Summary of Key Learnings from Medication-related Critical Incidents

OHA Education Centre

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Ontario Hospital Critical Incidents Related to Medications or IV Fluids Analysis Report

January to December 2015

ismp CANADA

Improving quality in patient safety

Ontario CRITICAL Incident Learning

Issue 17, July 2016

Summary of 2015 Critical Incident Reporting Analysis

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

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 Critical Incident Reporting Program

- Ontario are hospitals required to report critical incidents involving medications and intravenous (IV) fluids to the NSIR of the Canadian Institute for Health Information
- 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

  (b) does not result primarily from the patient's underlying medical condition or from a known risk inherent in providing the treatment"

2015 Analysis

- The cornerstone for understanding vulnerabilities in medication-use processes
- Today focuses on results presented in the 2015 annual report published in 2016
- Data from CIHI but opinions of ISMP Canada

2015 Data

- 17 critical incident reports from Ontario hospitals
- 10 (59%) were associated with **severe harm**
- 7 (41%) contributed to a patient's **death**
- A total of 21 patient care areas were noted for the 17 incidents

Stage of Medication Use System

- In first three years, majority of critical incidents originated in prescribing and administration
- In 2015 administration and preparing/dispensing stages were most commonly cited processes followed by prescribing

17 Medications from 14 Different Drug Classes

- High-alert medications were predominant in causing harm
- Opioids continue to be most frequent among all of the therapeutic classes
- Opioids did not predominate to the same degree as in the past

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

- Likelihood of recurrence & risk mitigation strategies
- Patient engagement
- Failure of independent double check
- Delay in first doses

Likelihood of Recurrence

- 47% of reporters (8) suggested a possibility of the incident recurring
- 6 reporters (35%) thought that the incident was unlikely to recur
- Eleven reports included risk-mitigation strategies

Recommendation: Adopt a "preoccupation with failure"

- Relationship between presumption of recurrence and adoption of higher or lower risk mitigation strategies is interesting/unclear
- High reliability facilities:
  - Adopt "preoccupation with failure"
  - Believe that errors can happen any time
  - Have a constant drive to improve
  - Recognize the inherent perils of healthcare
  - Avoid complacency

Patient Engagement

- Five incident reports indicated that:
  - Patients were not engaged in discussions to validate/ clarify previous usage (MedRec)
  - 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:
  - Standards recommend asking patients about intolerance

Recommendation: Continue to increase patient engagement

- 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

5 QUESTIONS TO ASK ABOUT YOUR MEDICATIONS

when you see your doctor, nurse, or pharmacist.

1. CHANGES?
Have any medications been added, stopped or changed, and why?

2. CONTINUE?
What medications do I need to keep taking, and why?

3. PROPER USE?
How do I take my medications, and for how long?

4. MONITOR?
How will I know if my medication is working, and what side effects do I watch for?

5. FOLLOW-UP?
Do I need any tests and when do I book my next visit?

Keep your medication record up to date.

Remember to include:

- ✔ drug allergies
- ✔ vitamins and minerals
- ✔ herbal/natural products
- ✔ all medications including non-prescription products

Ask your doctor, nurse or pharmacist to review all your medications to see if any can be stopped or reduced.

Visit safemedicationuse.ca for more information.

SafeMedicationUse.ca

Failure Of Independent Double Check

- Four reports, all involving high-alert medications, indicated 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

Institute for Safe Medication Practices Canada
REPORT MEDICATION INCIDENTS
Online: www.ismp-canada.org/err_index.htm
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A KEY PARTNER IN
CMIRPS SCDPIM
Canadian Medication Incident Reporting and Prevention System
Système canadien de déclaration et de prévention des incidents médicamenteux

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Understanding Human Over-reliance on Technology

- *When providing training for automated systems, review the limitations of such systems with trainees. Allow trainees to experience and understand automation failures during training.*
- *Conduct proactive risk assessments and/or staged implementation for new technologies to identify unanticipated vulnerabilities.*

Through the analysis of an incident received from the

3 letters of the medication name ("dil" in this case) and then choosing the desired medication name from a drop-down list. The computer list contained both generic and brand names. The staff member was interrupted while performing the order entry. When this task was resumed, diltiazem 300 mg was selected instead of Dilantin 300 mg.

On the patient care unit, the order for Dilantin was correctly transcribed by hand onto the medication administration record (MAR). The MAR entry was verified against the prescriber's order sheet and was

Recommendations: Review Independent Check Process

Review with staff:

- The value and importance of high-quality, independent double checks
- Reinforce the limitations and challenges with of trusting technology and familiarity with processes or colleagues

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.

Recommendation: Examine How STAT Orders are Processed

- Define policies and procedures surrounding access to and administration of defined time-critical medications
- Review specific needs of each hospital unit
- Ask front-line staff to suggest improvements

Shared Learning will Continue to be Key

- **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.

Advice for Hospitals

1. **Use analysis results** based on reported incidents to learn about vulnerabilities
2. **Consider the contributing factors** to assess possible safety gaps in your organization
3. Review your institution's processes for **independent double checks**

Advice for Hospitals (cont'd)

- **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 reporting and review of patient safety incidents within your facility and **reporting incidents to the National System for Incident Reporting (NSIR).**