improvement in Ontario:

Potential areas of focus:

(i) Likelihood of recurrence: In the 2015 report, 8 reporters (47%) suggested that there was a possibility of the incident recurring, 6 reporters (35%) thought that the incident was unlikely to recur, and 3 reporters (18%) did not select a response regarding recurrence.

High-reliability industries and organizations adopt a “preoccupation with failure”, an approach characterized by an acceptance that errors can happen any time and a constant drive to improve. The danger in dismissing the likelihood of recurrence may be an increased likelihood of missing the inherent perils of healthcare and becoming complacent in the drive toward better healthcare quality and patient safety.

(ii) Patient engagement: Patients and caregivers play vital roles in medication therapy, even in hospital settings where processes and controls direct medication management. Five of the incident reports mentioned that patients were not engaged in discussions to validate or clarify previous usage of a medication and that this lack of conversation was a factor contributing to harm. In other incidents, the patient received a medication to which there was a documented intolerance. Patients and/or caregivers can be key observers for drug effects, both desired and adverse. ISMP Canada has worked with Patients for Patient Safety Canada, the Canadian Patient Safety Institute, and other stakeholders to develop a campaign highlighting 5 questions to ask about medications. Customized posters are available to Ontario facilities from: www.ismp-canada.org/medrec/5questions.htm

(iii) Failure of independent double check: Four reports, all involving high-alert medications, stated that a double-check process was in place but had failed to identify and resolve an error before it reached the patient. Contributing factors were dependence on technology, complacency, knowledge deficits, and lack of review by a pharmacist before administration. A number of incident narratives highlighted complacency, which can develop in the presence of technology (e.g., “the computer is always correct”) or with familiarity and experience (e.g., “he has worked here a long time ... he knows what he is doing”). The value and importance of high-quality, independent double checks need to be incorporated into the culture of all hospitals.

(iv) Delay in first doses: A delay in administering the first dose was identified as causing harm in 3 of the reported incidents. Identified contributing factors included missed processing of a new order, inaccessibility of medications, queries about how to administer a medication, and ineffective communication of the urgency of a patient’s situation. In one case, an antibiotic order for a patient with sepsis was not noticed for about 10 hours after it was written. Delayed antibiotic administration in sepsis is a known predictor of death.

Conclusion

Aggregate analyses of medication incident reports can generate valuable learning that informs continuous improvements in medication-use systems. Collaborative learning is vital to ensure that vulnerabilities in the medication-use system are identified and addressed to prevent patient harm.

¹ *Hospital Management*, R.R.O. 1990, Reg. 965 [cited 2016 May 13]. Available from: http://www.e-laws.gov.on.ca/html/regs/english/elaws_regs_900965_e.htm#BK1

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