

J12: Opioids

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Updated: September 29, 2023

Reviewed: September 29, 2023

Introduction

Opioid overdose is the most commonly seen toxidrome in out-of-hospital practice in British Columbia, which is, as of 2020, in its fourth year of a public health emergency. Contamination of the illicit drug supply with powerful, synthetic opioids, such as fentanyl, is largely responsible for the crisis. This contamination makes consumption of any illicit drug extremely dangerous.

In 2018, 1,510 overdose deaths were recorded in the province, which represents more than four times the number of fatalities from motor vehicle collisions.

Essentials

- Opioid toxicity should be suspected in any individual with a decreased level of consciousness and depressed respirations or apnea.
- Assisted ventilation is the cornerstone of management. Paramedics and EMRs/FRs must ensure that proper airway management, including effective ventilations, continue until symptoms have resolved; this must supersede any pharmaceutical interventions. Consider the use of airway adjuncts to facilitate ventilation. Monitor oxygenation at all times.
- Assess for and treat hypoglycemia.
- The goal of naloxone administration is the restoration of adequate respirations – a return of full consciousness is not necessary.

Additional Treatment Information

- Cardiac arrests related to opioid use are primarily hypoxic. Naloxone is unlikely to benefit these patients and its routine use is unsupported by current evidence. Paramedics and EMRs/FRs must focus instead on effective ventilation, oxygenation, and chest compressions. In rare cases, patients may present with pulses that are difficult to palpate. If unsure whether a patient has a pulse, begin compressions and ventilations and evaluate the response to these treatments (e.g., oxygen saturation, heart rate, presence of central or peripheral pulses) before considering the use of naloxone.
- Effective ventilation and oxygenation are key to the successful management of opioid toxicity. A well-perfused, well-oxygenated brain that receives naloxone will be more likely to recover gracefully.
- Paramedics and EMRs/FRs must differentiate between overdoses of recreational opioids and overdoses of prescribed medication. In the case of opioid overdose from a patient's prescribed medication, a careful clinical history of opioid use must be elicited and naloxone should be administered judiciously to avoid precipitating a pain crisis or significant withdrawals.
 - In patients with palliative needs, who are presenting with respiratory depression due to opioids, there is a need to ensure adequate oxygenation while maintaining analgesia and avoiding rapid opioid withdrawal. In these patients, the administration of naloxone as a bolus, rather than titrating to respiratory effect, may result in refractory reversal of the opioid analgesia and provoke withdrawal symptoms. *As such it is recommended that the administration of naloxone, at a rate of 0.1 mg IM/IV every two minutes, be titrated to respiratory function, not to the pain or level of consciousness.*
 - See the appropriate palliative care clinical practice guidelines for altered mental status in the context of palliative care. CliniCall consultation is strongly encouraged and collaboration with the rest of the patient's care team is required to manage these cases (1-833-829-4099):
 - [→ P01: Palliative Care: General](#)
 - [→ P02: Palliative Care: Delirium](#)
 - [→ P03: Palliative Care: Pain](#)
- Titrate naloxone to effect. Do not administer subsequent doses of naloxone without allowing the medication time to work and without assessing ventilations. Some substances, particularly the fentanyl analogues such as carfentanil, may require significantly larger doses of naloxone to resolve. Early consultation with CliniCall is

recommended in cases where patients do not improve following two doses of naloxone (see FR interventions below).

- Consider the possibility of co-intoxication when assessing patients. Other substances, such as benzodiazepines, gamma hydroxybutyrate, and alcohol can prolong unconsciousness despite resolution of opioid toxicity. Once adequate spontaneous respirations have been re-established, make preparations to convey the patient.
- Pulmonary edema is a known, but rare, complication of naloxone use. If respiratory distress develops following recovery from opioid intoxication, consider the use of CPAP to support oxygenation.
- Patients who wake up following naloxone administration can be confused and violent. Calm reassurance is more helpful in these cases than confrontation. Violence and combativeness can be reduced by ensuring patients are optimally oxygenated prior to receiving naloxone.

Referral Information

Refusal of care instructions and guidelines must be followed for patients who decline to be conveyed to hospital.

General Information

- Beyond a decreased level of consciousness and depressed respiratory drive, as demonstrated by both decreased rate and limited tidal volume, signs and symptoms of an opioid overdose can include:
 - Pinpoint pupils (miosis)
 - Hypotension
 - Hypothermia
 - Tachycardia
- Intranasal drug administration is of limited benefit in opioid overdoses, as the distribution and uptake of the medication requires ongoing respirations. It may be an acceptable option if parenteral delivery routes are unavailable.
- Patients need not have specifically ingested or otherwise consumed what they believe to be opioids to develop opioid toxicity – many recreational drugs are contaminated with synthetic opioids, and users frequently have no way to establish the safety of their substances. Black-market prescription medications, cocaine, methamphetamine, and GHB, have all been associated with opioid contamination and users of these substances have died as a result of consumption. Paramedics and EMRs/FRs should rely on the clinical signs and symptoms of opioid toxicity and manage patients accordingly, regardless of the history available at the scene.
- Drug supply contamination can be caused by multiple agents, of which fentanyl is the most common. Other fentanyl analogues, of varying potency, have been found in the supply of illicit drugs. Contaminated supply “outbreaks” occur randomly and can produce waves of overdoses and overdose fatalities.
- Questioning patients about specific quantities of substances used is unlikely to be helpful.
- Patients should be screened for the risk of additional opioid intoxication and they (or their friends and family members) educated on the use of naloxone kits. Distribute kits to patients and families in accordance with BCEHS policy. Referral pathways for treatment may be available in some regions of British Columbia and these should be utilized wherever and whenever possible.
- Refer cases of children with opioid toxicity to the Ministry of Children and Family Development in accordance with BCEHS policy.

Interventions

First Responder

- Manage the airway and support ventilations with bag-valve mask as required; consider the use of 2-person BVM techniques with appropriate airway adjuncts
 - [→ B01: Airway Management](#)
- Administer high flow oxygen
 - [→ A07: Oxygen Administration](#)
- Obtain capillary blood sample and assess for hypoglycemia
 - [→ E01: Hypoglycemia and Hyperglycemia](#)
- Reverse opioid toxicity:

- [Naloxone](#)

Emergency Medical Responder – All FR interventions, plus:

- Consider the use of nasopharyngeal airways in patients whose level of consciousness precludes an oropharyngeal airway
 - → [PR07: Nasopharyngeal Airways](#)

Primary Care Paramedic – All FR and EMR interventions, plus:

- Consider placement of supraglottic airway device
 - → [PR08: Supraglottic Airways](#)
- Consider intravenous [dextrose](#) or intramuscular [glucagon](#) for hypoglycemia
- In cases of continued unconsciousness and apnea, consider establishing vascular access and giving naloxone intravenously
 - → [D03: Vascular Access](#)

Advanced Care Paramedic – All FR, EMR, and PCP interventions, plus:

- Consider fifth dose (4 mg) of naloxone
- [CinCal consultation required](#) prior to sixth dose (10 mg) of naloxone
 - Note that, depending on supplies and resources available, this intervention may not be feasible

Evidence Based Practice

Overdose-Poisoning

Supportive

- [Activated Charcoal](#)
- [Naloxone-IM \(Opiate OD\)](#)
- [Naloxone-IN \(Opiate OD\)](#)
- [Naloxone-IV \(Opiate OD\)](#)
- [Naloxone-SQ \(Opiate OD\)](#)
- [Capnography](#)
- [Naloxone-Nebulized \(Opiate OD\)](#)
- [Oxygen](#)
- [Oxymetry Monitoring](#)
- [Sodium Bicarb \(TCA OD\)](#)

Neutral

- [Glucagon \(Beta-Blocker OD\)](#)
- [Treat & Release \(Opiate OD\)](#)

Against

- [Benzodiazepine antagonist \(Benzo OD\)](#)

References

1. Kolinsky D, et al. Is a prehospital treat and release protocol for opioid overdose safe? 2017. [\[Link\]](#)

2. Levine M, et al. Assessing the risk of prehospital administration of naloxone with subsequent refusal of care. 2016. [\[Link\]](#)
3. Rudolph SS, et al. Prehospital treatment of opioid overdose in Copenhagen—Is it safe to discharge on-scene? 2011. [\[Link\]](#)
4. Wampler DA, et al. No deaths associated with patient refusal of transport after naloxone-reversed opioid overdose. 2011. [\[Link\]](#)
5. Willman MW, et al. Do heroin overdose patients require observation after receiving naloxone? 2017. [\[Link\]](#)

Practice Updates

- 2023-09-29: updated FR interventions

