Opioid Stewardship in Critical Care

Dynamics 2020

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Learning Objectives

• Understand the impact and complexity of the Opioid Crisis in Canada
• Define Opioid Stewardship and the major components of this strategy to help address the crisis
• Learn about resources available to advance opioid stewardship
• Describe a change in recommended opioid prescribing practices
• Describe emerging advice in the use of opioids in critical care
• Describe the impact of the COVID-19 pandemic on the number of opioid-related deaths and possible reasons why
ISMP Canada is an independent not-for-profit organization dedicated to reducing preventable harm from medications.

Our Vision: Zero preventable harm from medications.

Our Mission: To identify risks in medication use systems, recommend optimal system safeguards, and advocate for safe medication practices.
Canadian Medication Incident Reporting and Prevention System (CMIRPS)

ISMP Canada, a key partner in the CMIRPS program together with Health Canada, Canadian Institute for Health Information, Canadian Patient Safety Institute, and Patients for Patient Safety Canada

ISMP Canada receives funding from Health Canada to support our role in CMIRPS
We encourage you to report medication incidents

**Practitioner Reporting**

www.ismp-canada.org/err_report.htm

**Consumer Reporting**

www.safemedicationuse.ca/
How did we get from here... To here?
Opioid Crisis in Canada

What is the opioid crisis?
The opioid crisis is a complex public health issue. There are many factors that led us to the significant increase in opioid-related overdoses today. Some of these factors include:

• high rates of opioid prescribing
• the emergence of strong synthetic opioids in the illegal drug supply – such as fentanyl and carfentanil

Health Canada:
In 2018, almost 1 in 8 people in Canada were prescribed opioids.

Canadian Institute for Health Information.  
Opioid Crisis in Canada

Between January 2016 and March 2020, **20,523** opioid-related poisoning hospitalizations occurred in Canada (excluding Quebec).

In 2020, between January and March, there were **1,067** hospitalizations due to opioid-related poisoning, of which **64%** were accidental (unintentional).

**16,364** apparent opioid-related deaths occurred between January 2016 and March 2020.

In 2020, between January and March, **1,018** deaths occurred, of which **96%** were accidental (unintentional).

Opioid Crisis in Canada

A complex crisis...

Pain
- Legal / Illegal drugs
- Prescribing practices
- Pharmaceutical industry
- Interprofessional collaboration
- Diversion of opioids in healthcare settings

Health
- Housing/education
- Cultural safety
- Equity
- Opioid-related stigma
- Public health infrastructure

Mental Health
- Mental health supports
- Substance use disorder
- Community health supports
One strategy... Opioid Stewardship
Opioid Stewardship may be described as coordinated interventions designed to improve, monitor, and evaluate the use of opioids in order to support and protect human health.

https://www.ismp-canada.org/opioid_stewardship/
Opioid Stewardship

Opioid medications are used to treat pain. Opioids are also known as narcotics. In recent years more and more Canadians are using opioids, and research indicates that we are now the world’s second largest consumer of opioids. Along with this increased use of opioids there has also been a corresponding and alarming increase in the harm from opioids.

Through our ongoing analysis of medication safety incidents, we have found that opioids are frequently associated with harmful consequences—including death—when they are prescribed, used or administered incorrectly or in error.

Opioid Stewardship may be described as coordinated interventions designed to improve, monitor, and evaluate the use of opioids in order to support and protect human health. This web page has been developed to help the public and health care practitioners become better informed about opioids and to help reduce and prevent harm.

https://www.ismp-canada.org/opioid_stewardship/
Opioids for pain after surgery: Your questions answered

1. Changes?
You have been prescribed an opioid. Opioids reduce pain but will not take away all your pain. Ask your prescriber about other methods of reducing pain including using ice, stretching, physiotherapy, or non-opioid drugs like acetaminophen or ibuprofen. Know your pain control plan and work closely with your prescriber if your pain does not improve.

2. Continue?
Opioids are usually required for less than 1 week after surgery. As you continue to recover from your surgery, your pain should get better day by day. As you get better, you will need less opioids. Consult your healthcare provider about how and when to reduce your dose.

3. Proper Use?
Use the lowest possible dose for the shortest possible time. Overdose and addiction can occur with opioids. Avoid alcohol and sleeping pills (e.g., benzodiazepines like tenaxapam) while taking opioids. Do not drive while taking opioids.

4. Monitor?
Side effects include sedation, constipation, nausea and dizziness. Contact your healthcare provider if you have severe dizziness or inability to stay awake.

5. Follow-Up?
Ask your prescriber when your pain should get better. If your pain is not improving as expected, talk to your healthcare provider.

It is important to:
- Never share your opioid medication with anyone else.
- Store your opioid medication in a secure place out of reach and out of sight of children, teens and pets.
- Ask about other options available to treat pain.
- Take unused medications back to a pharmacy for safe disposal.
- Talk with your pharmacist if you have questions. For locations that accept returns, call 1-844-335-4689 or healthservice.ca

Did you know?
About 16 Canadians are hospitalized each day with opioid poisoning.
- Canadian Institute for Health Information, 2017

Examples of opioids used for pain after surgery:
- hydromorphone
- morphine
- codeine
- oxycodone
- tramadol

Notes:

https://www.ismp-canada.org/opioid_stewardship/
Opioid-Related Deaths Associated with Medication Incidents

Findings of a Multi-Incident Analysis

November 2014

Prepared by:
ISMP Canada

Figure 1: Main themes and subthemes from a multi-incident analysis of deaths involving one or more opioids

https://www.ismp-canada.org/opioid_stewardship/
Paediatric Opioid Safety Resource Kit

Last modified by Support on 2012/03/01 11:09

Results 1 - 7 out of 7 per page of 10

Page | Date       | Last Author
---   |------------|-------------
About Us | 2012/03/01 11:09 | Support

https://www.ismp-canada.org/opioid_stewardship/
Safe Storage & Disposal

PREVENT MEDICATION ACCIDENTS

1. Store medications out of sight and reach of:
   - Children and teens
   - Visitors
   - Pets

2. Place unused medications in a bag and bring to a pharmacy.

3. For locations that accept returns:
   - 1-844-535-8889
   - healthsteward.ca

Ask a healthcare provider if you have questions.


https://www.ismp-canada.org/opioid_stewardship/
Diversion

- Diversion of controlled medications from hospitals is increasing
  - From 2015 – 2019, hospital pharmacies in Canada reported more than 3000 incidents of lost or stolen controlled substances, mostly opioids (the majority are unexplained cause of loss)
  - A provincial survey (2015) of 4,000 RNs found that 3% of respondents self-identified as having a substance use disorder
  - A systematic approach, including advancing a just and trusting safety culture needed to address diversion
The 2017 Canadian Guideline for Opioids for **Chronic Non-Cancer Pain** provided 10 recommendations for the safe prescribing of opioids.

Recommendations include:

- Beginning with non-opioid pharmacotherapy, such as nonsteroidal anti-inflammatory drugs (NSAIDs), and non-pharmacological therapy

- If pain persists after these therapies have been optimized, recommendations are made to prescribe opioids with short durations of use and a maximum dose.

- Steps to safely tapering patients who have been using long-term opioid therapy from high doses.

[https://nationalpaincentre.mcmaster.ca/documents/Opioid%20GL%20for%20CMAJ_01may2017.pdf](https://nationalpaincentre.mcmaster.ca/documents/Opioid%20GL%20for%20CMAJ_01may2017.pdf)
Navigating Opioids for Chronic Pain

Sometimes the best of intentions lead to devastating consequences. Canada and the U.S. are the two highest consumers of prescription opioids even though we don’t have the highest rates of chronic pain. Since there are many different opioids used for the same purpose, we use morphine equivalence to compare how strong they are.

As the number of morphine milligram equivalents per day (MMED) increases, the harms associated with opioid therapy also increase.

- 60-90 MMED: +
  - Codeine 300mg
  - Tylenol 3
  - MS Contin 30mg

- 180-230 MMED: +
  - Percocet
  - Hydromorphone 8mg
  - Hydromorphone SR 40mg

- >290 MMED: +
  - OxyContin 40mg
  - Fentanyl 50mcg Patch
  - Hydromorphone 8mg

People on higher doses tend to have higher rates of complications like sleep apnea, gastrointestinal distress, and need for medications to manage side effects. Most chronic pain can be managed well below 200 MMED.

There is no safe dose of opioids—harmful and unpredictable things happen at all levels. Guidelines recommend that prescribing above 90 MMED be avoided.

There is up to a 5x increase in overdose risk in this range as compared to lower doses. Overdoses that happen at this level are more likely to be fatal.

There is up to a 10x increase in overdose risk in this range as compared to lower doses. Overdoses that happen at this level are more likely to be fatal.

Produced by

University of Toronto
Faculty of Medicine
Opioid Stewardship
Safe Opioid Prescribing

How are prescribing patterns changing?

From 2016 to 2017, the total quantity of opioids dispensed in Canada declined by more than 10% and the number of prescriptions for opioids declined by over 400,000 — the first decline in prescriptions since 2012.

How many people are starting opioids?

Fewer people are starting new prescribed opioid therapy*

9.5% in 2013
8.1% in 2018

Note
* Reflects people who filled prescriptions at community pharmacies in Ontario, Saskatchewan and British Columbia.

The proportion of the study population starting opioids decreased from 9.5% in 2013 to 8.1% in 2018. This represents a 9.6% decrease in the number of people who started on opioids during the study period. Consistent decreases in the proportion of people starting opioids were observed in all study provinces (Figure 2).

How are prescribing patterns changing?

In 2018, 1 out of 4 people had a previous non-opioid prescription for pain relief prior to starting opioid therapy.

**Note**
*Reflects people who filled prescriptions at community pharmacies in Manitoba, Saskatchewan and British Columbia. This excludes Ontario because the Narcotics Monitoring System data does not include all non-opioid pain medications.*

Opioid-related deaths – key changes

Understanding the Implications of a Shifting Opioid Landscape in Ontar (longwoods.com)
Although opioid stewardship in the setting of chronic pain is of paramount importance in curbing the ongoing epidemic, long-term prescription opioid use often begins with treatment of acute pain.

✓ Progression from acute to chronic pain is well-documented in surgical and trauma patients

✓ Appropriate analgesia in the perioperative period has been shown to decrease the progression to chronic pain states

✓ Approximately 50% of patients report moderate to severe pain during their ICU stay on surveys given after ICU discharge.

✓ In another study, more than one-third of ICU patients required no opioids during their ICU stay.


Opioids play a key role in treating acute, severe pain states

Non-steroidal anti-inflammatory drugs (NSAIDs), acetaminophen, and ketamine as primary therapy or adjuncts (concerns with complications in some patients)

✓ Gabapentin, pregabalin, or carbamazepine for neuropathic pain (multimodal regimen)

✓ Standardized pain management protocols and real-time decision supports are key – consider non-pharmacological interventions such as massage/touch, relaxation/distraction, music therapy, cold, etc.

✓ Specific strategies for pain control in the critical care setting emerging but limited evidence base at this time

Opioids used as a weaning strategy may lead to increased prescribing at hospital discharge and possible chronic opioid use.

With prolonged opioid use in the ICU, consider possible iatrogenic opioid withdrawal.

Opioids In-hospital

- No multiple range orders
  *Avoid: Hydromorphone 1-2mg IV/SQ q1-2 hours prn*

- No multiple opioid orders (unless clinically required)
  *Avoid: Hydromorphone 1-2mg PO q4hrs prn and morphine PO 2.5-5mg q4hrs prn*

- Fentanyl patch (other topicals too) requires some other type of PO opioid for breakthrough

- No multiple routes of the same drug/dose
  *Avoid: Hydromorphone 1-2mg IV/SQ/PO q1-2 hours prn*

- Develop standardized pain management protocols and real-time decision supports are key
An average of 34 deaths per week occurred in Ontario during the 3.5 months before the pandemic.

This increased to 46 deaths weekly in the first 3.5 months of the pandemic, a 38% increase.

If current trends continue, 2,271 opioid-related deaths are expected in 2020, compared to 1,512 in 2019.

The vast majority of these deaths continue to be accidental.
Ontario Opioid-Related Deaths During COVID-19

Drugs Involved

Compared to before the pandemic:

**Fentanyl**
- was more commonly a direct contributor to opioid-related deaths
- This may be due to:
  - Increased reliance on Unregulated drug supplies
  - Decreased access to prescription opioids

**Etizolam**
- was more commonly detected in a post-mortem toxicology

**Cocaine**
- directly contributed to significantly more opioid-related deaths

**Alone**
- In 3/4 of opioid-related deaths during the pandemic, no one was present to intervene

Delivery of Opioid Agonist Treatment during a Pandemic

The provision of uninterrupted opioid agonist treatment (OAT) is an important patient care service that pharmacies offer to treat opioid use disorder. OAT, particularly when provided as directly observed therapy, is challenging during the COVID-19 pandemic because of the need for physical distancing and because patients may be quarantined or self-isolating. To support continuity of care to patients during this time, Health Canada has issued temporary regulatory exemptions for providing OAT to allow pharmacists to order OAT verbally and pharmacies to extend, renew, or transfer OAT prescriptions. Regular delivery was overlooked one day because of a particularly high volume of deliveries (attributable to the pandemic). As a result, the patient missed that day's dose.

BACKGROUND

Medications used for OAT include buprenorphine-naloxone, methadone, and extended-release morphine, all of which are taken once daily. Directly observed therapy is typically reserved for patients who are in the stabilization or early maintenance phases of their treatment.
Questions / Discussion

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