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INSTRUCTIONS

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CE FACULTY

CE Coordinator:
Rosalind Stefanac

Clinical Editor:
Lu-Ann Murdoch, BScPhm

Author:
Ron Pohar, BScPharm, APA

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Management of Opioid Use Disorder:

The Role of the Pharmacy Technician

by Ron Pohar, BScPharm, APA

Learning objectives

After completing this lesson, the pharmacy technician participant will be able to:

1. Explain the impact of opioid use in Canada.
2. Define opioid use disorder.
3. Describe current guidelines for the management of opioid use disorder.
4. Identify the role of the pharmacy technician in the management of opioid use disorder.

Introduction

The pharmacologic class of opioids includes drugs that are derived or synthesized from opium, such as morphine, codeine, oxycodone, fentanyl, hydromorphone and heroin.[1] While prescription opioids have legitimate uses in the treatment of cancer and non-cancer pain, and some other indications, concerns remain due to the potential for abuse, misuse, addiction, overdose, and diversion due to their euphoric effects.[1,2] Escalating rates of opioid use in Canada over the past decade are a growing concern, with opioid misuse and abuse reaching levels which have

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been deemed a public health crisis. Rates of opioid-related harm continue to rise.[3] On average, 16 hospitalizations occur each day in Canada due to opioid-related poisonings; this rate has increased by about 53% in the past 10 years, with much of the increase occurring in the past three years.[4] Furthermore, data from Alberta show a 10-fold increase over the past five years in the number of emergency department visits due to heroin poisonings and synthetic opioid poisonings (including fentanyl), while the data provided by Ontario show a four-fold increase for heroin poisonings and a doubling for synthetic opioid poisonings. In 2016, approximately 2,800 deaths were attributed to opioids in Canada and in 2017, this number exceeded 3,000.[4]

Substance abuse was once regarded as a problem that only affected certain segments of society, but the current opioid crisis has shown that it is far-reaching, transcending age, gender and socioeconomic status.[4] Pharmacy technicians should be familiar with opioid use disorder and its management so that they can contribute to and support pharmacists in their role in addressing this crisis as a part of the healthcare team.

Opioid Use Disorder

The DSM-5 (Diagnostic and Statistical Manual of Mental Disorders, 5th edition) sets out criteria for the diagnosis of opioid use disorder. Importantly, no distinction is made between substance abuse and substance dependence in the DSM-5.[5,6] These terms are no longer used in the DSM-5 and have been replaced with the term "opioid use disorder."[5,6] According to the DSM-5, opioid use disorder is defined as a problematic pattern of opioid use leading to clinically significant impairment or distress, as manifested by at least two of the following, occurring within a 12-month period:

1. Opioids are often taken in larger amounts or over a longer period than was intended.
2. A persistent desire or unsuccessful efforts to cut down or control opioid use.
3. A great deal of time is spent in activities necessary to obtain the opioid, use the opioid or recover from its effects.
4. Craving, or a strong desire or urge to use opioids.
5. Recurrent opioid use resulting in a failure to fulfill major role obligations at work, school or home.
6. Continued opioid use despite having persistent or recurrent social or interpersonal problems caused or exacerbated by the effects of opioids.
7. Important social, occupational or recreational activities are given up or reduced because of opioid use.
8. Recurrent opioid use in situations in which it is physically hazardous.
9. Continued opioid use despite knowledge of having a persistent or recurrent physical or psychological problem that is likely to have been caused or exacerbated by the substance.
10. Tolerance, as defined by either of the following:
    a. A need for markedly increased amounts of opioids to achieve intoxication or desired effect.
    b. A markedly diminished effect with continued use of the same amount of an opioid.
    Note: This criterion is not considered to be met for those taking opioids solely under appropriate medical supervision.
11. Withdrawal, as manifested by either of the following:
    a. The characteristic opioid withdrawal syndrome (refer to Criteria A and B of the criteria set for opioid withdrawal).
    b. Opioids (or a closely related substance) are taken to relieve or avoid withdrawal symptoms."[6]

Management of Opioid Use Disorder

Opioid use disorder is best understood and managed as a chronic relapsing illness that is associated with significant morbidity and mortality.[7] However, remission is achievable with appropriate management. Recently, the British Columbia Ministry of Health[7] and the Canadian Institute of Health Research (CIHR) Canadian Research Initiative in Substance Misuse both issued guidelines on the management of opioid use disorder.[8] They emphasize that withdrawal management alone (also referred to as detox or detoxification) is not an effective treatment for opioid use disorder and is associated with high rates of relapse, morbidity and mortality.[7,8] The use of opioid agonists in the initial management of withdrawal symptoms (with buprenorphine/naloxone as the first-line choice and methadone as an alternative in most patients), followed by ongoing opioid agonist maintenance treatment to prevent relapse in the longer term, is recommended.[7,8] Further, the guidelines stress the importance of opioid agonists as only one component of a larger program that includes counselling, monitoring of substance use over the long term, management of comorbidities, care from specialists and psychosocial treatment.[7] However, psychosocial treatment intervention and support is not considered a mandatory requirement for gaining access to opioid agonist treatment.[8]

Opioid Agonist Maintenance

Maintenance treatment with opioid agonists has been shown to improve daily functioning, health, interpersonal relationships and the ability to work, and to minimize the risks associated with ongoing drug use such as exposure to contaminated needles, HIV or hepatitis C infection.[7] Furthermore, maintenance with opioid agonists decreases the cravings for other opioids and reduces the "reward" (euphoric effects) associated with their use. The combination product of buprenorphine/naloxone and methadone are the key opioid agonists used in Canada.[7]

Buprenorphine/naloxone

Buprenorphine is derived from thebaine, which is a morphine alkaloid found in the opium poppy.[9] Buprenorphine is a partial opioid agonist and binds to the mu opioid receptor with high affinity, thereby reducing cravings for opioids.[9] Buprenorphine can block the effects of and reduce the response to other opioid drugs when administered concurrently.[9] However, there is potential for misuse of buprenorphine when it is administered alone, so it is combined with low doses of naloxone (a short-acting opioid antagonist) in a sublingual tablet format. The dose of naloxone in this combination product is relatively low and oral absorption is poor, so it does not precipitate opioid withdrawal symptoms when administered sublingually.[9] Buprenorphine/naloxone is available as 2 mg/0.5 mg, 8 mg/2 mg, 12 mg/3 mg and 16 mg/4 mg sublingual tablets, which can be combined to reach the patient's target dose. Buprenorphine/naloxone is dispensed on a daily basis until the patient is clinically stable and can safely store take-home

doses.[7] The recommended starting dose is 8 mg buprenorphine/naloxone on the first day, divided and titrated to meet the patient's individual requirements.[7] The suggested total dose target for treatment on the first day is within the range of 8 mg and 12 mg of buprenorphine.[7] After induction and dosage stabilization, it may be possible to decrease the frequency of buprenorphine/naloxone dosing to every other day, at a higher dosage.[7] The usual maintenance dose is 12 mg to 16 mg per day of buprenorphine.[7]

Witnessed ingestion of the first dose of buprenorphine/naloxone is recommended to ensure that the patient is able to take the tablet appropriately and understands that it must fully dissolve sublingually, which can take up to 10 minutes.[7] The patient should not swallow, talk, eat, drink or smoke while the tablet is dissolving. Relative to methadone, the combination of buprenorphine/naloxone has some advantages in that is has less risk of overdose since it is a partial agonist and the combination with naloxone reduces the risk of diversion.[7,8] Take-home doses are safer with buprenorphine/naloxone.[8] Furthermore, alternate-day dosing schedules (either as daily witnessed or take-home doses) are possible.[7,8] As well, the time required to reach the therapeutic dose with buprenorphine/naloxone is shorter than methadone and it has a lower risk of toxicity and drug–drug interactions.[8] When discontinuing treatment, buprenorphine/naloxone has milder withdrawal symptoms than methadone.[8]

Methadone

Methadone is a synthetic opioid and an agonist of the mu opioid receptor; when taken orally, it is absorbed slowly and has a long elimination half-life that permits once-daily dosing.[9] Methadone therapy reduces the use of other opioids, such as heroin or fentanyl, through cross-tolerance. This reduces symptoms of withdrawal, as well as the desire to use other opioids. In addition, if other opioid drugs are used in the presence of methadone, their euphoric effects are reduced by the presence of methadone at the opioid receptor. Methadone is taken orally on a daily basis.[9]

Methadone has a narrow therapeutic index, meaning that small differences in dose can result in serious therapeutic failures or adverse drug reactions. As such, there is a potential for toxicity and overdose, particularly during the early stages of treatment with methadone while the dose is being titrated.[7] Witnessed daily dosing is generally a requirement when initiating and stabilizing patients on methadone treatment and is one of the most effective strategies for reducing the risk of overdose with methadone.[7] Take-home doses or "carries" are only permitted later in treatment and this decision is based on the stability of the patient and other patient-related factors.[7] Furthermore, drug interactions and concurrent use of other substances (including alcohol and benzodiazepines, such as lorazepam) increase the risk of methadone overdose. Thus, it is important to review the medication profile and monitor patient well-being (e.g., assess whether the patient appears to be intoxicated) at each visit to ensure patient safety. The initial dose of methadone should not exceed 30 mg/day.[7] Lower doses (5–10 mg/day) are recommended for individuals at high risk of toxicity, such as patients who have undergone withdrawal management (detoxification) from opioids. In addition, patients who use alcohol, benzodiazepines or other substances require lower dosages in the range of 10–20 mg/day. The dose is then slowly titrated upward by 5–10 mg at intervals of five days or longer.[7]

Methadone dispensing guidelines may vary across provinces. Pharmacy technicians should be familiar with their provincial guidelines for methadone dispensing.

Recommendations

The British Columbia Ministry of Health[7] and the CIHR Canadian Research Initiative in Substance Misuse[8] guidelines recommend buprenorphine/naloxone over methadone as the first-line treatment for opioid use disorder, unless there is a contraindication to its use. With methadone, the need for long-term, daily, witnessed ingestion at a pharmacy can be a treatment barrier or challenge in remote locations.[7,8] For some patients, however, methadone will remain an acceptable first-line treatment option, based upon consideration of individual patient factors.[7,8] Typically, maintenance with opioid agonists is continued long-term and discontinuation is appropriate only for those with a high chance of successful recovery without ongoing support from opioid agonist treatment. [7]

Harm Reduction Strategies

Harm reduction includes approaches such as "policies, programs and practices that aim to reduce the adverse health, social and economic consequences of licit and illicit substance use."[7] Examples of these approaches include needle/syringe distribution programs, overdose prevention with take-home naloxone, and safe injection sites. The purpose of these approaches is to improve the health and safety of individuals with opioid use disorder who are unable to achieve opioid abstinence.[7]

Naloxone is an opioid antagonist that rapidly reverses the effects of an opioid overdose, for example from heroin, fentanyl, methadone or morphine.[10] Naloxone is administered either by intramuscular injection or as a nasal spray.[10] Publicly funded take-home naloxone kits are available through community pharmacies in most provinces and territories or may be available for purchase; however, eligibility and access varies across jurisdictions. Nasal spray kits are not available in all provinces or territories.[11] Training on the use of naloxone injection is available through a number of resources including online continuing education programs for healthcare providers and other sites for the general public, for example http://towardtheheart.com/naloxone.

Fentanyl Patch Return

Fentanyl is a highly potent opioid. The number of overdoses and deaths due to misuse and abuse of fentanyl patches has increased in Canada.[12] In response, the province of Ontario introduced legislation requiring patients who receive fentanyl patches on prescription to return their used patches to the pharmacy prior to receiving new ones.[13] This program requires that the prescriber record on the prescription where the patient chooses to have the prescription filled and notify the pharmacy in advance of the prescription. For patients receiving a fentanyl prescription for the first time, the prescriber must indicate this on the prescription. From the pharmacy perspective, a pharmacy can only dispense the prescription if the name and location of their pharmacy has been indicated on the prescription by the prescriber, and they have been notified in advance. Furthermore, the prescription can only be dispensed in exchange for used patches, unless it is a first-time prescription.

Role of the Pharmacy Technician

Pharmacy technicians have an important role in the management of opioid use disorder. It is important that technicians are familiar with provincial guidelines related to dispensing of buprenorphine/naloxone and methadone to help ensure adherence to standards. Pharmacy technicians can help promote the safe use of methadone by observing the status of patients when they present to the pharmacy for daily administration. With methadone for example, intoxication increases the risk of toxicity and overdose, and may require that a methadone dose be held. Furthermore, the risk of methadone toxicity increases with missed doses due to rapid loss of tolerance.[7] By helping to identify patients who have missed daily dispensed methadone, pharmacy technicians can help to promote the safe use of methadone by avoiding potential drug toxicity.

Technicians can also assist and support pharmacists in their role by flagging any changes in opioid agonist dosing for pharmacist review to help ensure patient safety. Additionally, pharmacy technicians can flag profiles of patients where patterns of prescription opioid use (e.g., early refills) may suggest patterns of escalating or inappropriate use.

It is also important that pharmacy technicians be familiar with their jurisdictional policies related to naloxone kits. Undergoing training on the use of naloxone kits is also beneficial. Furthermore, it is important that pharmacy technicians are familiar with addiction resources and safe injection sites in the community so that they can help patients access the support services they may need. As well, pharmacy technicians can help ensure that there is a clear policy in the pharmacy for how to handle requests for needles and syringes, and ensure that sufficient supplies are available at all times.

For patients who require witnessed dosing, they can ensure that there is an area within the pharmacy where the patient can protect and maintain their personal privacy. Perhaps most importantly, when interacting with patients with opioid use disorder, it is essential that pharmacy technicians maintain a nonjudgmental attitude, and treat patients with dignity and respect.

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QUESTIONS

Please select the best answer for each question and answer online at eCortex.ca for instant results.

1. Which of the following belong to the opioid drug class?
a) Heroin
b) Fentanyl
c) Lorazepam
d) A and B
e) A, B and C

2. Which of the following is correct regarding opioid use in Canada?
a) Rates of opioid use have been stable over the past decade.
b) Hospitalizations and emergency department visits due to opioid poisonings continue to rise.
c) There are no legitimate uses for opioids in Canada and their use is never justified.
d) All of the above are correct.

3. Opioid use disorder
a) Is a term introduced in the DSM-5, replacing opioid dependence and opioid abuse
b) Is a chronic, relapsing condition that requires ongoing management
c) Is associated with significant morbidity and mortality
d) All of the above are correct.

4. Symptoms of opioid use disorder may include
a) Persistent desire or unsuccessful effort to cut down on opioid use
b) Craving to use opioids
c) Recurrent opioid use in situations in which it is physically hazardous
d) All of the above

5. According to guideline recommendations, the preferred first-line treatment for the management of opioid use disorder is:
a) Methadone
b) Buprenorphine/naloxone
c) There is no recommendation given between methadone and buprenorphine/naloxone
d) Neither methadone nor buprenorphine/naloxone are first-line treatments.

6. Which of the following is correct regarding the management of opioid use disorder?
a) Methadone is never an acceptable first-line treatment option for opioid use disorder
b) Patients on maintenance treatment with opioid agonists do not require additional counselling and support
c) Maintenance with opioid agonist therapy should only be continued short-term
d) None of the above are correct

7. Opioid agonist therapy
a) Has been shown to reduce the risks associated with ongoing drug use such as exposure to HIV and hepatitis C infection
b) Has been shown to improve daily functioning and ability to work
c) A and B are both correct
d) A and B are both incorrect

8. Methadone
a) Is a mu opioid receptor antagonist
b) Is relatively safe in overdose
c) Prevents the symptoms of opioid withdrawal through cross-tolerance
d) Has a wide therapeutic window

9. Buprenorphine
a) Is derived from thebaine
b) Can block the effects of other opioids if they are taken at the same time
c) Is a full opioid antagonist
d) Is combined with the opioid agonist naloxone to prevent abuse
e) A and B are both correct

10. An advantage of buprenorphine/naloxone is that
a) There is potential for administration every second day once the patient is stabilized
b) It can be administered without observation starting from the initial dose
c) It has a lower risk of diversion than methadone since it is combined with naloxone, an opioid agonist.
d) A and C are both correct

11. Harm reduction strategies may include
a) Needle distribution programs
b) Distribution of take-home naloxone kits
c) Supervised injection sites
d) All of the above

12. Naloxone
a) Is an opioid agonist that can quickly reverse the effects of opioid overdose
b) Is generally available only to first responders in most provinces
c) Is administered by intramuscular injection or as a nasal spray to treat an opioid overdose
d) Is administered by subcutaneous injection or as a nasal spray to treat an opioid overdose

13. Fentanyl
a) Is a low potency opioid
b) Has no potential for overdose and misuse when administered in patch form
c) Is a high potency opioid
d) None of the above

14. The fentanyl patch return program in Ontario
a) Has been legislated in the province
b) Requires that used fentanyl patches be returned to the pharmacy prior to dispensing new ones (except for first-time prescriptions).
c) Requires that the prescriber indicate the name and address of the patient's choice of pharmacy, where the prescription must be filled, on the front of the prescription.
d) All of the above

15. To help better manage the care of patients with opioid use disorder, pharmacy technicians can
a) Alert pharmacists to increasing frequency of opioid prescriptions for further assessment
b) Receive training on naloxone kits
c) Help to identify patients who may be at risk of methadone toxicity due to intoxication
d) All of the above

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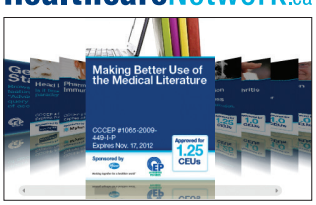

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