Ontario
CRITICAL Incident Learning
Improving quality in patient safety

Issue 4
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Distributed to:

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

Suggested action items:

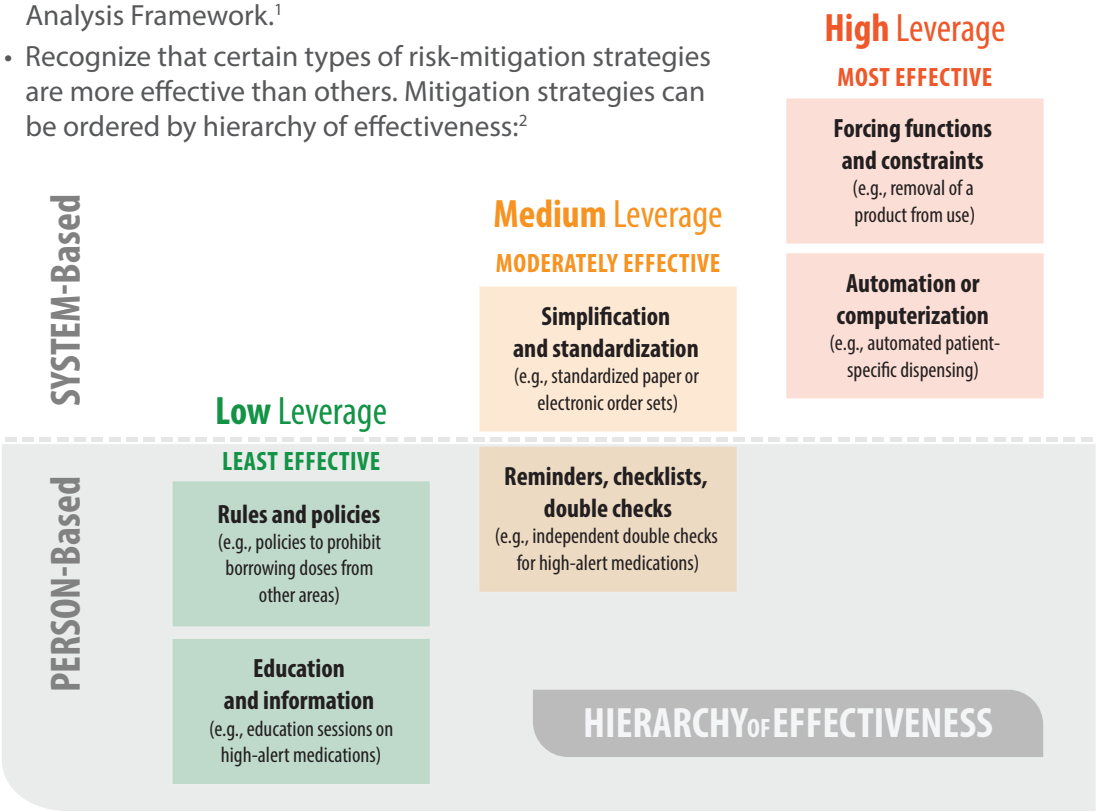
- Circulate bulletin to front-line staff and physicians
- Refer bulletin to quality and safety committees to encourage appraisal of effectiveness of hospital's recommendations and assessment of hospital's quality improvement initiatives
- Use bulletin as an educational resource in your hospital's safety huddles or rounds

Designing Effective Recommendations

The reporting, investigation, and analysis of medication incidents are important elements in improving patient safety, but these efforts must be accompanied by effective strategies to mitigate the contributing factors leading to the incidents.

Advice for Hospitals

- Review patient safety incidents using a systematic, team-oriented approach, as described in the Canadian Incident Analysis Framework.[1]
- Recognize that certain types of risk-mitigation strategies are more effective than others. Mitigation strategies can be ordered by hierarchy of effectiveness:[2]



- System-based recommendations have a higher likelihood of success because they do not rely on individual attention and vigilance.
- Appreciate that a small number of higher-leverage, more effective recommendations addressing the contributing factors determined from the incident analysis will be more likely to improve patient safety than a larger number of less effective strategies.
- Ensure that recommendations are specific, measurable, attainable, realistic, and timely (SMART).[3]
- Continuously monitor and assess the effectiveness of any recommendations arising from incident analyses.
- Provide feedback to staff about quality and safety improvement initiatives and achievements.

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Background

A hospitalized patient received a fatal overdose of an opioid prepared from a high-concentration product. The facility conducted a full internal review of the incident and developed a series of strategies that were expected to reduce the likelihood of recurrence of this error, as well as to enhance the safety of other aspects of care within the facility. The recommendations included providing staff education, changing medication policies, reducing availability of the particular product, improving the labelling and delivery of all high-concentration products, and reinforcing independent double-check practices. Despite these measures, the facility has since experienced one near-miss incident and one harmful overdose of the same product.

Learning from Analysis

Further analysis revealed that availability of the high-concentration product played a significant role in both of the subsequent errors, despite the institution's intent to develop and implement strategies specifically designed to address the identified contributing factors. For example, in areas where the product was still available, unused containers for discharged patients were being stored in drug carts until the next audit and collection opportunity. Doses of the high-concentration product were being borrowed for use in other areas of the facility, which led to opportunities for error. These actions reflected a desire for economy and efficiency on the part of staff members and were not performed out of carelessness or any intent to cause harm.

These findings emphasized that vulnerabilities in medication-use systems must be addressed with the most effective strategies that are reasonable and/or feasible to implement, given the particular circumstances. In this case, the facility ultimately opted to implement a *daily* audit of high-concentration opioids to ensure removal of items no longer required for admitted patients, effectively creating a high-leverage forcing function and constraint (i.e., the product would not be available for borrowing).

Organizations often respond to errors with policy and rule changes, but research and experience have clearly shown that such recommendations, implemented in isolation, are unlikely to provide any meaningful benefit to patient safety over the long term and that higher-leverage strategies are required. Hospital leaders are encouraged to analyze all recommendations proposed after review of a critical incident and to consider how effective they will be in preventing a future incident or mitigating harm from any incidents that do occur.

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We gratefully acknowledge the review of this bulletin by the facility where the incident described took place.

[1] Incident Analysis Collaborating Parties. Canadian Incident Analysis Framework. Edmonton (AB): Canadian Patient Safety Institute; 2012. Incident Analysis Collaborating Parties are Canadian Patient Safety Institute (CPSI), Institute for Safe Medication Practices Canada, Saskatchewan Health, Patients for Patient Safety Canada (a patient-led program of CPSI), Paula Beard, Carolyn E. Hoffman, and Micheline Ste-Marie. Available from: http://www.patientsafetyinstitute.ca/English/toolsResources/IncidentAnalysis/Documents/Canadian%20Incident%20Analysis%20Framework.PDF

[2] Institute for Safe Medication Practices (ISMP). Medication error prevention "toolbox". ISMP Med Saf Alert. 1999 Jun; 4(11): 1-2.

[3] Doran GT. There's a S.M.A.R.T. way to write management objectives. Manag Rev. 1981;71(11,AMA Forum):35-36.

Collaborating parties of the Ontario Critical Incident Reporting program

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