The Institute for Safe Medication Practices Canada (ISMP Canada) is an independent national not-for-profit agency established for the collection and analysis of medication error reports and the development of recommendations for the enhancement of patient safety.

The Healthcare Insurance Reciprocal of Canada (HIROC) is a member owned expert provider of professional and general liability coverage and risk management support.

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Updated Operating Room Standards Include Strategies to Prevent Inadvertent Injection of Epinephrine Intended for Topical Use

Information published by the Institute for Safe Medication Practices Canada (ISMP Canada), and others has highlighted substitution errors involving the inadvertent injection of concentrated epinephrine (1 mg/mL) intended for topical application during elective outpatient ear, nose, and throat procedures.[1-7] In a collaborative effort to enhance the safety of epinephrine use, the Operating Room Nurses Association of Canada (ORNAC) worked with ISMP Canada to incorporate incident learning into its 2011 *Standards, Guidelines and Position Statements for Perioperative Registered Nursing Practice* (http://www.ornac.ca/standards/).

The purpose of this bulletin is to raise awareness of the following important *additions* to the practice standards for Canadian perioperative nurses:

> *2.11.13 When using medication intended for topical use, such as concentrated epinephrine, place medication in a solution bowl not parenteral syringe.*
>
> *2.11.14 When using medication intended for injection by the surgeon, the medication is drawn up into a syringe directly from the vial not from an open solution bowl.*

A failure mode and effects analysis (FMEA) confirmed the importance of these additions to the standards (refer to the sidebar on page 2 of this bulletin for additional information).

ORNAC has taken a leading role on this issue and has set an example among national and international standard-setting organizations.

ISMP Canada continues to work with manufacturers and other stakeholders to influence improvements to the packaging for sterile products intended for topical use.

Acknowledgements:

Reporting is the first step in enhancing medication safety. Sincere appreciation is extended to the healthcare professionals who have reported information related to epinephrine intended for topical use, for their initiative, efforts, and demonstrated support for a culture of safety, exemplified by their willingness to share information about medication incidents and related findings.

Please refer to page 3 for references.

Medication Reconciliation Update

ISMP Canada is co-leading, with CPSI, the National Medication Reconciliation Strategy and is pleased to support the **Canada Health Infoway *ImagineNation Outcomes* Challenge**.

Canada Health Infoway seeks to accelerate the use and spread of innovative solutions in healthcare information and communication technologies. They have selected four key areas with the potential to improve health care quality and the patient experience in Canada.

1. e-Scheduling
2. Patient access to health information
3. Medication reconciliation
4. Clinical synoptic reporting

Up to $1 million in awards are being offered through this team-based Challenge to demonstrate the use and growth of e-solutions. ISMP Canada is a supporting organization for the ImagineNation Outcomes Challenge, providing expertise related to medication reconciliation.

More information is available from: http://www.imaginenationchallenge.ca/

Collaborative Failure Mode and Effects Analysis (FMEA): Reducing the Risk of Inadvertent Injection of Concentrated Epinephrine Intended for Topical Use

Given the high risk of harm or death associated with the inadvertent injection of epinephrine 1 mg/mL, further study of the management of this medication was deemed necessary. An Ontario hospital volunteered to assist ISMP Canada with a prospective analysis of processes related to the use of concentrated epinephrine intended for topical use in the operating room. The hospital had already implemented enhancements to its operating room processes to reduce the potential for error and welcomed the opportunity for ISMP Canada to assess these enhancements and to share learning with others upon completion of the FMEA.

ISMP Canada gratefully acknowledges the Ontario hospital and team members who participated in this analysis, as well as the Ontario Ministry of Health and Long-Term Care, which provided funding support for the FMEA project.

Canadian facilities that would like to receive a copy of the final report should send a request by email to info@ismp-canada.org, or call 416-733-3131 or toll-free at 1-866-544-7672.

Narcotic (Opioid) Medication Safety: Manufacturer Enhances Safety by Changing Vial Closures for Injectables

Sandoz Canada Inc. and ISMP Canada received reports of concerns about "tip-off" closures that were in use for a variety of injectable opioid medications manufactured by this company (see Figure 1). Reporters found that a "tip-off" closure could be replaced onto a vial after it had been opened, with little or no evidence of tampering. As such, the medication could be withdrawn and replaced with another substance, such as normal saline.

Medication incidents occurred in the hospital setting in which patients had insufficient treatment of their pain. Incidents with oversedation also occurred when a higher opioid dose was prescribed on the assumption that the previous dose had been ineffective.

ISMP Canada worked in consultation with Health*PRO* Procurement Services (an organization that also advised ISMP Canada of reports of product problems) and provided information to Sandoz Canada Inc. After careful analysis of the situation, the manufacturer decided to change the packaging for all injectable opioid medications that were available in a vial with a "tip-off" closure to the more commonly used closure (see Figure 2). Closures have now been changed for all of the opioid products manufactured by Sandoz Canada Inc. that are currently on the Canadian market.

ISMP Canada thanks the reporters and Health*PRO* for sharing information related to these incidents, and thanks Sandoz Canada Inc. for implementing this change to improve patient safety.

Figure 1: Example of a vial containing an opioid medication with a "tip-off" closure.

Photo courtesy of Sandoz Canada Inc.

Figure 2: Example of modified closure for opioid product.

Photo courtesy of Sandoz Canada Inc.

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ISMP Canada is a national voluntary medication incident and 'near miss' reporting program founded for the purpose of sharing the learning experiences from medication errors. Implementation of preventative strategies and system safeguards to decrease the risk for error-induced injury and thereby promote medication safety in healthcare is our collaborative goal.

Medication Incidents (including near misses) can be reported to ISMP Canada:

(i) through the website: http://www.ismp-canada.org/err_report.htm or (ii) by phone: 416-733-3131 or toll free: 1-866-544-7672.

ISMP Canada can also be contacted by e-mail: cmirps@ismp-canada.org. ISMP Canada guarantees confidentiality and security of information received, and respects the wishes of the reporter as to the level of detail to be included in publications.

A Key Partner in the Canadian Medication Incident Reporting and Prevention System