

Issue 8
April 2014

Distributed to:

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

Suggested action items:

- Refer bulletin to pharmacy and therapeutics committee with a recommendation to examine pain order sets used in the emergency department
- Refer bulletin to nursing leadership committees
- Refer bulletin to chief of staff and physician leaders for review of safe prescribing practices
- Circulate bulletin to physicians and other front-line staff
- Use bulletin as an educational resource in your hospital's safety huddles or rounds



**Institute for Safe
Medication Practices
Canada**

www.ismp-canada.org
1-866-544-7672
info@ismp-canada.org

Safe Pain Control in the Emergency Department

The emergency department of any hospital is an area where healthcare practitioners are often called upon to make quick decisions with incomplete information. As a result, emergency departments are frequently the location of medication incidents.¹ Controlling pain early in the presentation of a patient's illness or soon after an injury is an important duty of healthcare practitioners. The activity, the urgency, and the unknowns in emergency care may create situations in which medication incidents can happen. ISMP Canada has received numerous reports from practitioners illustrating the pitfalls of controlling pain in the emergency department. The contributing factors identified in these incidents have included knowledge deficits related to opioids, high initial doses or too frequent administration of these drugs, and problems with monitoring and assessing patients.

Call to Action for Hospitals

Make medication safety a strategic priority:

- Develop and sustain comprehensive pain management systems and protocols.
- Ensure that medication-use policies reflect safe dosage regimens.
- Commit to robust medication reconciliation in the emergency department to proactively identify potential medication safety issues.
- Ensure that prescribers and staff members are aware of high-alert medications used in acute pain management, for which heightened vigilance is required.
- Be aware of the pharmacological properties of medications and how they influence medication administration schedules.

Make system-based changes to support the safe use of opioids:

- Create comprehensive pain management order sets for the emergency department that employ safe dosage parameters.
- Prohibit the use of medication orders without dose or frequency limits.
- Develop protocols for opioid use that include guidelines for:
 - suggested quantity and frequency of administration
 - monitoring of patients who are taking opioids for signs of overdose
 - rescue of patients exhibiting signs of overdose
- Ensure that relevant information about opioids (e.g., dosage, onset and duration of therapy, adverse effects, toxicity reversal) is available at points of care.

Sustain high-quality practice:

- To support safe opioid practices over the long term, use resources such as the ISMP Canada HYDROMORPHONE Safety Self-Assessment (available from: <https://mssa.ismp-canada.org/hydromorphone-ssa>) and the Canadian Association of Paediatric Health Centres' Paediatric Opioid Safety Resource Kit (available from: <http://ken.caphc.org/xwiki/bin/view/PaediatricOpioidSafetyResourceKit/WebHome>).

Case Summary

A patient who presented to a hospital emergency department with flank pain received 5 mg of intravenous (IV) morphine followed by an anti-nausea medication for symptom control. Fourteen minutes later, 2 mg HYDROMORPHONE IV was ordered and administered for the patient. Shortly thereafter, a family member noted that the patient was unresponsive and not breathing. A “code blue” was called, and resuscitative efforts were undertaken. The opioid antidote naloxone was required to counteract the overdose. The patient continued to have pain after the episode, and a smaller amount of HYDROMORPHONE was given. Unfortunately, the patient again experienced significant sedation and a second rescue dose of naloxone was required.

ISMP Canada is aware of other incidents in the emergency department that have involved patients receiving the wrong drug, initial doses of opioid that were too high, and opioids ordered without frequency limits.

Learning from Analysis

The hospital’s review of the incident showed that the use of more than one opioid medication, along with a potentiating anti-nausea drug, notably increased the risk of harm. The use of more than one opioid may have resulted from a knowledge deficit on the part of the prescriber, exacerbated by the lack of a standardized pain management protocol in the emergency department. In response, the organization committed to developing a pain management order set for patients presenting to the emergency department and to ensuring that reference and clinical resources would be readily available in the department for use by prescribers. The hospital also developed an educational program for nursing staff and implemented a policy to enhance the monitoring of all patients receiving IV opioids.

Conclusion

Safe prescribing practices, including thorough assessment and vigilant monitoring of patients receiving pain control in the emergency department, are crucial. Opioid-naïve patients and patients with undefined and evolving clinical problems present a complex set of challenges in symptom control for the care team, and special attention is required to ensure that safe practices are not compromised. Systems-based solutions, such as pain management order sets with prudent medication dose and frequency parameters, coupled with appropriate monitoring and assessment of vital signs, can be combined with rescue protocols to reduce the risk of harm related to pain management in this setting.

Individual practitioners and administrators in Ontario healthcare facilities are encouraged to closely examine local pain control practices to identify vulnerabilities and make process changes that will promote safe and effective care within their organizations.

¹ Croskerry P, Shapiro M, Campbell S, LeBlanc C, Sinclair D, Wren P, et al. Profiles in patient safety: medication errors in the emergency department. *Acad Emerg Med.* 2004;11:289-299.

Content reviewed by:

Debbie Barnard, MSc, CPHQ, Chief,
Quality and Patient Safety Officer,
Health Sciences North

Bert Lauwers, MD, FCFP, CCPE,
Vice President Medical and Chief
of Staff, Ross Memorial Hospital

Sandra Knowles, BScPhm, Drug
Policy Research Specialist, Ontario
Drug Policy Research Network

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

© 2014 ISMP Canada. Funding for this communication is provided by the Ontario Ministry of Health and Long-Term Care. Although the analyses described in this bulletin were based on data provided by the Canadian Institute for Health Information, the opinions expressed are those of ISMP Canada only. Source data from the National System for Incident Reporting, Canadian Institute for Health Information [4 March 2014].

Collaborating parties of the Ontario Critical Incident Reporting program

