



Just the facts: high-impact emergency department intervention following opioid overdose

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Case

A 38-year-old man presents to your emergency department (ED) via emergency medical services (EMS). History obtained by paramedics indicates that he became unresponsive after smoking fentanyl. When 0.4 mg of intramuscular naloxone administered by bystanders was ineffective, they called EMS and initiated CPR. Paramedics arrived and administered another 0.8 mg of intramuscular naloxone at the scene, at which point the patient's respiratory rate improved to 10 breaths/min. He was mildly sedated upon arrival to the ED, but after a period of observation, he became awake and alert and developed diaphoresis, nausea, and myalgias. You identify these symptoms as opioid withdrawal. Your patient reports using opioids daily for several years and has been smoking 1 g of fentanyl per day for the past several months. He has experienced multiple opioid overdoses in the past year, but this was his first overdose requiring presentation to hospital. He has no other medical conditions and has never received treatment for his opioid use disorder.

Clinical questions

What is the risk of death in the year following a nonfatal opioid overdose?

Opioid-related morbidity and mortality across Canada is considerable, with 3823 opioid-related deaths reported in 2019 alone [1]. The majority (77%) of deaths are attributed to fentanyl and its analogues, representing an increasingly toxic drug supply [1]. Notably, the harms related to opioids have further increased in many jurisdictions during the COVID-19 pandemic, likely due to changes in the local drug supply and drug use patterns [2].

Following ED presentation for nonfatal opioid overdose, there is a 1-year mortality rate of 5.5–8% [3, 4]. Most of these deaths are due to a subsequent opioid-related overdose, and 18–20.4% of them occur in the first month after initial presentation [3, 4]. One Canadian study found that nonfatal opioid overdose was independently associated with overdose mortality, with a dose–response relationship [5]. As such, any ED presentation for opioid overdose represents a critical opportunity for intervention.

What are some approaches to asking patients about their substance use?

Most ED clinicians are skilled at resuscitating and identifying patients with opioid-related presentations but some may find it challenging to navigate discussions about a patient's substance use. Many tools and frameworks exist to guide these conversations, including the Brief Negotiated Interview (BNI), SBIRT (Screening, Brief Intervention, Referral to Treatment), and motivational interviewing. These techniques can be readily integrated into a fast-paced ED setting to facilitate a nonjudgmental, patient-centered discussion

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focused on identifying and augmenting an individual's readiness to change, goal setting, and safety planning. While there is evidence that even short (10 min) interactions using BNI or motivational interviewing are feasible in an ED setting [6], it is worth noting that these strategies are most effective when combined with treatment initiation [7].

Should buprenorphine/naloxone be initiated in the ED?

Buprenorphine/naloxone is first-line pharmacologic therapy for opioid use disorder and can be safely initiated in the ED [7,8]. As a partial opioid agonist, it has a lower risk of respiratory depression and a more favourable safety profile than methadone. With the exception of Saskatchewan and Manitoba, buprenorphine/naloxone does not require special licensure in most provinces.

A large RCT demonstrated that ED initiation of buprenorphine/naloxone doubled patient engagement in treatment 30-days post-initiation and reduced self-reported opioid use [7]. After initiating buprenorphine/naloxone, ED clinicians should provide a bridging prescription until the patient can be seen by an addiction medicine physician or primary care provider for treatment continuation.

ED clinicians should be aware that if administered before a patient is in moderate opioid withdrawal, buprenorphine's high affinity for the mu opioid receptor can cause it to displace other opioids and precipitate severe opioid withdrawal [8]. For this reason, clinical assessment of opioid withdrawal using the Clinical Opioid Withdrawal Scale (COWS) is recommended prior to buprenorphine initiation.

If you have managed a patient's acute withdrawal symptoms, should you still offer buprenorphine/naloxone?

Patients who are offered withdrawal management or 'detox' alone without opioid agonist treatment (OAT), such as methadone or buprenorphine/naloxone, are more likely to experience relapse, opioid overdose, and have higher all-cause mortality [8]. While opioid withdrawal itself is generally not life-threatening, the rapid loss of tolerance to opioids after even brief periods of abstinence combined with the high risk of relapse and overdose for individuals not on OAT makes withdrawal management alone neither safe nor effective management of opioid use disorder. Instead, all patients who meet the DSM-V criteria for opioid use disorder should be offered OAT as the standard of care [8].

What else can you do in the ED to reduce the risk of death following a nonfatal overdose?

Given the risk of recurrent opioid overdose in this population, all patients presenting to ED with opioid overdose should be offered a take-home naloxone kit. Distribution of take-home naloxone is feasible and acceptable in an ED setting, with two-thirds of patients willing to accept naloxone if it were offered [9].

Safer use strategies—such as using with others, using clean equipment, cleaning the skin prior to injection, not mixing opioids with alcohol, benzodiazepines or other sedatives, and doing a small test dose of substances—should also be discussed. ED clinicians should be aware of and refer patients to local resources for people who use drugs, such as needle exchange programs and supervised consumption sites, if available.

Upon discharge from the ED, patients should be referred to locally available treatment options, if desired. Rapid access addiction medicine (RAAM) clinics provide low-barrier care options and are available in many urban and some rural settings. In areas without RAAM clinics, alternative models including dedicated OAT clinics and primary care-based treatment may be available. In other settings, virtual care options such as telemedicine and electronic consultations (e-consult) can be used to connect local providers to addiction medicine specialists and facilitate ongoing treatment. If available, ED clinicians can partner with peer support workers and outreach services to assist in linkage to treatment resources [10]. ED clinicians are encouraged to explore and be aware of the options available in their local practice setting to facilitate a safe discharge.

Case conclusion

Once awake, the nurse provides a take-home naloxone kit and training. Performing a brief negotiated interview, you understand that his goals are to stop using fentanyl and to return to school. You share your concerns about his health given his overdose presentation, and risk of subsequent harm if his opioid use disorder is left untreated. He accepts your offer to initiate buprenorphine/naloxone, but his COWS score is only 7 (mild withdrawal). You decide to proceed with a home induction and provide six 2/0.5 mg tablets of buprenorphine/naloxone for the patient to take home. You instruct him to take 1–2 tablets SL q1-2h once he is in moderate withdrawal, provide a patient handout with detailed instructions, and discuss the risk of precipitated withdrawal. You provide a bridging prescription until he can attend the local RAAM clinic for follow-up in 2 days' time and ensure that he has medication coverage, transportation to the

appointment, and that there are no other barriers to engaging in care. Together you discuss a safety plan to mitigate the risk of harms from any ongoing fentanyl use while his dose of buprenorphine/naloxone is being titrated. With this plan in place, you discharge your patient from the ED.

Further reading recommendations

To learn more about buprenorphine initiation protocols, see the CRISM National Guideline for the Clinical Management of Opioid Use Disorder here: https://crism.ca/wp-content/uploads/2018/03/CRISM_NationalGuideline_OUD-ENG.pdf.

For approaches to the management of precipitated withdrawal, see page 45 of the BC Centre for Substance Use Guidelines here: https://www.bccsu.ca/wp-content/uploads/2017/06/BC-OUD-Guidelines_June2017.pdf

To learn more about motivational interviewing: [11].

To read the relevant CAEP Position Statement: [12].

Declarations

Conflict of interest The authors declare that they have no conflict of interest.

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